Oral Presentation Session

Twelve Lead ECG Revisited

Date: 30.10.2020 Time: 08:00 - 09:15 Hall: 4

ID: **235**

Topic: **Cardiology » Electrocardiography and Non invasive electrocardiology**

Presentation Type: **Oral**

THE RELATIONSHIP OF LUMBAR T SCORE AND HEART RATE RECOVERY-INDEX IN PATIENTS WITH POSTMENOPAUSAL WOMEN

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OBJECTIVE: Post-exercise heart rate recovery index has been proposed as a measure of cardiac autonomic function. The aim of the study was to evaluate heart rate recovery index parameters in patients with hypertensive postmenopausal women.

METHODS: Between May-October 2019, A total of 135 postmenopausal women included in the study. After the routine history, physical examination and blood tests, patients underwent a routine electrocardiogram, transthoracic echocardiogram, and treadmill exercise test, and patients underwent lumbar bone mineral densitometry. According to the results of lumbar vertebra bone mineral densitometry, 45 patients with T score ≥-1 were named as group 1, 45 patients with T score up to -1 / -2.5 were named as group 2 and 45 patients with T score lower than -2.5 were named as group three. Heart rate recovery indexes were compared between three groups and their relationship with the lumbar T score was evaluated.

RESULTS: Heart rate recovery index values of group 1 were respectively 31.09±5.9, 47.16±8.54, and 65.61±11.22 beats/minute. Heart rate recovery index values of group 2 were respectively 24.21±7.11, 37.30±9.29, and 49.45±11.09 beats/minute. Heart rate recovery index values of group 3 were respectively 17.21±3.51, 28.28±4.14, and 35.28±3.60 beats/minute. There were statistically significant differences between the three groups in terms of heart recovery index values at the first-minute recovery phase of the treadmill exercise test (F value=25.65 and P value<0.01). There were statistically significant differences between the three groups in terms of heart recovery index values at the second-minute recovery phase of the treadmill exercise test (F value=26.52 and P value<0.01).). There were statistically significant differences between the three groups in terms of heart recovery index values at the third-minute recovery phase of the treadmill exercise test (F value=45.91 and P value<0.01). There were statistically significant positive correlations between T score and heart rate recovery index value at first-minute recovery phases of treadmill exercise test in groups 1, 2, and 3 (Respectively, R=0.29 and P=0.049, R=0.38 and P<0.01, R=0.51 and P < 0.01).

CONCLUSION: In postmenopausal women, the lower t score, the higher degree of autonomic dysfunction. There was a statistically significant relationship between T score and heart rate recovery index values.

Keywords; Postmenopausal Women, Lumbar T Score, Heart Rate Recovery-Index

ID: **246**

Topic: **Cardiology » Electrocardiography and Non invasive electrocardiology**

Presentation Type: **Oral**

EVALUATION OF SPATIAL QRS-T ANGLE IN PATIENTS WITH SARCOIDOSIS

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Objective: Cardiovascular risk may be increased in patients with sarcoidosis because common mechanisms such as inflammation and oxidative stress play a role in the pathophysiology of sarcoidosis and atherosclerosis. The aim of this study was to evaluate whether this risk increases. Therefore, the spatial QRS-T angle, a marker of cardiovascular risk, was measured in sarcoidosis patients and a control group.

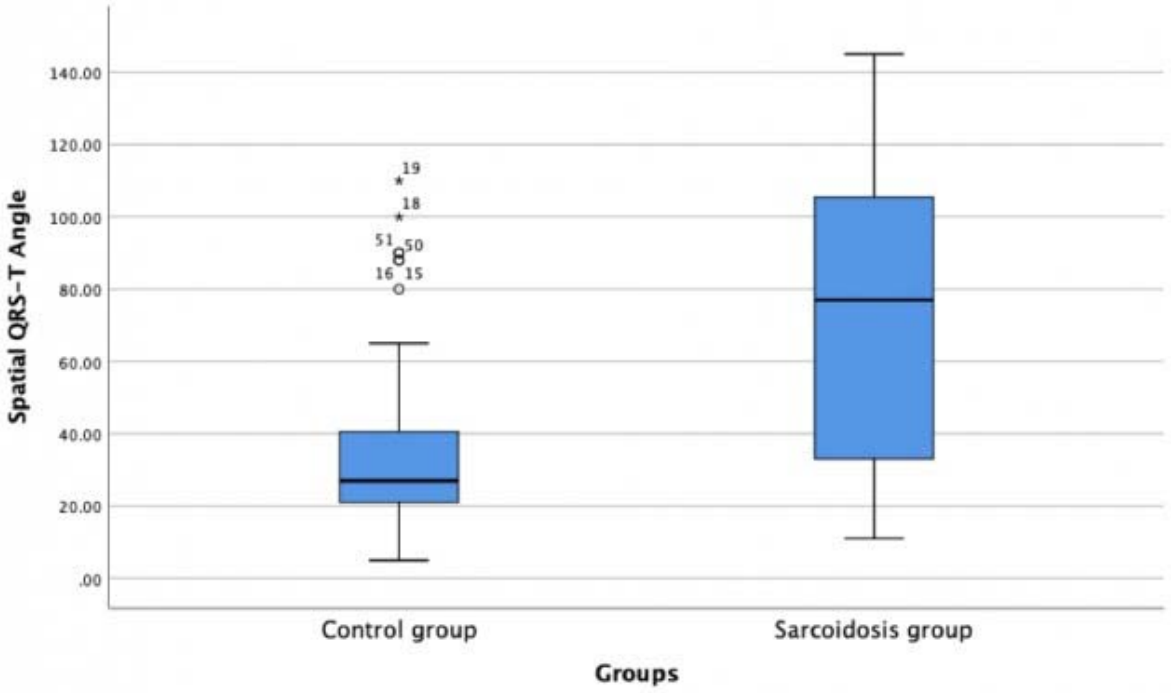
Methods: A retrospective examination was made of the records of patients followed up with the diagnosis of sarcoidosis in the Pulmonary Diseases, Outpatient Clinic of Baskent University Faculty of Medicine Adana Hospital. All eligible patients had electrocardiograms (ECG) at the time of initial diagnosis before treatment. The spatial QRS-T angle was calculated according to the 'simple' method, using amplitudes of QRS and T waves in leads aVF, V2, V5 and V6 in the calculation QRSnet= Ramp − |S/QSamp|, Tnet= (+) Tamp − |(−) Tamp. These values were calculated and recorded in the 4 leads, then, the QRS-T angle was calculated by replacing the values in the formula given below.

$$\mathrm{QRS/T}_{simple} = \arccos \frac{[(QRS_{net}\,V_6 \times T_{net}\,V_5) + (QRS_{net}\,V_{aVF} \times T_{net}\,V_{aVF}) + (QRS_{net}\,V_2 \times T_{net}\,V_2)]}{\sqrt{QRS_{net}\,V_6{}^2 + QRS_{net}\,V_{aVF}{}^2 + QRS_{net}\,V_2{}^2)} + \sqrt{(T_{net}\,V_5{}^2 + T_{net}\,V_{aVF}{}^2 + T_{net}\,V_2{}^2)}}$$

The spatial QRS-T angle was calculated with the same method in an age and gender-matched healthy control group and statistically significant differences were investigated.

Results: A total of 106 subjects were included in the study (55 patients diagnosed as sarcoidosis and 51 healthy volunteers). There was no statistically significant difference between the groups in terms of baseline demographic characteristics (p> 0.05). The spatial QRS-T angle was 73.7 (32-109, IQR = 77) in the patient group and 27 (21-41, IQR = 20) in the control group, and the difference was statistically significant (p <0.001). Figure-1 shows the comparison of spatial QRS-T angles between the groups.

Conclusion: The results of this study showed that the spatial QRS-T angle was increased in patients with sarcoidosis, suggesting that cardiovascular risks may be increased in patients with sarcoidosis. Prospective studies involving a large number of patients are needed to be able to make more conclusive judgments.


Spatial QRS-T Angle
140.00
120.00
100.00
80.00
60.00
40.00
20.00
.00
19
18
51
50
16
15
Control group
Sarcoidosis group
Groups

ID: **49**

Topic: **Cardiology » Cardiac pacing for bradyarrhythmias**

Presentation Type: **Oral**

FACTORS AFFECTING THE RECOVERY OF ATRIOVENTRICULAR BLOCK; A TERTIARY CENTER EXPERIENCE

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Aim: Atrioventricular (AV) block is a partial or complete interruption of impulse transmission from the atria to the ventricles. AV block can occur due to many causes, including ischemia, medications, systemic diseases, idiopathic fibrosis of conduction system and some infections. In this study our aim was to determine clinical factors related to recovery of conduction system in patients presenting with AV block.

Methods: A total of 178 patients which were hospitalized into a tertiary center due to AV block between January 2013 and March 2019 were retrospectively analyzed. Patient characteristics, demographic and clinical factors were determined from hospital records. Patients were divided into two groups according to complete improvement of AV block during hospitalization. 34 patients who had completely recovered from AV block were consisted “recovery group” and remaining 144 patients were consisted “AV block group”.

Results: The average length of hospital stay was 3.6±3.5 (min 1- max 24) days and it was significantly longer in AV block group (3.8±3.7 vs 2.6±1.6 days, p=0.006). The most common cause of AV block was acute coronary syndrome (35.2%) in recovery group and idiopathic in AV block group (90.8%). Beta blocker (63% vs. 15%, p=0.005) and digoxin usage (12% vs. 1%, p=0.13) at admission was significantly higher in recovery group. 53% of patients in recovery group and 58% of patients in AV block group underwent coronary angiography during hospital stay and rate of coronary revascularization was significantly higher in recovery group (35% vs. 17%, p=0.002). 1 patient in recovery group and 12 patients in AV block group died during in-hospital stay (p=0.437). According to logistic regression analyses; younger age, presenting with acute coronary syndrome, usage of beta blocker during admission and low creatinine levels were found to be independent predictors of improvement in AV block.

Conclusions: AV block is less reversible in patients without a clear reason such as acute coronary syndrome, beta blocker usage, chronic kidney disease and older age.

ID: **25**

Topic: **Cardiology » Arrhythmias and antiarrhythmic therapy**

Presentation Type: **Oral**

FRAGMENTED QRS: A NEW INDEPENDENT PREDICTOR OF MORTALITY FACTOR IN CHRONIC KIDNEYDISEASE PATIENTS WHO HAVE CORONARY ARTERY CALCIFICATION

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Background: Our aim of this study was to investigate the relationship between QRS fragmentation and clinical outcome in asymptomatic chronic kidney disease patients.

Patients and Methods: One-Hundred-Sixty-four asymptomatic chronic kidney disease patients were included for in this study. Electrocardiographic analyses were performed to detect fQRS. Coronary artery calcific score has also been measured by using 64-Slices multi-detector computed tomography. A high-sensitive C-reactive protein, intact parathyroid hormone, total calcium and phosphates have were also been recorded. We followed the patients for cardiovascular events, mortality and morbidity during five years.

Results: Fragmented QRS has been was detected in 55 chronic kidney disease patients (33.5%) (Group 1). There was no evidence of QRS fragmentation in the remaining 109 patients (Group 2). The overall mean coronary artery calcific score was 744±443.2. The mean Coronary artery calcific score was 1286 ± 334.6 and 201± 57.6 in Group 1 and Group 2, respectively (P=0.001). Fourteen patients in group 1(25.6 %), and 18 patients in group 2 (16.3%) died due to cardiovascular events (P=0.0034). Twenty-two patients (40.7 %) in Group 1, and 32 patients (29 %) in Group 2 were required coronary revascularization during the follow-up period (P=0.030).

Conclusion: Our study showed that there was a strong correlation between the presence of fragmented QRS, coronary artery calcific score and future cardiovascular events in hemodialysis patients. In our opinion, fragmented QRS and coronary artery calcific score can be investigated in asymptomatic chronic kidney disease patients as the cheapest and non-invasive method.

ID: **123**

Topic: **Cardiology » Pregnancy and Heart diseases**

Presentation Type: **Oral**

ASSESSMENT OF ATRIAL CONDUCTION TIME AND P WAVE DISPERSION IN PATIENT WITH GESTATIONAL DIABETES MELLITUS

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OBJECTIVE: Gestational Diabetes Mellitus (GDM) is a glucose tolerance disorder at any level that starts with pregnancy or is noticed during pregnancy. The risk of developing type 2 diabetes mellitus (DM) and cardiovascular disease has increased in women with GDM during long-term follow-up. DM patients are at high risk for atrial fibrillation, and a significant proportion of patients with atrial fibrillation are diabetic. It is known that prolonged P wave dispersion and electromechanical delay times obtained by tissue Doppler echocardiography are noninvasive predictors of atrial fibrillation development. It is also known that it can predict the development of atrial fibrillation. In our study we aimed to asses atrial conduction time and P wave dispersion in GDM patients.

METHODS: 30 patients with GDM and 30 healthy pregnant women were included in the study. Atrial electromechanical time (PA) was measured by tissue doppler lateral mitral annulus (PA lateral), septal mitral annulus (PA septum) and right ventricular tricuspid annulus (PA tricuspid). P-wave dispersion (PDD) was obtained by subtracting the minimum P (Pmin) time from the maximum P (Pmax) wave time that can be measured in twelve-lead electrocardiography. The results were compared with GDM and control groups.

RESULTS: P wave dispersion was 52.7 ± 5.1 ms in the GDM group and 28.9 ± 4.2 ms in the control group ($p < 0.001$). In the GDM group, PA lateral was 65.7 ± 4.2 ms and in the control group 47.7 ± 4.7 ms ($p < 0.001$).Interatrial, intraatrial and intraleft atrial delay times were significantly higher in the GDM group (median values, respectively, 18ms versus 12ms, ($p < 0.001$); 10ms versus 7.5ms, ($p < 0.001$); 4 ms versus 4 ms, ($p < 0.001$). There was a positive correlation between intraatrial delay time and P wave dispersion in GDM group ($r:0,39$, $p = 0.033$).

CONCLUSIONS: The main finding of our study was the maximum P wave duration, minimum P wave duration and longer P wave dispersion in the GDM group compared to the controls. In addition, atrial conduction times were longer in GDM group. GDM patients should be monitored for atrial arrhythmias, in addition to blood sugar and gestational follow-up. Patients with high risk for the development of atrial fibrillation can be pre-determined and the formation of diseases, such as stroke, which is the most feared complication, can be prevented in advance.

ID: **208**

Topic: **Cardiology » Inherited arrhythmia syndromes**

Presentation Type: **Oral**

SHORT QT VILLAGE

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Abstract:

Short QT syndrome (SQTS) is an inherited cardiac channelopathy characterized by an abnormally short QT interval and increased risk for atrial and ventricular arrhythmias. Diagnosis is based on the evaluation of symptoms (syncope or cardiac arrest), family history and electrocardiogram (ECG) findings. Mutations of cardiac ion channels responsible for the repolarization orchestrate electrical heterogeneity during the action potential and provide substrate for triggering and maintaining of tachyarrhythmias. Due to the malignant natural history of SQTS, implantable cardioverter defibrillator (ICD) is the first-line therapy in affected patients.

We screened one family included 57 members. we described 15 patients with short qt syndrome. we defined short qt syndrome due to ESC definition. We implant ICD 7 seven patients with symptoms, one of index event. We follow up mean 24 months and we screen inappropriate shocks 6 patients. We described biggest short qt family uptill time.

ID: **613**

Topic: **Cardiology » Inherited arrhythmia syndromes**

Presentation Type: **Oral**

CONTACT DERMATITIS DUE TO ECG ELECTRODE

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In coronary intensive care units (ICU) monitoring and frequent electrocardiography (ECG) is one of the most important procedures in patient follow-up. Patients are continuously follow-up with monitor during their stay in the ICU, the ECG) lead placement in certain parts of the patient's body or electrodes are placed at certain intervals and ECG practice are repeated. Allergic reactions of (ECG) electrodes have been reported during ECG monitoring. Allergic reactions to electrodes most depend on the gel used. Dermatitis that occurs within 48-96 hours after skin contact with allergen and develops as a late type hypersensitivity reaction due to cellular immunity is called contact dermatitis. In this case, we present a case of contact dermatitis due to ECG electrode in a non-atopic patient.

CASE REPORT

A 43-year-old male patient presented to the emergency department with the complaint of syncope 8 times in 24 hours. The patient was consulted to the cardiology department due to recurrent syncope. When the ECG showed ST elevation in leads V1-V3, the patient was admitted to the coronary intensive care unit. In the follow-up the patient, ECG findings were consistent with Brugada, patient presented with syncope and family history of cardiac death at an early age implantation implantable cardioverter defibrillator (ICD) was planned. ICD implantation was performed on the 3rd day of hospitalization. The patient was discharged one day later with a clean wound. One day after discharge, he was admitted to the cardiology clinic with complaints of common burning, tenderness, redness and itching. In the physical examination of the patient, a ring-shaped rash was seen.in many parts of his body that was compatible with the regions where ECG electrodes were placed. The patient was consulted with dermatology department and diagnosed as contact dermatitis. Regression of lesions were seen after topical steroids

DISCUSSION

Patient monitoring in coronary intensive care units is very important for arrhythmia and ischemia monitoring is performed by placing the electrodes in certain areas. allergies or dermatitis to ECG electrodes are not common but seen. Allergy-causing parts of the ECG electrodes may be in the adhesive part or the gel part

Dermatitis that develops as a hypersensitivity reaction within 48-96 hours after contact with allergens is called contact dermatitis .While it is common in some areas of the body, scalp is rare or not seen in areas such as palms. The areas where the lesions are seen give an idea about the allergen substance for example, in our patient, the lesions showed the wrists with ECG body electrodes placed on the anterior chest and those on the ankle with the extremity leads.

ID: **622**

Topic: **Cardiology » Arrhythmias and antiarrhythmic therapy**

Presentation Type: **Oral**

INFLUENCE OF E-CIGARETTE SMOKING ON VENTRICULAR REPOLARIZATION DISPERSION ON HEALTHY INDIVIDUALS

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Background

However, there is limited information about risks and effects of electronic cigarettes (e-cigarettes), the usage of e – cigarettes are exponentially increasing. E- cigarettes are vaporizing a liquid solution including nicotine. We have already known that just a single classic cigarette smoking increase QT dispersion (QTD) and cause increased risk of ventricular fibrillation (VF) and sudden cardiac death (SCD). QT dispersion is an important predictor of SCD. We aimed to compare electrocardiographic properties between e- cigarette users and non – users whether there is a risk increment.

Methods

40 heavily e – cigarette user healthy individuals were admitted to this study and 45 sex-matched healthy non-smoker individuals constituted control group. 12 lead Electrocardiography with 25mm/s paper speed and 10mm/mV voltage was performed to all subjects and The Tp-e interval, Tp-e/QT ratio and Tp-e/QTc ratio were assessed from recordings and corrected by heart rates.

Results

Mean age was 31±10.4 in e-cigarette user group and 33.4±13.2 in non-smoker group. %75 (n: 30) of the e-cigarette group was male and the ratio in non-smoker group was %71.1 (n:32). There was not any demographic changes and clinical findings difference between the groups. The baseline PR, QT and QTc values were similar in two groups. Tp-e interval (88.2±9.5ms and 74.2±7.1 ms; p:0.04), Tpe/QT ratio (0.22±0.04 and 0.20±0.03; p<0.01), Tp-e/QTc (0.23±0.03 and 0.17±0.02; p<0.01) ratios were significantly higher in e-cigarette using group.

ID: **463**

Topic: **Cardiology » Electrocardiography and Non invasive electrocardiology**

Presentation Type: **Oral**

THE PREDICTIVE VALUE OF RS TIME FOR SHORT TERM MORTALITY IN PATIENTS WITH ACUTE PULMONARY EMBOLISM

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Objective: Acute pulmonary embolism (PE) is an emergency situation with high mortality even if diagnosed early and treated appropriately. Although electrocardiographic (ECG) changes may not be helpful in diagnosing the disease, it may be important for us to provide information about the course of the disease. In our study, we aimed to assess the predictive value of RS time which is a novel electrocardiographic parameter on 1-month mortality of acute pulmonary embolism.

Methods: This retrospective study included 216 patients who were diagnosed with acute pulmonary embolism by pulmonary CT angiography. The patients' ECG on admission was evaluated by two experienced cardiologists using the ImageJ program. The patients were divided into two groups according to median values of RS time (1. Group was defined as RS time ≤60 msec (n:108) and 2. Group was defined RS time > 60 msec (n:108). Laboratory, clinical and demographic characteristics of the patients were obtained from the hospital registry system.

Results: The study population comprised a total of 216 patients (mean age: 66±15.7 years; 59.7% [n=129] female). The patients with RS time >60 msec have much more 1-month mortality than in those with RS time ≤60 msn. Among the ECG parameters only RS time> 60 msec was an independent predictor of 1- month mortality of patients with PE (HR: 4.329, 95%CI: 1.649-11.365; p= 0.003).
Conclusion: As a novel ECG parameter, RS time could be measured for each patient with PE. RS time >60 msec could be a very useful index for predicting 1-month mortality of patients diagnosed with PE.

The smoking habits and years of smoking was not correlated with Tp-e interval, Tp-e/QT or Tp-e/QTc ratios.

Discussion: E-cigarettes were also increasing sympathomimetic activity and therefore defined as arrhythmogenic substance. This study demonstrates alterations of ventricular repolarization that may culminate in fatal ventricular arrhythmias. E-cigarettes may reduce some adverse effects of tobacco usage but addicts should know that e-cigarettes are not harmless rather that standard cigarettes.

	All Patients; n:216	RS time ≤ 60 msec; n: 108	RS time > 60 msec; n: 108	p value
Age; years	66 ±15,7	65 ±14,9	67 ±16	0,279
Female gender; (%)	129 (59,7%)	73 (67,6%)	56 (51,9%)	0,018
Diabetes Mellitus; (%)	40 (18,5%)	17 (15,7%)	23 (21,3%)	0,293
Hypertension; (%)	104 (48,1%)	47 (43,5%)	57 (52,8%)	0,173
Heart Rate; /min	102 ±21	102 ±22	102 ±21	0,722
Sustained Atrial Arrhythmia; (%)	22 (10,2%)	7 (6,5%)	15 (13,9%)	0,072
Right Axis Deviation; (%)	8 (3,7%)	4 (3,7%)	4 (3,7%)	1
RBBB; (%)	34 (15,7%)	8 (7,4%)	26 (24,1%)	0,001
S1Q3T3; (%)	47 (21,8%)	19 (17,6%)	28 (25,9%)	0,138
QRS Duration; msec	95 (90-110)	90 (85-100)	105 (95-120)	<,001
RS Duration; msec	60,1 (55,2-70)	55,2 (50-60)	70,0 (64,8-80)	<,001
RS Time Lead Group; (%)				
V1-V3	65 (30,1%)	34 (31,5%)	31 (28,7%)	0,458
V4-6	95 (44,0%)	51 (47,2%)	44 (40,7%)	
d1-aVL	25 (11,6%)	11 (10,2%)	14 (13,0%)	
d2-d3-aVF	31 (14,4%)	12 (11,1%)	19 (17,6%)	
Duration of Hospitalization; days	8 (7-11)	8 (7-11)	8 (7-11)	0,726
Inhospital Mortality; (%)	18 (8,3%)	3 (2,8%)	15 (13,9%)	0,003
Mortality, First Month; (%)	33 (15,3%)	5 (4,6%)	28 (25,9%)	<0,001

Table 1: Table 1. Demographic, clinical and laboratory characteristics of all patients, patients with and without RS time > 60 msec.

	Univariable Analyses				Multivariable Analyses			
	p value	HR	95,0% Confidence Interval		p value	HR	95,0% Confidence Interval	
Age, years	<0,001	1,081	1,043	1,119				
CAD*	0,042	2,118	1,027	4,368				
Pulmonary Disease	0,031	2,223	1,078	4,583				
Malignancy	0,007	2,776	1,321	5,832				
CPA	0,011	6,539	1,552	27,559				
SBP	0,002	0,975	0,960	0,991				
BUN	<0,001	1,023	1,016	1,030				
Creatinine	0,008	5,366	1,552	18,553				
eGFR	0,020	0,975	0,954	0,996				
ALT	0,019	1,007	1,001	1,012				
Hemoglobine	0,020	0,832	0,713	0,971				
Lactate*	0,001	3,268	1,584	6,741	0,004	2,928	1,412	6,071
sPESI≥1	0,008	15,058	2,057	110,209				
Hemodynamic Instability	0,001	3,222	1,620	6,409				
Risk Group*	0,001	0,515	0,354	0,751	0,005	0,558	0,373	0,836
Rhythm*	0,004	3,248	1,463	7,215				
QRS Duration*	0,010	1,018	1,004	1,031				
RS Time > 60ms*	<0,001	5,925	2,287	15,348	0,003	4,329	1,649	11,365

Table 2: Univariate and Multivariate Analysis of First Month Mortality

ID: **741**

Topic: **Cardiology » Electrocardiography and Non invasive electrocardiology**

Presentation Type: **Oral**

VENTRICULAR REPOLARIZATION INDEXES IN PATIENTS TREATED WITH HYDROXYCHLOROQUINE –AZITHROMYCIN COMBINATION FOR COVID-19

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Background: Combination of hydroxychloroquine and azithromycin for the treatment of coronavirus disease 2019 (COVID-19) carries increased risk of corrected QT (QTc) prolongation and cardiac arrhythmias.

Objective: To characterize the ventricular repolarization indexes which are associated with malignant ventricular arrhythmias in patients treated with hydroxychloroquine and concomitant azithromycin for COVID-19.

Method: A total of 81 patients who had hydroxychloroquine and azithromycin combination therapy due to possible or confirmed diagnosis of COVID-19 were included in the study. Baseline and control electrocardiograms (before and after treatment) were analyzed retrospectively. Tp-e interval, Tp-e / QT and Tp-e / QTc ratios, which are ventricular repolarization indexes, were calculated.

Results: While there was no significant increase in QTc interval in patients receiving combination therapy, there was a significant increase in ventricular repolarization indexes.

Conclusion: The increase in ventricular replarization indexes is associated with the risk of arrhythmia. In patients using QTc prolonging medication for COVID-19 treatment, only QTc monitoring may not be sufficient for follow-up for arrhythmia. Even if there is no prolongation in QTc, an increase in ventricular repolarization indexes can be seen.

Key words: hydroxychloroquine, azithromycin, QTc prolongation, Tp-e, repolarization, arrhythmia

ID: **773**

Topic: **Cardiology » Diagnosis and treatment of Pulmonary Hypertension**

Presentation Type: **Oral**

RELATION BETWEEN PULSE RATE AND PULMONARY EMBOLISM IN PATIENTS WITH MAJOR GASTROINTESTINAL ONCOLOGICAL SURGERY

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Abstract

Objective: In the literature, a clear relationship between heart rate during surgical operations and pulmonary embolism (PE) could not be established. The aim of this study was to investigate whether there is a relationship between heart rate and PE during surgery and other variables that contribute to it.

Methods: File records of 2553 patients who underwent gastrointestinal oncological surgery were screened retrospectively and 463 patients with adequate file records were included in the study. The presence of PE was determined by clinical and radiological identification of the patients. With these findings, 52 patients who met the PE criteria were identified. Demographic information, duration of operation, mean heart rate, high sensitive CRP (hs-CRP), D-dimer level and oxygen saturations of the patients were recorded.

Results: 52 PE and 412 non-PE patients were included in the study. D-dimer levels were found to be significantly increased in PE group. The duration of operation was significantly longer in the PE group, the mean heart rate was significantly lower, and the number of bradycardic patients (pulse <60 beats / min) was significantly higher. The mean duration of operation (OR: 1.014), mean heart rate during operation (OR: 0.925) and bradycardia (OR: 15.571) were found to be independently correlated with PE.
Conclusions: Bradycardia during surgery is closely related to PE

Oral Presentation Session

Surgical Perspectives in Congenital Cardiac Defects

Date: 30.10.2020 Time: 08:00 - 09:00 Hall: 5

ID: **286**

Topic: **Cardiovascular Surgery » Adult Congenital Heart Disease**

Presentation Type: **Oral**

GENDER-RELATED DIFFERENCES IN ADULTS WITH CONGENITAL HEART DEFECTS: A CALL FOR GENDER-SENSITIVE, SPECIALIZED AND INTEGRATIVE CARE

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Background:
Currently, far more than 1.2 - 2.7 million adults with congenital heart disease (ACHD) are expected to live across Europe. There are major research gaps regarding gender differences in patients with congenital heart defects (CHD), although there is evidence, that gender differences can influence treatment decisions and medical health care. Therefore, the aim of the present study was to assess and evaluate gender-specific differences in a large ACHD cohort.

Methods:
This cross-sectional, questionnaire-based study included 1597 ACHD (53.1% female; 37.5 ± 13.1 [18 - 86] years). Gender-related differences concerning diagnosis, comorbidities, the medical health care situation, individual need for counselling and quality of life (QOL) were assessed by patient reported outcome measures (PROM) from February to October 2018.

Results:
Significant differences were observed concerning the patient reported gender distribution with a female predominance in tetralogy of Fallot (p<.001), atrial septal defect (p<.001) and Ehlers-Danlos syndrome (p=.028) and a male predominance in coarctation of the aorta (p<.001) and aortic valve stenosis/ insufficiency (p=.001). The prevalence of comorbidities was significantly higher in men (p<.001), whereas women reported pulmonary hypertension (p<.001), cardiac arrhythmia (p<.001) and mental impairment (p=.003) more often. Male patients with CHD consulted their general practitioners (GP) more often than woman, if a medical problem concerning the CHD was suspected (52% vs. 48%; p<.001).
A total of 772 patients (403 female) stated that they had never been referred to an institution specialized in CHD. 36% of all respondents had no awareness of CHD specialized institutions (no gender differences). Both sexes had a high demand for counselling (see Table 1). In terms of QOL, women reported greater impairments than men, especially in the dimensions of everyday activities, pain/ physical complaints and anxiety/ depression (p<.001). This resulted in a generally lower perceived QOL in woman (77.0 ± 18.1) than men (79.3 ± 16.4) respectively (p=.01).

Conclusion:
There are major gender differences in patients with CHD. Based on the PROMs, gender differences in diagnosis, comorbidities, medical care, counselling needs and QOL must be considered in future medical treatment. In addition to CHD specialists, GPs must be sensitised about the importance of gender differences in ACHD, since they are the first contact persons when it comes to medical questions for the majority of ACHD, especially for men.

Keywords: congenital heart defect (CHD), gender differences, sex, quality of life, adults with congenital heart defects (ACHD)

ID: **445**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

FLUOROPOLYMER CARDIOVASCULAR PATCH VERSUS SALINE UTILIZATION FOR REDUCTION OF POSTOPERATIVE ADHESIONS IN STAGED CONGENITAL HEART SURGERY PROCEDURES

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Introduction

The formation of postoperative cardiac adhesions makes a repeat sternotomy time consuming and dangerous.
We aim to offer an option for this common surgical problem in congenital heart surgery.

Patients and Methods

Between January 2015 and December 2019, we evaluated 68 patients who underwent redo sternotomy, for staged congenital heart surgery procedures, according to two groups of only saline and fluoropolymer cardiovascular patch utilization for reduction of pericardial and retrosternal adhesion.

Evaluation of adhesion formation between the pericardium and the epicardium and also retrosternal adhesions were performed by the same surgeon according to opening times, major injuries and macroscopically appearance.

The following grading system was used to evaluate;

0: no adhesions;
1+: mild adhesions [easy to dissect manually];
2+: moderate adhesions [cohesive and can be dissected manually];
3+: severe adhesions [cohesive, requires sharp dissection] or nondissectable

As a result, the surgical barrier significantly reduced retrosternal adhesions. However, severe adhesions were observed between the epicardium and the pericardium in both groups.
According to comparison of opening times, surgical barrier group was significantly lower than saline group.
Major injuries were seen more frequently in saline group.
In surgical barrier group, epicardial architecture and landmarks were more difficult to identify because of tight adhesion of the material to epicardium.

Discussion

At the time of reoperation in cardiac procedures, the risks caused by retrosternal adhesions include injury to the right ventricle, aorta, right atrium, innominate vein, and any aortocoronary bypass graft. These injuries often result in severe hemorrhage with significant morbidity and mortality.

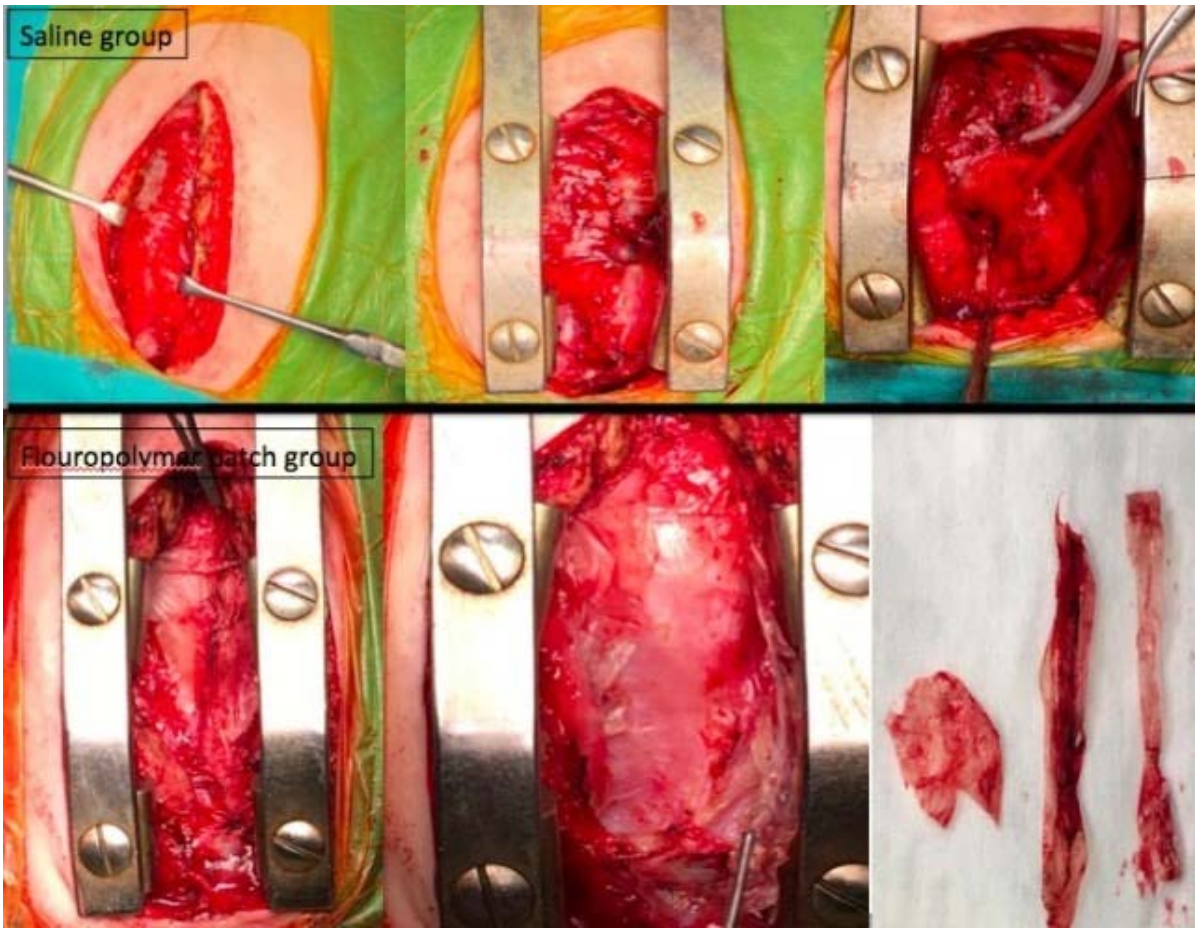
In addition to these injuries, adhesions between the pericardium and the epicardium after pericardial closure will obscure epicardial architecture and landmarks, making prevention of these adhesions important.

Fluoropolymer cardiovascular patch material can shorten operation times and reduce major injuries, but cannot prevent epicardial adhesions and can complicate identifying epicardial structures. Also it has a cost when compared to saline application.

Table 1: Demographic data of patients and comparative results

Saline group (n:29)	**Fluoropolymer patch group (n: 39)**	**P value**	
Mean age (years)	1,3 ± 0,5	1,6 ± 0,7	-
Weight (kg)	9,4 ± 2,3	10,3 ± 3,7	-
Duration times between two stages of procedures (months)	9,1	13,6	-
Repeat sternotomy procedure times (min)	54 ± 13	39 ± 11	P:0,001
Major injuries requiring stitch repair (n)	9	5	P:0,003
0: no adhesions; **1+: mild adhesions** **2+:moderate adhesions 3+:severe adhesions (n)**	4 7 16	11 19 9	P<0,005
Major bleeding (>10cc/kg/24h) after surgery (n)	3	2	P:0,07* (not statistically significant)

Figure 1: Intraoperative appearance of two strategies


Saline group
Flouropolymer patch group

ID: **629**

Topic: **Cardiology » Acute heart failure**

Presentation Type: **Oral**

TWO NEWBORNS WITH HEART FAILURE DUE TO VEIN OF GALEN ANEURYSMAL MALFORMATION

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BACKGROUND

Although higher rates have been reported in newborns, vein of Galen aneurysmal malformation (VGAM) accounts for 1% of all cerebral arteriovenous shunts. While it's diagnosed with mild symptoms in older ages, it can lead to severe clinical conditions in newborn progressing to systemic circulatory disorder and secondary multiorgan failures because of increased preload in the right heart, severe heart failure, pulmonary congestion and pulmonary hypertension.

METHODS

In this article, we wanted to share our experience with the management of two newborns with VGAM who have had different shunt flow.

Case 1

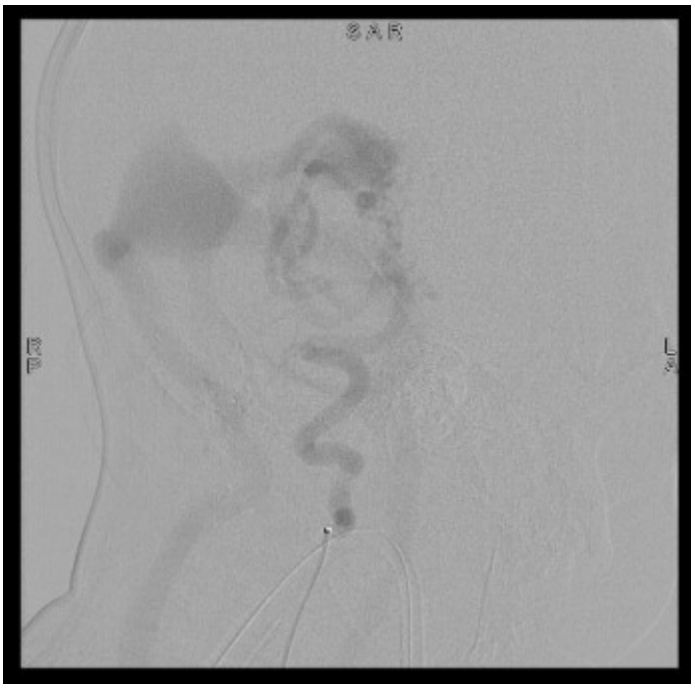
The baby girl who was born as 2640 gr at 38'th gestational week, was hospitalized in the neonatal intensive care unit (NICU) due to groaning and respiratory distress. On her physical examination, she had tachycardia and 2/6 systolic murmur in the pulmonary focus. Severe dilatation of the right heart cavities, small ASD and pulmonary hypertension were detected by echocardiography. VGAM was detected in cranial USG and MRI. Continuous murmur at cranial auscultation supported the diagnosis. The patient was started on digoxin, furosemide and spironolactone treatment and was followed up in the outpatient clinic. When the baby was 45 days old, a 4F sheath was placed percutaneously in the right femoral artery under general anesthesia. It was observed that there was one AV malformation opening to the Galen vein in the left vertebral artery injection, and an AV malformation originating from the anterior cerebral artery associated with the Galen vein in the left internal carotid injection. The two arteries feeding the aneurysm were successfully occluded. No bleeding or hydrocephalus developed. The patient's decongestive treatments were discontinued after the first month and she continues the outpatient follow-up.

Case 2

The baby boy who was born as 3000 g at term was accepted to the pediatric emergency service with a preliminary diagnosis of cardiopathy. Echocardiography revealed dilatation in the right heart, pulmonary hypertension, retrograde flow in the arcus aorta, and an increase in superior vena caval diameter. There was continuous murmur in fontanelle auscultation. Galen vein aneurysmal malformation and communican hydrocephalus were detected in cranial USG. The patient was started to treatment with furosemide, spironolactone and digoxin. The patient developed severe lung congestion during the follow-up in NICU and the symptoms of heart failure remained resistant to treatment.The liver and kidney functions were impaired. A dilutional hyponatremia developed. Serum sodium dropped to 118 meq / L. Tolvaptan was added to the treatment. The patient is still being followed up with tolvaptan treatment, and appropriate timing is being waited for interventional treatment.

CONCLUSION

VGAM should be considered in differential diagnosis in a newborn with dilatation of the right heart structures and heart failure. The greater the amounts of arteriovenous shunt of the aneurysm, the more difficult it is to control heart failure. In such patients, the presence of retrograde flow in the aortic arch should be sought by echocardiography, and fontanelle auscultation should be performed at physical examination. The main treatment is interventional aneurysm occlusion while surgical treatment is not recommended due to high mortality. In patients with poor general condition and planned to be waited until interventional treatment, tolvaptan should be kept in mind as a useful option.



ID: **182**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

PREDICTORS OF REOPENING THE STERNUM IN CHILDREN AFTER CARDIAC SURGERY

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Background:

Capillary leak syndrome can be severe in children after open-heart surgery which may hinder sternum closure and described as mediastinal tamponade. Reopening the sternum postoperatively may help maintaining hemodynamics and respiratory function. We looked for predictors that indicate the need for reopening the sternum.

Methods:

This is a retrospective cohort study in a single cardiac center experience between 2009 and 2015. All children who required emergent reopening the sternum in the pediatric cardiac ICU after cardiac surgery were grouped as index cases and matched to a control group for age, body weight, cardiac diagnosis, and type of repair (single vs biventricular). With a ratio of two control cases for each index case, variables related to cardiac output (predictors) were collected in a time line of 12, 6 hours, and just before reopening the sternum. Morbidities and mortality were also reviewed

Results:

Thirty-three index cases were compared with 63 control cases. Hospital stay and hospital-acquired infections were the same between the groups. Ventilation hours were longer in the index cases. Temperature gap more than 3°C, inotropic score more than 14, and acute kidney injury indicated by doubled blood urea nitrogen and creatinine were higher in the index group 6 hours before reopening the sternum. Mortality was more in the reopening sternum group with higher risk when extracorporeal membrane oxygenation was needed.

Conclusions:

Low cardiac output after cardiac surgery in children in form of temperature gap more than 3°C, inotropic score more than 14, and acute kidney injury may predict the need of reopening the sternum. Rate of mortality was higher in the reopening sternum group when extracorporeal membrane oxygenation was needed.

ID: **287**

Topic: **Cardiovascular Surgery » Adult Congenital Heart Disease**

Presentation Type: **Oral**

MEDICAL HEALTH SUPPLY OF ADULTS WITH CONGENITAL DISEASE ASSOCIATED WITH AORTIC INVOLVEMENT

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Background:
All patients with CHD are chronically ill from their cardiac disease. Even after a primarily successful operative or interventional treatment, many of them have residua and sequelae of their CHD.
Although there is an increasing evidence that aortic alterations become relevant in CHD the importance of aortopathy in CHD has been largely neglected.
This study is performed to determine the “real life” primary care of adults with CHD, focusing on patients with manifest aortopathy or at risk thereof.

Methods:
In a questionnaire-based cross-sectional survey, the “real life”-care of 563 consecutive adults with CHD (49.6 % female, mean age 35.8 ± 12.1, 18 - 86 years) was analyzed, comparing patients with and without risk or with manifest aortopathy.

Results:
Out of the 563 consecutively enrolled adults with CHD, 320 (56.8 %) had a risk of developing aortopathy and/or manifest aortopathy. Of the 320 patients at risk, 183 (32.5 % of total) had a proven aortopathy.

Basic medical care for CHD-independent medical problems is given by primary medical care providers (family doctors or general practitioners in 89.4 % (n = 286), internists in 13.4 % (n = 43), physicians of another specialty in 2.5 % (n = 8)). 95.3 % of these primary medical care providers are aware that their patient has CHD.

Even for CHD-specific health problems, basic medical care is given by a primary medical care provider (family doctor or general practitioner in 56.6 % (n = 181), internist in 18.4 % (n = 59)), while 96 (30.0 %) patients primarily consult a doctor of another specialty, including cardiology.

Only 32.8 % of CHD-patients answered positively to the question whether a general practitioner/family doctor had ever referred them to a CHD-specialist because of cardiac problems related to their CHD.
By contrast, the need and demand for advice of patients with CHD and aortopathy are high and mainly related to physical activity, employment and education, to pregnancy and inheritance, rehabilitation measures as well as health and life insurance.

Only 36 % of all patients who responded indicated that their information on specific care structures for CHD was sufficient. Furthermore, only 37 % of all patients who responded were aware of patient organizations for CHD.
Nevertheless, more than 90 % of all CHD-patient considered their satisfaction with medical care as very good or good.

Summary and Conclusion:
Aortic involvement in CHD has been largely neglected, although considerable negative effects on morbidity and mortality exist. As aortopathy becomes more important with increasing age and complexity of CHD, almost all affected CHD patients need lifelong medical advice and access to modern, scientifically based therapy and care concepts.
According to study-results primary care providers who have to advise CHD-patients about adequate diagnosis, treatment, prognosis and preventive measures, are mostly insufficiently informed about the specialized CHD facilities. In the future, experts and centers must become more visible and cooperate stronger with referring doctors to provide modern management in treatment and therapy. In addition, also affected patients are insufficiently informed in this respect

As a future goal, a better awareness of the CHD problem should be created among primary care physicians as well as among the patients concerned.

Keywords: congenital heart disease; adults with congenital heart disease; aortopathy, follow-up, care, prevention

ID: **290**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

ASSESSMENT OF THE PSYCHOLOGICAL SITUATION IN ADULTS WITH CONGENITAL HEART DISEASE

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Background:
Due to medical advances in diagnosis and treatment of congenital heart disease (CHD), the population of adults with congenital heart disease (ACHD) is constantly growing. The psychological effects of CHD had been widely neglected. Current evidence points towards an increased risk for mental health issues in ACHD, including depression, anxiety and posttraumatic stress disorder. The newly developed concept of illness identity, or the extent to which ACHD integrate their illness into their sense of self, may play an important role in explaining why some patients experience emotional distress in the face of their chronic illness, while others remain unaffected. The present study investigated the concept of illness identity in relation to clinical parameters, psychological functioning and information needs. Psychometric properties of the German version of the Illness Identity Questionnaire (IIQ-D) were examined.

Methods:
Self-report questionnaires on illness identity (IIQ-D), psychological functioning (HADS-D) and information needs were assessed within a representative sample of 229 ACHD (38 ± 12.5 [18-73]; 45% female) at the German Heart Center of Munich. Descriptive analyses and multiple regression models were conducted. Confirmatory Factor Analysis (CFA) was performed to validate the IIQ-D.

Results:
The IIQ-D demonstrated good reliability (Cronbach's $\alpha = 0.79–0.93$). The originally postulated four-factor structure could not be replicated in the current sample. Both, anatomic disease complexity (Wilk's $\lambda = .87$, $p < .01$) and functional status (Wilk's $\lambda = .87$, $p < .01$) significantly influenced illness identity. Illness identity accounted for unique variances in depression and anxiety: Maladaptive illness identity states (i.e., engulfment and rejection) were associated with higher emotional distress, whereas adaptive illness (i.e., acceptance and enrichment) identity states were linked to lower emotional distress. Further, engulfment ($t = 2.31$, $p = .02$) and enrichment ($t = 2.42$, $p = .01$) predicted higher information needs in ACHD.

Conclusions:
Illness Identity emerged as a strong predictor of emotional distress in ACHD. Findings raise the possibility that interventions designed to target a patient's illness identity may improve psychological well-being and cardiac outcomes in ACHD.

Keywords: congenital heart disease; adults with congenital heart disease; psychological situation; illness identity; prevention

ID: **817**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

Early And Midterm Results Of Aortic Coarctation Repair

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Background aim

Aortic coarctation is a congenital heart disease that is observed in 8-10% of all congenital heart diseases. Surgical techniques of resection end-to-end Anastomosis, subclavian flap aortoplasty and extented anostomosis aortoplasty are used in surgical repair. In this study, we will be sharing the surgical strategy and timing of aortic coarctation patients in our clinic, and our experience in this process.

Methods:

We included in this study 76 patients who underwent surgery for aortic coarctation in our pediatric cardiovascular surgery clinic between 2013-2020.

Results:

76 patients who underwent coarctation repair 52 were male and 24 were female. The average weight of the patients was 9.51 kg (min 2.5 kg - max 80 kg), the mean age was 868 days (min 8 days - max 14853 days). Among patients, 11 received sternotomy, 65 left posterolateral thoracotomy. 40 patients had resection and end-to-end anastomosis, 1 had subclavian flap aortoplasty and 32 extended anostomosis aortoplasty technique. The preoperative mean gradient of the patients was 55.36 mmHg (min 24mmHg- max 103mmHg) and the postoperative mean gradient was 14.72mmHg (min 40mmHg-max 0mmHg). 2 patients died and the mortality was 2.6%. In post-op follow-up of the patients, 1 intestinal perforation (1.3%), 2 pericardial effusions (2.6%), 2 recoarctation (2.6%), 1 cautery burn in arm (1.3%), 2 acute renal failure (2.6%) were encountered.

Conclusion:

Aortic coaractation is a congenital heart disease that can be treated both interventionally (endovascular) and surgically. Followin repair morbidity and mortality rates are low, hence routine follow up is essential and care should be taken in terms of complications that may develop in the late period.

ID: **512**

Topic: **Cardiovascular Surgery » Adult Congenital Heart Disease**

Presentation Type: **Oral**

CLOSING OF ASD IN CHECK VALVE DESIGN FOLLOWING CONE RECONSTRUCTION IN EBSTEIN'S ANOMALY: CASE REPORT OF AN ELDERLY PATIENT

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BACKGROUND

Cone reconstruction, first described by da Silva and modified by Dearani et al., is a method of forming a functional valve by converting the functionally inadequate Tricuspid valve to the cone shape using its own tissue. This method of treatment has been applied in recent years especially in pediatric patients who are not suitable for valve replacement.

In adult patients, anticoagulation after valve replacement is necessary and it is considered to be a preferable application in order to prevent complications.

METHODS

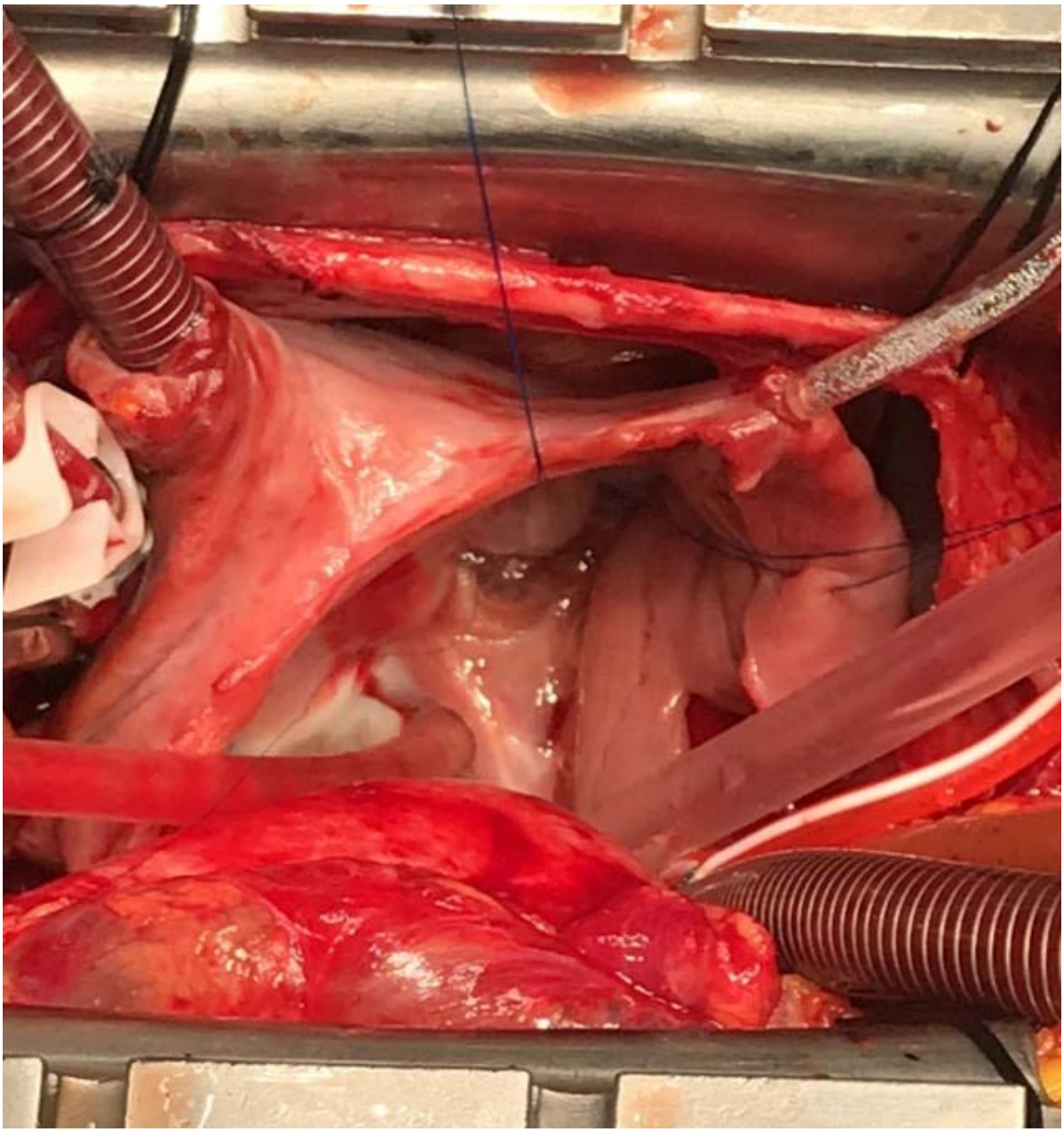
A 43-year-old female patient had been diagnosed with ASD at the external center where she had been going for dyspnea, palpitation, fatigue and cyanosis for the last year. ECG showed AF, RBBB, DIII-aVF T (-). In the ECO evaluation, EF 60%, aorta 26 mm, LA 23 mm, LV 30/20 mm, MI 1-2, right cavities were extremely wide (RV 51 mm, RA 85x55 mm), near tricuspid valve RV apex (Ebstein's anomaly), severe tricuspid failure, PAB 35 + 5 mmHg, ASD closure device in IAS.

RESULTS

The patient was operated on October 8, 2019. In exploration, tricuspid valves were located close to the apex of the ventricle and 1 small ASD of 1 cm diameter was observed. The tricuspid valves were completely released from the tissue of origin with the procedure described by da Silva, leaving only the papillary muscles. Thus, a new heart valve structure was created in the cone design. The cone was then sutured here following vertical plication. 33 mm flexible annuloplasty ring was placed on it. Leak test showed no failure. A pericardial patch was placed for the ASD in the check valve design that prevents passage to the right side. The one-way shunt was tested and there was no leakage. The patient was discharged on the 5th day without any problem

CONCLUSIONS

The cone procedure can be used worldwide in patients ranging from a few days old to infants to adults, regardless of age, and is considered the “gold standard for repairing Ebstein's anomaly. We believe that ASD is beneficial for our patient because it remains compensatory until the functional right ventricular volume expands after the new repair and does not allow the transition from left to right.



Oral Presentation Session

Eye Catching Cases in Vascular Surgery

Date: 20.10.2020 Time: 09:15 – 10:45 Hall: 5

ID: **589**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

VENA CAVAL SYNDROMES: ETIOPATHOGENESIS, DIAGNOSIS AND TREATMENT

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BACKGROUND & OBJECTIVE: Vena caval syndromes (VCSs) are a complex of clinical symptoms resulting in obstruction of blood flow in the superior (SVC) and inferior vena cava (IVC). Superior and inferior vena cava syndromes (SVCS and IVCS) can be caused by tumor invasion, extrinsic compression, diagnostic or therapeutic catheters, Behçet's disease and / or thrombophilia.

PATIENTS & METHODS: Eighty-three patients with a median age of 43 (range, 1-80) were followed up and treated for VCSs (SVCS, 43.4%: IVCS, 56.6%) in the last 1.5 decade. Diagnosis was confirmed by duplex ultrasound, magnetic resonance and computerized tomographic angiography and contrast angiography.

RESULTS: The male / female ratio was 2.3 / 1. Behçet's disease was the most common cause of VCSs in etiopathogenesis (46.9%). Others were tumor, congenital, aneurysm, and central venous catheters. According to angiographic classification, type III was the most common SVCS. One patient with IVCS had type 2 double IVC according to the Morita classification. One of the therapeutic modalities was bilateral jugulo-atrial and cava-caval bypass grafting, thromboendvenectomy (TEV) and pericardial patchplasty, EVAR for concomitant AAA, tumorectomy, thrombectomy, anticoagulation and compression therapy. The mean follow-up was 27 months. One patient required thrombectomy due to graft thrombosis (Figure 1).

CONCLUSIONS. Surgical treatment with long-term results for VCSs is an effective therapeutic modality. Although spiralized saphenous vein graft is an exclusive conduit, it is not always possible to obtain it, and therefore, expanded externally supported polytetrafluoroethylene grafts are a good option. As an important alternative, TEV and patchplasty should be kept in mind.

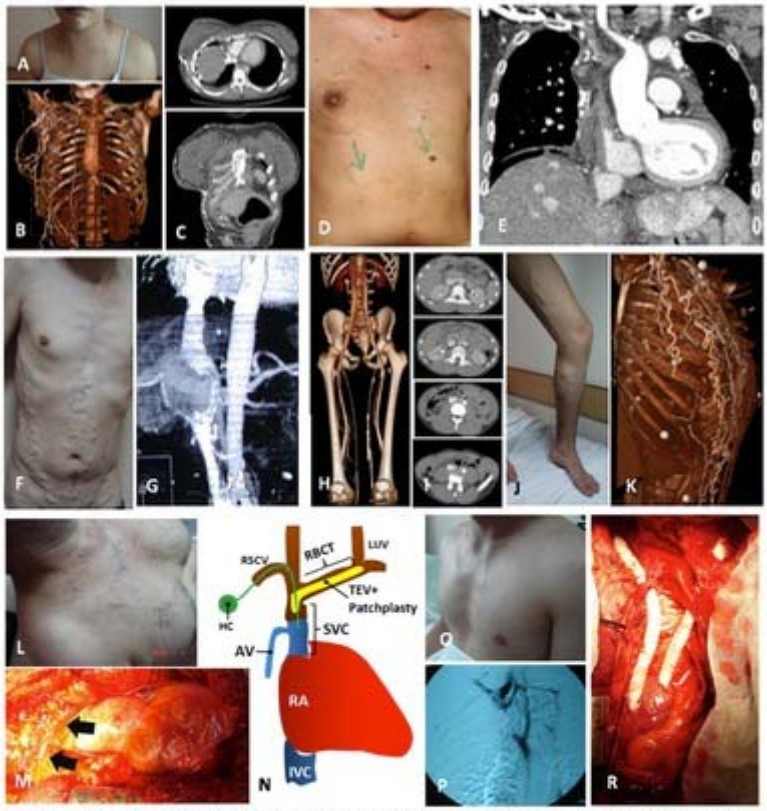

Figure 1. A CT venography of a 21-year-old female patient with SVCS due to Behçet's disease. Note the chest wall and epigastric venous collaterals due to extensive occlusion of the SVC, innominate and azygos (Type IV) (**A-C**). A CT venography of a 26-year-old man with SVCS and pulmonary artery aneurysm due to Behçet's disease. Note the clinical (arrows) and angiographic appearance (Type IV) of venous collaterals in the anterior chest wall of the patient (**D, E, K**). A 43-year-old patient with Behçet's disease presenting with diffuse venous collaterals in the anterior abdominal wall with aortic aneurysm, caval thrombosis and cardiac involvement (Type V according to Hamza's classification) (**F, G**). Clinical and angiographic appearance of a 15-year-old man with double IVC with no interiliac communication (Type 2A according to Morita classification) (**H-J**). Clinical presentation of venous collaterals in the neck and the upper region of chest due to SVC obstruction in a 55 - year - old man (**L**). A longitudinal venotomy throughout proximal SVC and left brachiocephalic trunk was performed via sternotomy and left neck incision. Hickman catheter was removed through two different incisions on the chest wall; thrombo-endvenectomy, and finally patchplasty with pericardial patch (black arrows) (**M, N**). A picture showing venous collaterals due to SVC obstruction in a 26-year-old male patient with Behçet's disease (**O**); the same patient's contrast angiogram (**P**) and operative field showing bilateral jugulo-atrial bypass grafting by expanded externally supported polytetrafluoroethylene (ePTFE, 10 mm in diameter) (**R**). SVCS, superior vena cava syndrome; RSCV, right subclavian vein; AV, azygos vein; RA, right atrium, SVC, superior vena cava; IVC, inferior vena cava; LIJV, left internal jugular vein; TEV, thrombo-endvenectomy; HC, Hickman catheter; LBCT, left brachiocephalic trunk;

ID: **580**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Carotid Artery Disease**

Presentation Type: **Oral**

POSTERIOR TRANSVERSE PLICATION PROCEDURE FOR TREATMENT OF INTERNAL CAROTID ARTERY KINKING DURING ENDARTERECTOMY

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OBJECTIVE

Rarely needs for shortening of the internal carotid artery (ICA) after carotid endarterectomy (CEA) to correct for kinking is still controversial. Although several procedures have been described, the impact on perioperative outcome remains unclear, and long-term clinical follow-up is insufficient. Shortening by resection has a theoretical risk for a twisted anastomosis and subsequent ICA thrombosis.

METHODS

In this case, we repaired a 62-years-old woman with symptomatic carotid disease who underwent the posterior transverse plication (PTP) during CEA in the presence of a significantly kink at mid part of ICA. Preoperative imaging consisted of duplex ultrasound and combined with computed tomographic angiography. We performed CEA+PTP+8mm patch grafting in the operation.

RESULTS

A 62-years-old woman underwent the surgery. None developed any neurological event and post-operative scan did not show any ICA thrombosis or stenosis from an ICA kinking after a follow-up of 2 months.

CONCLUSIONS

Posterior transverse plication provides an easy, simple and safe alternative shortening procedure without the need for a new anastomosis. However, restenosis at the plicature may restrain the long-term utility of carotid reconstruction.

ID: **568**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Oral**

STEM CELL APPLICATIONS IN ADVANCED PERIPHERAL ARTERIAL DISEASES IN OUR CLINIC

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Objective: In this study, we evaluated the results of our stem cell applications in patients with advanced ischemic stage and peripheral vascular disease that we could not perform surgery.

Methods: Patients who were examined and treated between June 2009 and June 2015 and who could not undergo revascularization due to distal vascular insufficiency were included in the study. Stem cells obtained by bone marrow aspiration were obtained in 30 patients (17 males, 13 females; mean age 56.2 years) and stem cells obtained from abdominal fat tissue were obtained in 30 patients (22 males, 8 females; mean age 58.9 years). Twenty patients with similar clinical symptoms and receiving only medical treatment were compared with a control group.

Results: The procedure was performed under local anesthesia in patients receiving bone marrow and under general anesthesia with mask in patients using fat cells. In all patients, the cells were processed in mobile units and rendered usable for approximately one hour. The obtained stem cells were injected intramuscularly with insulin injectors percutaneously to the target tissue to match the target tissue. 1-3-6 after treatment. Clinical status, ankle brachial indexes, saturation index measurements over skin-nail and exercise test and walking distance were evaluated.

Conclusion: Stem cell applications in patients who cannot be revascularized can improve the clinical status of the patient and increase the quality of life and walking distance. We think that amputation rates can be reduced with this application.

ID: **563**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

VENOUS INSUFFICIENY DEVELOPMENT DUE TO USING VENA SAPHENA MAGNA GRAFT DURING CORONARY ARTERY BYPASS SURGERY

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Objective:
Internal thoracic artery, is the primary graft for coronary artery bypass surgery (CABG) . Venous grafts are preferred as the second most frequent grafts. And saphenous vein (vena saphena magna) is the most frequently used one. Superficial and/or deep venous insufficiency may develop, or already present insufficiency may exacerbate following saphenous vein harvesting. (2)
We examined the development of lower extremity venous insufficiency following saphena magna harvesting with clinical examination and color venous doppler ultrasound findings.

Methods:
Patients that are operated in our clinic, who had saphenous vein grafts in addition to internal mammary artery grafts are categorised into three groups. First group included patients that had below the knee unilateral saphenous vein harvesting, patients that had both from below the knee and above the knee saphenous vein harvesting composed the second group. Third group composed of patients without saphenous vein harvesting. Clinical findings and color doppler ultrasound findings are compared pre and post operatively.

Results:
Increased venous insufficiency symptoms and findings are observed in patients who had CABG surgery and had saphenous vein harvesting during the first postoperative week. Color doppler ultrasound findings showed an increased venous reflux duration and velocity. All groups are re-examined one month postoperatively, all groups had statistically significant ($p<0,005$) ankle circumference difference, although group one had the lowest difference. Clinical symptoms regressed statistically significantly compared to the first week.

Table 1. Comparison of preoperative demographical and clinical datas, preoperative and postoperative values of CFV reflux and velocity (DM: diabetes mellitus, EF: ejection fraction, VSM: vena saphena magna, ICU: intensive care unit, CFV: common femoral vein)

Conclusions:
Clinical findings of venous insufficiency were found to be increased following saphenectomy during early postoperative period, and consistent with literature (3,4). Symptoms were found to decrease after one month postoperatively. Duplex ultrasound performed after one month postoperatively, showed even less chronic venous insufficiency findings.
More studies are needed to evaluate further the effects of saphenous vein harvesting. Our study showed that, saphenous vein harvesting during coronary artery bypass surgery does not cause chronic venous insufficiency and also decrease symptoms related to chronic venous insufficiency in the long run.

Keywords: Saphenectomy, chronic venous insufficiency, coronary artery bypass graft

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ID: **489**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Oral**

SUCCESSFUL PERCUTANEOUS REMOVAL OF RETAINED J-TIP GUIDEWIRE: A REPORT OF TWO CASES

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Background: Central vein catheterization using the Seldinger technique has long been utilized as an invasive procedure for vascular access. Possible complications associated with the procedure include hemothorax, pneumothorax, and vascular injury. Forgetting a J-tipped guidewire inside the vessel during the Seldinger procedure is a rare complication. Herein, we present two cases in whom a forgotten J-tipped guidewire was successfully removed under the guidance of angiography.

Patients and methods: A 49-year-old male patient lost consciousness after recurrent hypertensive cerebrovascular events and underwent CVC. The patient was subsequently taken to the catheterization laboratory and the position of the guidewire was assessed under fluoroscopy. Under the guidance of cardiac movement patterns, the distal tip of the guidewire was detected to be in the right iliac position. Further investigation revealed that the guidewire advanced into the right subclavian vein, and the J tip of the guidewire fused to the interior wall and became immobile. A right subclavian vein puncture was performed and sheathed with a 6 French gauge (F) catheter. An Amplatz Goose Neck snare kit (LifeTech SeQure, Shenzhen, China) was sent through the sheath in an attempt to snare the guidewire at the point at which it fused to the interior wall (Figure 2). After successfully catching the guidewire, compression was applied and cautious traction was exercised. Based on the presence of significant resistance to traction, rotation was applied to free the J tip from the vascular compartment. After several attempts during manipulation, the guidewire was successfully released (Figure 3). The guidewire was finally pulled out through the right subclavian vendor sheath (Tianck Medical Co. Shenzhen, China). After removal, it was observed that the extracted guidewire became epithelialized (Figure 4). After the procedure, a contrast agent was administered through the sheath to evaluate any venous wall rupture, cardiac rupture and/or tamponade.

Conclusion: In conclusion, to avoid such complications, it is necessary to establish a standard protocol and check list and to utilize patient-oriented teaching, and the procedure should be performed by - or at least under the guidance of - experienced physicians. We suggest that endovascular interventions should be considered safe and the procedure of choice for the removal of intravascular foreign bodies.

ID: **226**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Oral**

FEMOROFEMORAL CROSSOVER BYPASS GRAFT IN OCCLUSIONS OF THE RIGHT ILIOFEMORAL-POPLITEAL ARTERY AFTER PRIOR FAILED PERCUTANEUS ENDOVASCULAR INTERVENTION: CASE REPORT

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Background: Femorofemoral crossover bypass grafting is an alternative to anatomic reconstructions for patients with unilateral iliac arterial occlusive disease and a high surgical risk. And there is another way to treat patients with the same condition, called insitu bypass graft from great saphenous vein bypass. This case report can be used to understand the comparison of both methods.

Method: Retrospective, case report

Case Report: A 83-year-old man with a clinical history of rest pain at the right leg since ± 1 month before admitted to the hospital. At the beginning the pain was felt occasionally, especially if the patient was walking about 100 meters. The patient felt his right leg colder than the left side. The patient had triple anticoagulants for 14 days before admission. Medical history was notable for Cardiac arrythmia disease. Physical examination showed no important findings in the head and neck, irregular rhythm with rate about 110x per minute, no murmur and gallop. and no relevant findings in the abdomen. Examination of the right lower extremities demonstrated edema caused by chronic venous insufficiency and pain with vas 6-7, no palpable pulse on artery femoral, poplitea, tibialis anterior, and dorsalis pedis. There was functional incompetence of the right lower extremity with plantar pallor and capillary refill time more than 2 second. Iliac and femoral thrombectomy was initially attempted using a balloon catheter but not complete revascularized; hence, a crossover femorofemoral bypass was accomplished using a 6 mm Vascular graft helix. The immediate result was disappearance of the signs and symptoms of acute ischemia; The both pedal and posterior tibial pulses could be palpated. After discharged from the hospital, the patient had bleeding because of anticoagulant therapy, so the medicine was stopped. And then, because of necrotizing of the right foot, so below knee amputation surgery was performed. In the surgery, it was also performed popliteal thrombectomy and there was good result in the circulation. The operation was uneventful, but seven days after the operation there was occlusion on the iliofemoral artery that made the flap of the stump was became dark and infected by Acinetobacter baumanii.

Keywords: Femorofemoral bypass grafting, insitu bypass graft, unilateral iliac arterial occlusive disease.

ID: **584**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Oral**

IATROGENIC FEMORAL ARTERIOVENOUS FISTULA REPAIR

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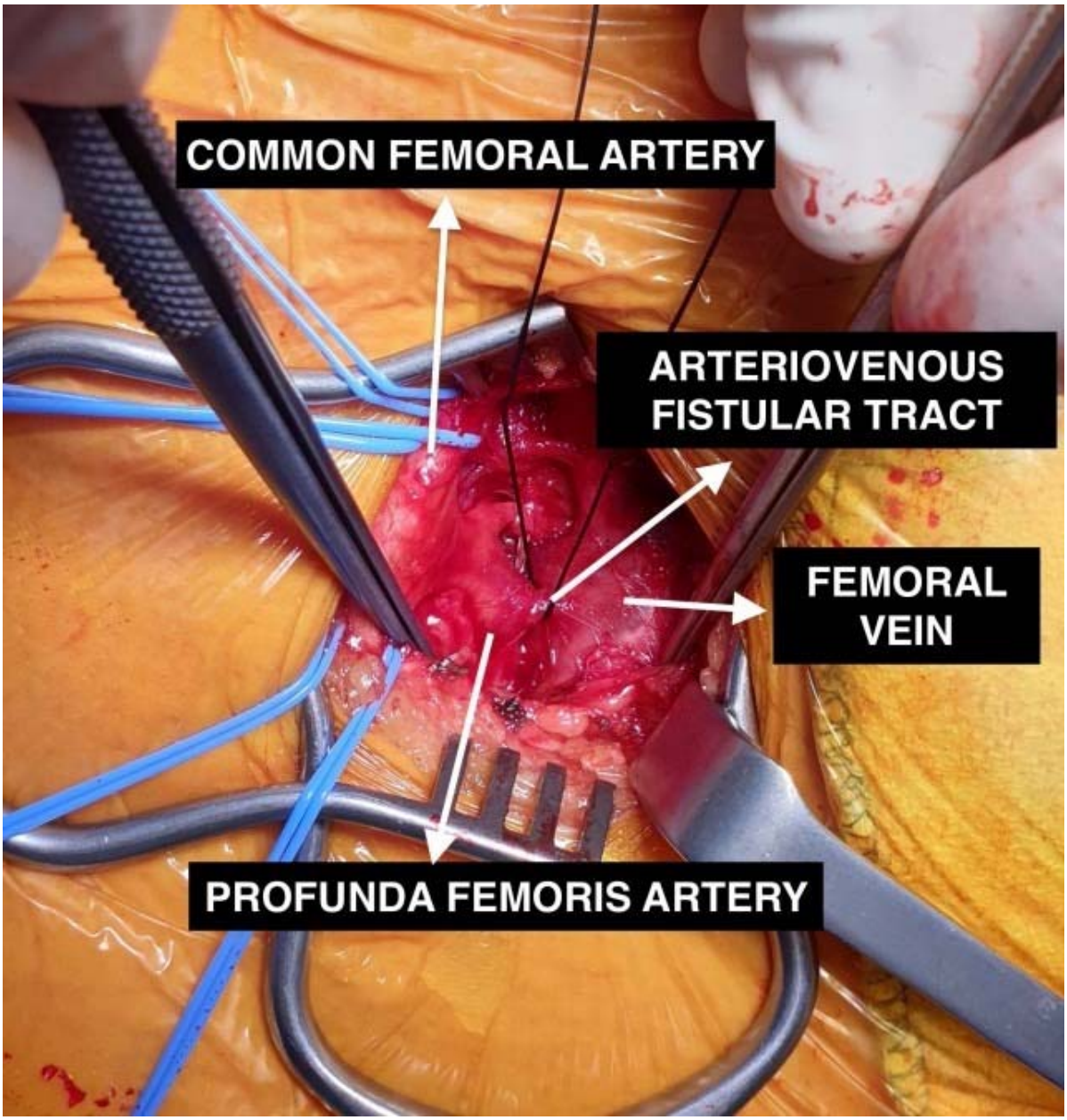
Introduction: Iatrogenic arteriovenous fistulas are a potentially harmful complication of cardiac catheterization. Although the likelihood of incidence increases with repeated interventions, the incidence and clinical outcomes are generally unknown. Recently, the incidence of radial artery use for cardiac catheterization is increasing. However, most cardiology clinics use the femoral artery, and various complications, especially pseudoaneurysm and arteriovenous fistula formation, are seen in this region due to the interference.

Case Report: A 54-year-old male patient presented to our clinic with complaints of pain in the right inguinal region and claudication at 200 meters in the right lower extremity. The patient's history revealed a history of cardiac catheterization using the right inguinal region 3 months ago. On physical examination, the distal pulses were palpable and there was a swelling of approximately 2 cm in the right inguinal region. Felt thrill during palpation and continuous murmur was heard during auscultation. On the right lower extremity arteriovenous doppler ultrasound, an arteriovenous fistula tract was observed between the femoral artery and the femoral vein, causing a continuous flow from the artery to the vein, approximately 6 mm in diameter and 15 mm in length. The patient was operated under local anesthesia after preoperative preparations were completed. Arteriovenous fistula was reached through a skin incision approximately 3 cm parallel to the inguinal ligament after marking the artery-vein-fistula tract using preoperative ultrasound. The fistula tract was rotated with right angle clamp and obliterated using 2 pieces of 2/0 silk braided sutures. Thrill disappeared by palpation and the procedure was completed.

Conclusion: Although iatrogenic arteriovenous fistulas are rare conditions, they must be treated with surgical or endovascular interventions without causing more serious complications.


COMMON FEMORAL ARTERY
ARTERIOVENOUS FISTULAR TRACT
FEMORAL VEIN
PROFUNDA FEMORIS ARTERY

ID: **166**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Oral**

SURGICAL TREATMENT IN A PATIENT WITH CELIAC ARTERY STENOSIS: AORTA-HEPATIC BYPASS

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OBJECTIVE

Chronic mesenteric ischemia is a rare disease caused by a decrease in blood flow to the gastrointestinal tract. Complaints occur especially after meals. In this study, we wanted to share the surgical treatment of a young patient who was not suitable for endovascular treatment and underwent saphenous vein and aorta-hepatic bypass due to multiple lesions.

METHODS

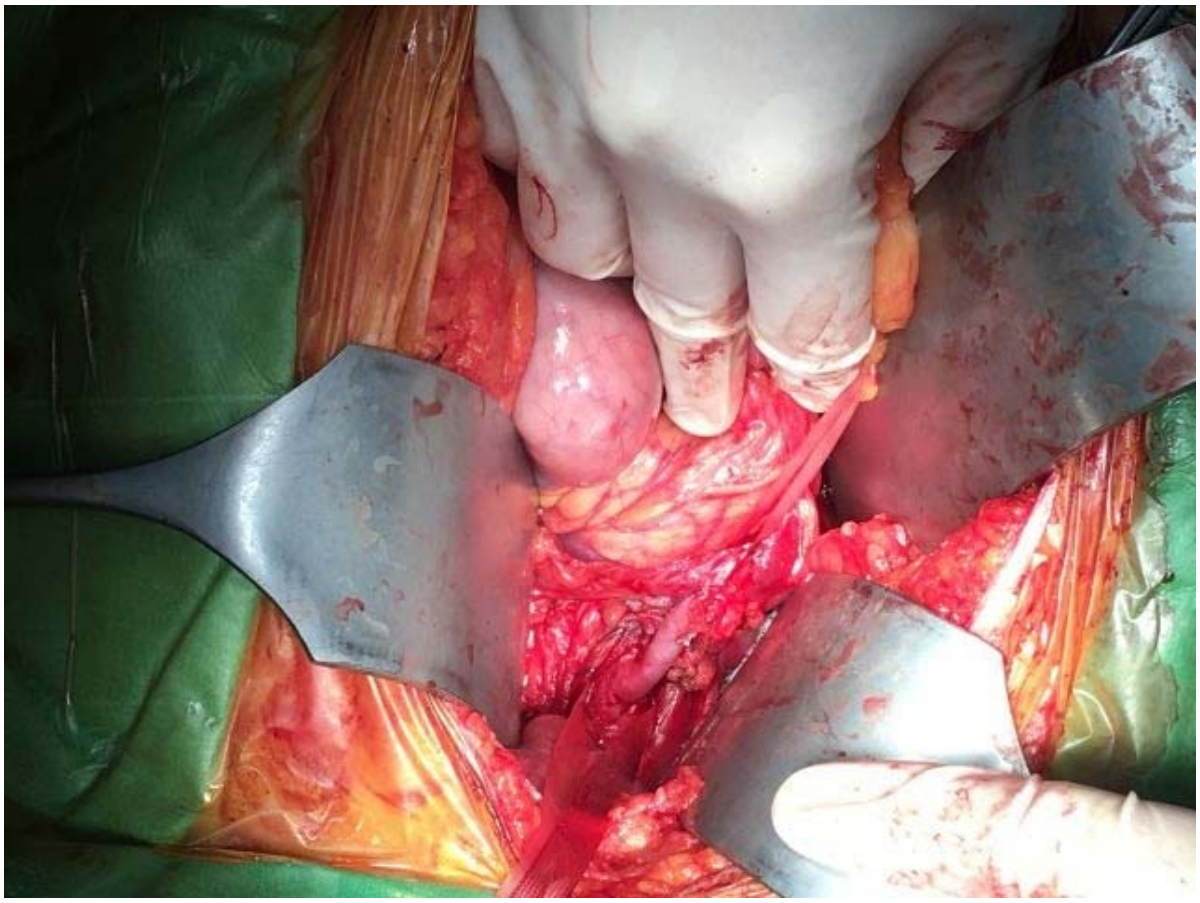
Upper midline vertical abdominal incision was performed under general anesthesia. Between supra celiac aorta and common hepatic artery, approximately 3 cm in length saphenous vein graft interposition was performed. Figure 1

RESULTS

Many diseases are known to cause chronic abdominal pain. It is very difficult to distinguish the etiology of abdominal pain, especially in women. She had recently complained of loss of appetite, weight loss and postprandial pain. She had the habit of using 2 packs of cigarettes a day for 20 years. The family had a history of peripheral arterial disease. The patient was presented with intestinal ischemia, arterial dorsalis pedis obstruction, celiac artery and superior mesenteric artery involvement. The coexistence of all these lesions in a 35-year-old female patient was interesting because of its rarity. In this patient, the presence of a long lesion beginning from the ostial celiac artery and the presence of disease in more than one localization made surgical treatment rather than endovascular intervention. The patient was discharged on the 4th postoperative day. Made a week and a month later in the follow-up examinations, the patient's complaints disappeared.

CONCLUSIONS

Chronic mesenteric ischemia should be kept in mind in patients with abdominal pain. Asymptomatic patients should be followed to avoid bowel infarction. Endovascular interventions have advantages such as shorter hospital stay, less invasive and lower complication rates compared to surgery. Surgical methods are a good alternative in cases that are not suitable for endovascular intervention.



ID: **117**

Topic: **Cardiovascular Surgery » Peripheral Arterial Disease**

Presentation Type: **Oral**

LERICHE SYNDROME A RARE CASE

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ABSTRACT

Leriche Syndrome (LS), also referred to as aortoiliac occlusive disease, is due to thrombotic occlusion of the abdominal aorta just above the site of its bifurcation is a rarely seen vascular disease, causes mortality, morbidity and 12% lower limb amputation. It is characterized by claudication in one or both legs lower extremities and absent or decreased femoral pulses. It should be considered in our differential diagnosis in any patient with complain of pain or weakness in the lower extremities.

INTRODUCTION

Leriche syndrome (LS), first described in 1923, is a rarely clinical condition with a high mortality, which usually occurs due to thrombosis at the aortic bifurcation. This chronic disease often takes decades to develop. It has a propensity to affect males with peripheral arterial disease in their third to sixth decade of life. The mortality and morbidity rates of LS have been reported to be between 4.5-5.0% and 18-20%, respectively. Leriche syndrome characteristically causes claudication in one or both lower extremities, absent or decreased femoral pulses, and erectile dysfunction in males. The main treatment is surgery in LS, but angioplasty and endovascular stenting are the other treatment options in cases of focal involvement. In this article, we aimed to present rarely case and also, we need to increase our attention and how to take part in our normal differential diagnosis thinking, any patient that presented with symptoms of paresis, pain, weaknes and bruising in both legs.

CASE REPORT

A 50-year-old female patient was come to our cardiovascular clinic with complaints of pain and weakness in her legs, intermittent claudication and bruising. Her medical history included hypertension and hyperlipidemia. She was taking her Antihypertensive and Hyperlipidemia drugs regularly. The patient had bruising in the right leg, pain, and coldness in both legs that had started approximately 1 month before and that had increased progressively. Her vital signs were as follows: blood pressure=160/100 mmHg, pulse=88 beats/min, respiratory rate=18/min, temperature=36.5°C, and oxygen saturation=98%.
Physical examination revealed undetectable pulselessness in both femoral arteries, coldness and there is small ulceration in the dorsal part of right foot with black discoloration of her right big toe and next two fingers.
Laboratory tests were as follows: WBC=14.34x10^3/mm3, Hg=16.9 g/dL, Hct=50.3%, Plt= 531×10^3 /mL, APTT=97.1 sec, INR=11.52, Troponin=0.48 ng/mL, creatinine=1.19 mg/dL. Both lower extremity arterial color Doppler examinations showed no blood flow to the main femoral arteries or distally. The occlusion was found to extend to the upper parts of the main femoral artery. Abdominal CT angiography revealed that There was no contrast enhancement in the distal aorta and in both common, external iliac arteries, in both femoral and popliteal arteries (Figure 1). The patient was diagnosed as having LS, the standard of care in the treatment of Leriche syndrome is surgical revascularization. We planned two surgical options, aorto-bifemoral bypass and axillo-bifemoral bypass. Unfortunately, she denied our operative treatment, so that she preferred to go abroad for surgical treatment. Now we are managing for medical treatment to reduce signs and symptoms.

FIGURE 1. CT-angiography with 3D-reconstruction demonstrating distal aortic occlusion.

ID: **501**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Oral**

WHAT SHOULD WE LOOK FOR? A DILEMMA IN THE ENDOVASCULAR GRAFTING INTERVENTION ON DIFFERENTIATION OF VASCULAR NATURE OF THE TRAUMATIC CHRONIC ARTERIOVENOUS FISTULA

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BACKGROUND

In patients with traumatic AVF, misleading images appear during angiography evaluation in chronic period. As a result, the procedures performed during endovascular treatment have resulted the physician in the wrong and complications with the ongoing process.

METHODS

A 35-year-old male patient was admitted to our clinic with complaints of pain in the left leg, skin discoloration, increase in diameter, tension and fatigue when walking.

In his history, he stated that 9 years ago he had a gunshot wound to his left knee and the color of his leg had darkened and his diameter had increased. Because of the same complaints, he went to hospital 8 years later and CT angiography revealed AVF at distal SFA level. It was learned that stent graft was placed between SFA and Popliteal artery under conventional angiography 1 year ago.

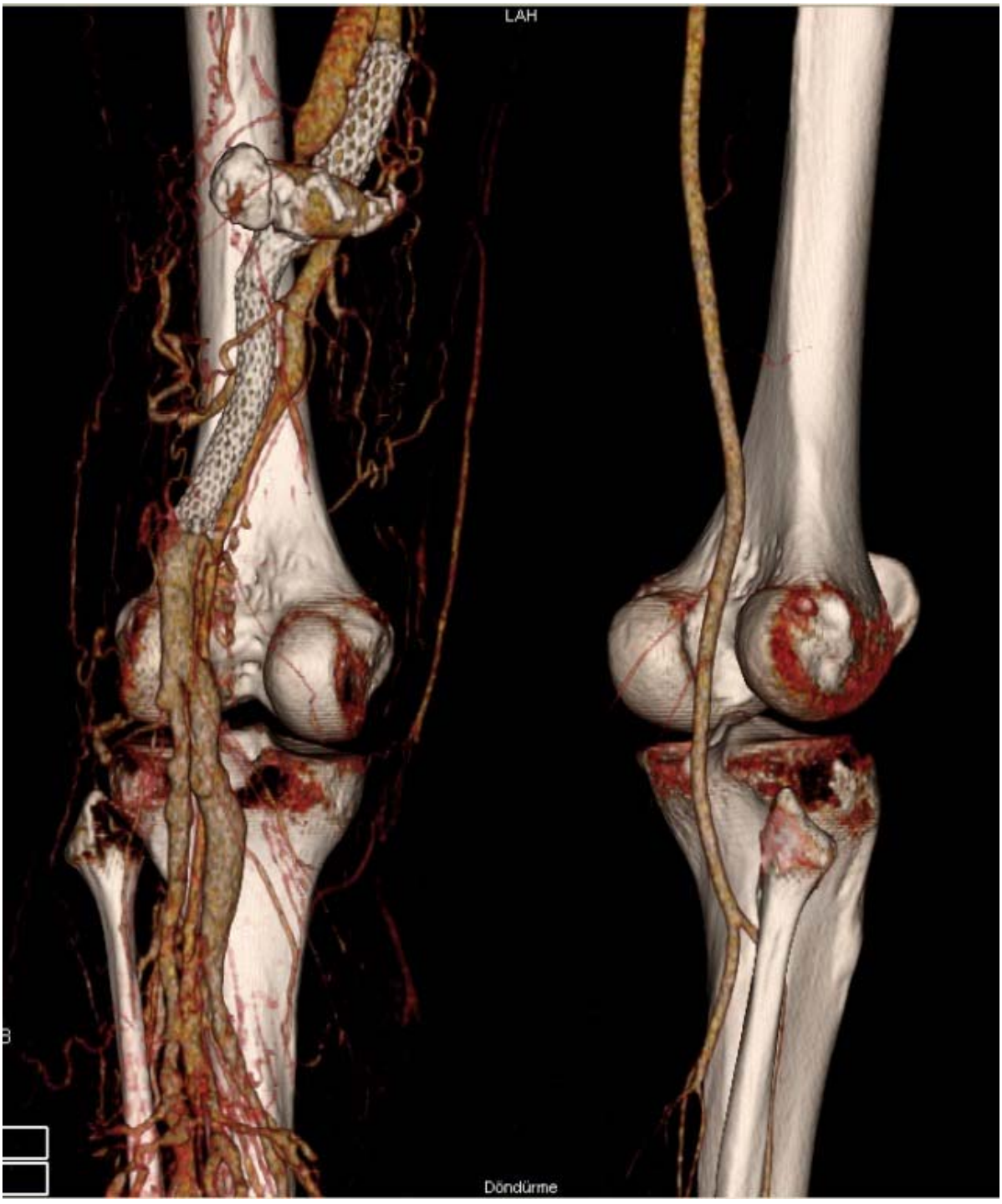
One year after the procedure, when the patient came to our clinic, CT angiography revealed that the endovascular stent graft was placed incorrectly between the artery and vein. However, it was learned that many of the physicians who had seen the patient before did not realize this situation.

RESULTS

Surgical exploration revealed widespread venous collaterals, and SFA continued with intervening stent graft and popliteal vein. On the other hand, SFV was observed with the popliteal artery associated with AV fistula. An 8 mm dacron graft was placed between the SFA and the proximal artery of the Popliteal artery. After increasing the diameter of the saphenous vein taken from the other leg between the popliteal vein and SFV, the endothelized graft was transposed as continuity of the stent.

CONCLUSIONS

Graft stents are the gold standard in the reconstruction of traumatic AVFs. (1) However, the direction of circulation changes due to the remodeling of the venous structure by arterialization by reverse flow. Blood oxygen saturation is high in the blood samples circulating in the venous collaterals due to increased arterial flow rate and remodeling in the patients who are evaluated in the late period and may cause false positive evaluations in arterial and vein detection by blood gas measurements. It is strongly recommended that CT angiography be performed with the guidance of anatomical structure and information.


LAH
Döndürme

Oral Presentation Session

Various Aspects of Pulmonary Hypertension

Date: 30.10.2020 Time: 09:30 - 10:30 Hall: 4

ID: **32**

Topic: **Cardiology » Diagnosis and treatment of Pulmonary Hypertension**

Presentation Type: **Oral**

ENDOCAN AS A NEW ENDOTHELIAL MARKER IN SECONDARY PULMONARY ARTERIAL HYPERTENSION

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Background: Secondary pulmonary arterial hypertension (SPAH) is associated by inflammation, endothelial dysfunction and vascular re-modeling. Endocan (endothelial cell specific molecule-1, ESM-1), is known a new endothelial dysfunction biomarker, could be a potential immunoinflammatory biomarker for SPAH. We aimed to investigate the possible link between serum endocan levels and SPAH.

Methods: We prospectively enrolled 56 SPAH patients and 72 control group. For each patient, echocardiography and serum endocan levels were assessed at hospital admission.

Results: Overall, there was not significant difference between the two groups in demographic data and general risk factors such as hyperlipidemia, hypertension, diabetes mellitus, coronary artery disease and smoking. Patients with SPAH had higher serum endocan levels (3.20 ng/dl (0.39-17.30) vs 1.72 ng/dl (0.20-8.64), p:0,02) than patients without SPAH. Serum endocan levels were significantly correlated with systolic pulmonary artery pressure and left atrial volume index (r:0,289, p<0,001, r: 0,495, p<0,001, respectively). Additional, serum endocan level and diastolic dysfunction (DD) were detected as independent risk factors of SPAH (p: 0.02, B: 1.27, CI: 1.09-1.48, p< 0.001, B: 0.05, CI: 0.02-0.17, respectively).

Conclusion: Resulting of this study, finding high serum endocal levels in patients with SPAH than without SPAH could be associated with immunoinflammatory mechanisms and endothelial dysfunction. However, there is a need for randomized controlled trials for understanding these mechanisms.
Keywords: Endocan, secondary pulmonary arterial hypertension, inflammation

ID: **244**

Topic: **Cardiology » Diagnosis and treatment of Pulmonary Hypertension**

Presentation Type: **Oral**

RECOVERY IN PULMONARY HYPERTENSION IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE AFTER KARAKOCA RESECTOR BALLOON TREATMENT: PRESENTATION OF FOUR CASES

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Introduction: Chronic obstructive pulmonary disease (COPD) is among the most common pulmonary diseases related to pulmonary hypertension (PH). Development of PH causes decrease in exercise capacity, deepening of hypoxemia and shortening of survival. Herein, we present four individuals admitted to our clinic for cardiovascular examination before and one month after resector balloon therapy.

Materials and Methods: The patients had severe or very severe COPD according to the GOLD staging system. The clinical features, spirometry and echocardiography were performed before and one month after Karakoca resector balloon therapy. One patient is female and other patients were male, and they are between 57 to 74 years of age. FEV1, FEV1/FVC, PEF, MEF25-75, Left and right heart diameters and systolic pulmonary artery pressures (sPAP) were measured before and one month after Karakoca resector balloon therapy.

Results: Clinical features, spirometric and echocardiographic measurements are presented in tables 1 and 2. None of patients had heart disease that may affect sPAP. After balloon therapy, one patient's score decreased to GOLD grade 1 from 3, other 3 patients' scores decreased to GOLD grade 3 from 4. The functional capacity of all patients increased after treatment. The sPAP at admission were 45, 50, 62, 67 mmHg and after balloon resector therapy were 24, 20, 22, 32 mmHg, respectively.

Discussion and Conclusion: The presented patients with severe or very severe COPD, had decrease in sPAP and GOLD scores and increase in functional capacity after Karakoca resector balloon. These findings are important in terms of morbidity and survival of this patient group. In COPD, although standard medical management can alleviate and retards the progression of the disease, complete clinical and spirometric recovery may not be possible. Karakoca resector balloon treatment, which has relatively lower popularity among cardiologists, may provide a more sustainable symptom relief, increased oxygen saturation and improvement in PH and spirometric measurements in COPD patients.

Table 1. Basic clinical and demographic characteristics of the patients

	Patient 1	Patient 2	Patient 3	Patient 4
Age (years)	74	72	68	57
Gender (F/M)	M	M	F	M
BMI (kg/m^2)	22,3	34.8	39,3	16
Smoking status (Packages years)	40	50	-	-
Hypertension	-	-	+	+
Diabetes	-	-	+	-
Chronic renal failure	-	-	-	+
Coronary artery disease	-	-	-	-
Heart rate (bpm)	80	95	102	65
ECG	Sinus rhythm	Sinus rhythm	Sinus tachycardia	Sinus rhythm
Hemoglobin (g/dl)	15,5	13,9	16,6	11,1
Platelets (10^3/μL)	185	295	186	268
WBC (10^3/μL)	5,53	8,3	5,6	17,1
Neutrophils (10^3/μL)	3,2	5,8	4,5	13,1
Urea (mg/dl)	40	33	36	80
Creatinine (mg/dl)	1.06	0.93	0.67	6.2
AST (U/L)	13	13	18	25
ALT (U/L)	7	21	26	10
CRP (mg/L)	12.5	9.7	10.1	13.2

Abbreviations: ALT, alanine aminotransferase; AST, aspartate aminotransferase; bpm, beats per minute; BMI, body mass index; CRP, C reactive protein; NYHA, New York Heart Association; WBC, white blood cell.

Table 2. Clinical scores, oxygen saturation and echocardiographic and spirometry measurements before and one month after resector balloon treatment

Parameters	Patient 1		Patient 2		Patient 3		Patient 4	
	Before	After	Before	After	Before	After	Before	After
Ejection fraction (%)	66	65	65	65	66	66	65	65
LVEDD (cm)	4.6	4.6	4.8	4.8	4.7	4.8	4.4	4.4
LA (cm)	3.8	3.9	4.0	4.1	3.6	3.5	4.3	4.2
RVEDD (cm)	4.0	3.9	4.8	4.7	4.2	4.1	3.7	3.7
RA (cm)	4.3	4.3	5.6	5.6	3.9	3.9	3.5	3.6
sPAP (mmHg)	45	24	50	20	62	22	67	32
FEV1 (L, %)	0.67, 25	0.87, 32	0.65, 24	0.78, 28	0.76, 41	1.42, 76	0.67, 22	1.01, 29
FEV1/FVC (%, % predicted)	35, 46	37, 49	48, 62	55, 72	63, 82	71, 92	36, 48	39, 51
PEF (L/sec, %)	3.52, 48	3.34, 46	2.0, 27	2.03, 28	2.13, 39	5.31, 98	2.97, 38	2.37, 28
MEF 25-75(L, %)	0.28, 14	0.32, 16	0.24, 11	0.37, 17	0.38, 14	0.85, 32	0.26, 12	0.38, 16
Oxygen saturation %	82	93	84	94	85	95	82	92
GOLD	4	3	4	3	3	1	4	3
NYHA class	3	2	2	1	3	1	4	2

Abbreviations: FEV, forced expiratory volume; FVC, functional vital capacity; GOLD, Global Initiative for Chronic Obstructive Lung Disease; LA, left atrium; LVEDD, left ventricular end diastolic diameter; MEF, maximum expiratory flow; NYHA, New York Heart Association; PEF, peak expiratory flow; RA, right atrium; RVEDD, right ventricular end diastolic diameter; sPAP, systolic pulmonary artery pressure.

ID: **10**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

NEUTROPHIL TO LYMPHOCYTE RATIO MAY BE HELPFUL IN PREDICTING THE COMPOSITION OF THE PERICARDIAL EFFUSION

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Background: Early and definitive diagnosis is crucial in patients with pericardial effusion. Pericardial effusions can be caused by a variety of disorders.

Objective: Pericardial fluid requires pericardiocentesis to identify whether the composition of the fluid is transudate or exudate. In this study, we compared the neutrophil to lymphocyte ratio (NLR) with pericardial fluid protein / serum protein ratio to discriminate transudates or exudates in pericardial fluid.

Methods: Seventy-five of 107 consecutive patients who were admitted to a university tertiary-care center with new-onset large pericardial effusions and undergone pericardiocentesis between were retrospectively analyzed. Clinical characteristics, final diagnosis, and pericardial fluid and serum total protein measurements, and hematological parameters were retrieved from the patient charts. Patients were divided into two groups with regard to the nature of the pericardial fluid as exudates and transudates according to the Light's criteria.

Results: Pericardial fluid protein / serum protein ratio (PP/SPR) and NLR were significantly higher in the exudates group than in the transudates group ($p<0.001$). ROC curve analysis revealed that NLR value of 3.93 was able to determine exudates pericardial fluid with 79.3% sensitivity, and 82.4% specificity (Figure 1).

Conclusion: NLR might be used to identify the nature of the pericardial fluid with a high sensitivity and specificity before pericardiocentesis.

Keywords: pericardial effusion, pericardiocentesis, neutrophil-to-lymphocyte ratio, transudates, exudates

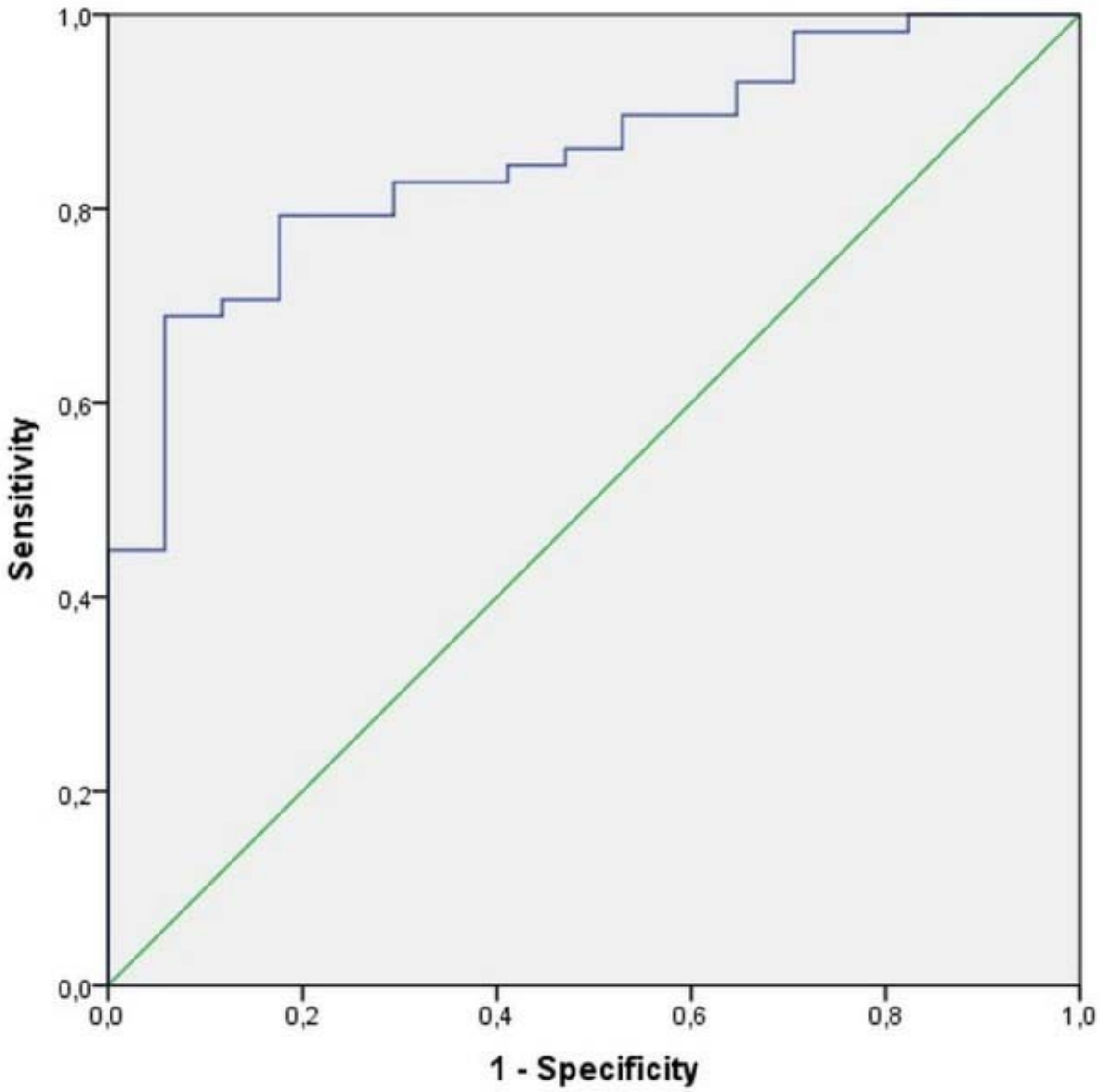

Figure 1: ROC of NLR for identifying pericardial effusions with exudate composition.

ID: **176**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

RELATIONSHIP BETWEEN PULMONARY ARTERIAL HYPERTENSION AND GALECTIN IN PATIENTS WITH HUMAN IMMUNODEFICIENCY VIRUS INFECTION

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Objectives: Pulmonary arterial hypertension (PAH)rate in patients with human immunodeficiency virus (HIV)infection is 2500 times greater than in general population. In patients with unexplained dyspnea, transthoracic echocardiography (TTE)is indicated to detect HIV-related cardiovascular complications. Previous studies showed that Galectin-3(Gal-3) levels increase in HIV infections. There were other studies in which high levels of Gal-3 were detected in patients with high pulmonary artery pressure(PAP).Our study was planned to determine predictive value of serum Gal-3 level for PAH presence in HIV-infected adults with dyspnea, by evaluating estimated systolic pulmonary artery pressure(PAPs),right ventricular(RV)functions and RV STRAIN findings via TTE.

Materials and Methods: The study was a single-center, prospective trial.30 adults with HIV infection with unexplained dyspnea underwent TTE. Participants were grouped due to mean Gal-3 level. Participants' estimated PAPs were calculated over tricuspid regurgitant flow maximum velocity (TRMAXVEL). Values over 30 mmHg were associated with elevated PAPs.

Results: 9(30%) of the participants were female and 21(70%) was male.3(10%) of the participants had estimated PAPs of over 30 mmHg. Mean Gal-3 level of these 3 participants was 20,26±3.41 ng/ml, mean TAPSE was 19,33±2.51,mean S' 14,26±2.73,mean RVFAC as 40,93±11.86,mean RVSTRAIN was -25,6±3.7.When groups were compared due to Gal-3 levels, there was not a significant difference between two groups for RV systolic function parameters. Participants with higher Gal-3 levels were older in age. Mean Gal-3 value of participants was found to be higher than mean Gal-3 level of healthy population.
Conclusion: Is high Gal-3 level an early finding in this group of patients without significant change in PAP and RV function? TTE follow-up parameters of these cases with high and low Gal-3 levels will help to test this hypothesis. Right heart catheterization was not administered, which is gold standard method for assessment of PAP. Due to low proportion of HIV in etiology of PAH, we can assume that study population is limited. Randomized studies with larger populations, different Gal-3 cut-off values and administering right heart catheterization may provide different information about relationship between Gal-3 levels and PAH in HIV.

Key Words: Pulmonary arterial hypertension, Galectin-3, TAPSE, HIV

ID: **46**

Topic: **Cardiovascular Surgery » Pulmonary Hypertension Summit**

Presentation Type: **Oral**

OUR SURGICAL EXPERIENCES IN ACUTE AND CHRONIC PULMONARY THROMBOEMBOLISM

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Objective

Acute and chronic pulmonary thromboembolism patients are difficult to treat and have high mortality. In this study, it was aimed to share our experiences about pulmonary thromboendarterectomy which is not performed much more than certain centers all over the world.

Methods

A total of 13 patients with acute pulmonary embolism and chronic thromboembolic pulmonary hypertension who were operated between February 2007 and July 2018 were included in the study. Nine of these patients were operated urgently and 4 were electively operated. All patients underwent pulmonary embolectomy and endarterectomy under open heart surgery conditions. The retrospective information of the patients was obtained from the hospital software system.

Results

Of the patients who underwent pulmonary thromboendarterectomy, 6 were female and 7 were male. The mean age was 58 (38-71). As a risk factor; 7 patients had deep vein thrombosis, 3 patients had recently undergone surgery, 2 patients had malignancy, 5 patients had smoking, 1 patient had Behçet and 1 patient had cerebrovascular event. 4 cases were exitus in the 0-26 day range. Three of them were acute pulmonary embolism and 1 patient with chronic thromboembolic pulmonary hypertension.

Conclusion

Early pulmonary artery pressures were significantly decreased in patients undergoing pulmonary thromboendarterectomy. Patients diagnosed with chronic thromboembolic pulmonary hypertension should be directed to surgical centers for pulmonary thromboendarterectomy without developing permanent arteriopathy. We believe that the timing of administration to patients diagnosed with acute pulmonary embolism is important. The mortality rate of patients who underwent surgery for delayed and hypotensive shock is high.

ID: **594**

Topic: **Cardiology » PI for SHD - ASD,VSD,PDA closure**

Presentation Type: **Oral**

THE RELATIONSHIP OF SYSTOLIC PULMONARY ARTERY PRESSURE AND MORTALITIY IN PATIENTS WITH INFECTIVE ENDOCARDITIS

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ondokuz Mayıs Üniversitesi, samsun, Turkey

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Table 1
Echocardiography finding n İn hospital mortality p N One-year mortality p Systolic Pulmonary artery pressure (SPAP) 145 145 Cardiac deaths Survived 46 35 (20- 75) 0,001 59 35 (20- 75) 0,001 99 30 (20- 90) 86 30 (20- 90)

Aim: Infective endocarditis; it is a disease with high mortality, which is defined as infection of endothelial surfaces in the heart (valve and endocardium), prosthetic heart valves and intracardiac devices (cardiac pacemaker, intracardiac defibrillator, ventricular support devices).Despite good progress of diagnosis and treatment of İnfective Endocarditis it remains high mortality ratio and the decision of treatment method is still not very clearly. In this study we sought that systolic Pulmonary artery pressure (SPAP) might be the indicator of mortality and we may use while assigning treatment.

Method: In our study, we retrospectively investigated 145 patients (≥18 years), had followed in our hospital with infective endocarditis between at 2005-2018 years. The data is analyzed via IBM SPSS V23.The suitability of data to normal distribution is examined by Shapiro Wilk. The T-test, Mann Whitney U test and Ki-square are utilized for statistical analysis. We assessed SPAP via 2D Transthoracic echocardiography and Continuous wave (CW) Doppler of the tricuspid regurgitation (TR) trace is utilized to measure the difference in pressures between the right chambers. The simplified Bernoulli equation (P = 4[TRmax]2) is used to calculate this pressure difference using peak TR velocity.

Results: The average of patient`s age was 53 and n:75(55%) was male. The most affected valve was mitral (48.3%) and the most commonly identified microorganism was staph aureus (41,4) in blood culture. The n:46(31%) patients had cardiac death in hospital and the mean SPAP was higher than survived group n:99(69%) (respectively 35mmhg and 30mmhg p:0.001)(Table 1) .In our study increasing in SPAP found strongly associated with in hospital and one year mortality in patients with infective endocarditis.

Conclusion: The SPAP might be useful while determining treatment method in patients with infective endocarditis and early surgical treatment should considered in increased SPAP.

ID: **555**

Topic: **Cardiology » Diagnosis and treatment of Pulmonary Hypertension**

Presentation Type: **Oral**

SYSTEMIC ARTERIAL STIFFNESS IN PATIENTS WITH PULMONARY HYPERTENSION

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Objective: Patients with pulmonary arterial hypertension (PAH) show endothelial dysfunction and increased stiffness in pulmonary arteries. Patients with PAH also show endothelial dysfunction in systemic arteries. Systemic arterial stiffness is an early marker of vascular damage. Pulse wave velocity (PWV) measured from the brachial artery is a reliable indicator of arterial stiffness. There aren't enough data in patients with PAH about arterial stiffness in systemic arteries. The aim of the study was to compare endothelial function and stiffness of systemic arteries between patients with PAH and healthy subjects. Also, we evaluate relationship with functional capacity and PWV in patients with PAH.

Methods: We were included patients with PAH and age-gender matched healthy subjects with a normal ambulatory blood pressure recording. 27 patients with PAH (age: 48.89 ± 18.35 years, 25.9 % male) and 27 healthy control subjects (age: 48.93 ± 18.09 years, 25.9 % male) were enrolled in the study. Pulse wave velocity (PWV) measured from the brachial artery.

Results: Compared with control subjects, patients with PAH had higher PWV (8.33±2.25 and 7.16 ± 1.94, respectively; p= 0.045). Also, PWV correlated distance covered in the 6-min walk test (r=-0.425; p=0.027) and functional class (r=0.513; p=0.006).

Conclusions: Patients with PAH have increased PWV in systemic arteries. Given the relationship between PWV and PAH severity, systemic arterial stiffness might serve as a marker of disease severity and response to treatment.

ID: **631**

Topic: **Cardiology » Diagnosis and treatment of Pulmonary Hypertension**

Presentation Type: **Oral**

WHAT'S THE PREDICTIVE VALUE OF FRAGMENTED QRS IN MORTALITY FOR CHRONIC PHASE OF PULMONARY THROMBOEMBOLISM?

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[2]*Manisa state hospital, Manisa, Turkey*

[3]*Mersin state hospital, MERSIN, Turkey*

[4]*Hospital of Ege University , Izmir, Turkey*

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Objective

Presence of fragmented QRS (fQRS) complex in a 12-lead electrocardiogram (ECG) has been shown to represent defect of intramyocardial conduction. Presence of f(QRS) on ECG related to high mortality in acute coronary syndrome and pulmonary thromboembolic patients. The aim of our study is to evaluate whether patients who already known as pulmonary thromboembolism (PTE) and have a fragmented QRS on their ECG to determine effects of all cause mortality in long term.

Method

The study group consisted of patients with already diagnosed as PTE and admitted to any department of Dokuz Eylul university hospital with any disease in 2013. This study was single-centre and retrospective designed and we had picked up 191 patients who met the criteria. The ECGs were found from the patient's registries and evaluated. We followed-up the patients 5 year and checked their survival time from the government death notification system.

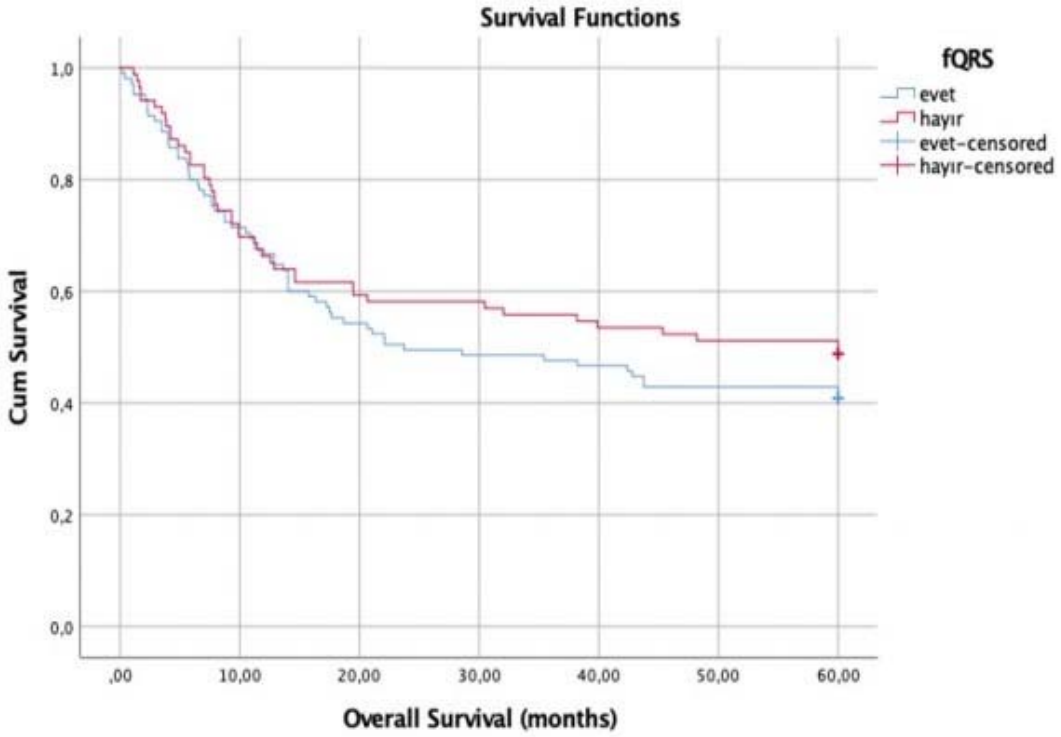
Results

We had reached 191 patients and 105 of them were female (%55). In 5 year follow-up, we checked what is the predictivity for mortality. The mortality was observed in 106 patients. There was f(QRS) parameter in 105 patients and 62 of them (%59) had died. However long-term mortality rate was higher in f(QRS) positive group, it was not statistically significant (p=0,317).

Conclusion

There are some trials show that presence of fQRS in the surface ECG in patients acute PTE indicates worse long-term mortality. We tried to show if a patient who already had diagnosis of pulmonary thromboembolism was admitted to hospital with any disease, if there is f(QRS) parameter on their ECG, in long term mortality they die more but it isn't significant statically.

Keywords: Fragmented QRS, pulmonary thromboembolism, long-term mortality


Survival Functions
fQRS
evet
hayır
evet-censored
hayır-censored
Cum Survival
1,0
0,8
0,6
0,4
0,2
0,0
,00
10,00
20,00
30,00
40,00
50,00
60,00
Overall Survival (months)

ID: **710**

Topic: **Cardiology » Hypertension and antihypertensive therapy**

Presentation Type: **Oral**

THE EFFECT OF CARDIAC REHABILITATION ON BLOOD PRESSURE, LEFT ATRIAL AND VENTRICULAR FUNCTIONS IN HYPERTENSIVE PATIENTS

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Background: Hypertension is associated with left ventricular (LV) hypertrophy, impaired LV relaxation and left atrial (LA) enlargement. Cardiac rehabilitation (CR) is associated with improved clinical outcomes in a broad spectrum of cardiac disease. The aim of our study was to determine the effect of CR on blood pressure (BP), LA and LV functions with speckle tracking echocardiography in hypertensive patients.

Methods: Among the 68 consecutive hypertensive patients, 30 patients (mean age: 30.7±5.9 years) who accepted to undergo CR program were included as CR group while the remaining 38 patients (mean age: 28.8±5.7 years) were included as control group. All patients underwent ambulatory BP monitoring and transthoracic echocardiography, which were repeated after CR program or 12 weeks later in the control group. In addition to conventional parameters, LA and LV functions were assessed by both speckle tracking and 3 dimensional echocardiography. N terminal pro-brain natriuretic peptide (NT-proBNP) of the patients were assessed before and after CR program.

Results: Although the basal ambulatory BP measures and NT-proBNP levels were similar between the groups, daily, day-time and night-time BP measures and NT-proBNP levels significantly decreased in the CR group after CR program and they had significantly lower daily systolic and daytime diastolic BP and daily, day-time and night-time diastolic BP load and NT-proBNP levels than control group. There were significant increases in LA reservoir strain and LV global longitudinal strain in CR group after CR while no significant increases were observed in controls.

Conclusion: CR improves LA and LV strain measures while lowering ambulatory BP measures and may be incorporated in routine management of hypertensive patients.

	Cardiac rehabilitation group (n= 30)			Controls (n=38)				
	Before rehabilitation	After rehabilitation	P1	Baseline	At the 12th week	P2	P3	P4
Daily systolic BP (mmHg)	130±11	126±9	**0.006**	130±10	129±12	0.845	0.808	**0.046**
Daily diastolic BP (mmHg)	82±8	78±7	**<0.001**	82±10	80±9	0.087	0.945	0.063
Day-time systolic BP (mmHg)	132±12	128±9	**0.024**	132±12	131±10	0.612	0.900	0.079
Day-time diastolic BP (mmHg)	84±8	80±7	**0.002**	85±11	84±11	0.847	0.690	**0.045**
Night-time systolic BP (mmHg)	126±12	121±10	**0.005**	123±10	124±9	0.774	0.178	0.427
Night-time diastolic BP (mmHg)	77±8	73±8	**0.003**	77±10	75±11	0.098	0.957	0.154
Daily systolic BP load (%)	34±23	26±21	**0.026**	30±22	30±24	0.899	0.528	0.425
Daily diastolic BP load (%)	33±22	25±18	**0.008**	38± 28	34±22	0.064	0.368	**0.023**
Day-time systolic BP load (%)	32±25	24±20	**0.027**	29±25	27±29	0.102	0.777	0.287
Day-time diastolic BP load (%)	32±22	25±18	**0.039**	36±28	31±26	0.177	0.477	**0.048**
Night-time systolic BP load (%)	47±34	33±31	**0.023**	35±28	37±29	0.584	0.114	0.805

	Cardiac rehabilitation group (n= 30)			Controls (n=38)				
	Before rehabilitation	After rehabilitation	P1	Baseline	At the 12th week	P2	P3	P4
LAVmax (mL)	52.3±14.7	50.5±14.1	0.333	47.5±9.9	46.8±8.9	0.576	0.113	0.482
LAVmin (mL)	20.2±9.4	19.5±9.4	0.602	18.1±5.7	18.8±7.2	0.660	0.252	0.396
LAVpreA (mL)	32.1±13.3	32.6±13.9	0.757	31.5±7.5	32.3±8.7	0.590	0.829	0.913
LA TSV (mL)	31.5±8.4	31.0±8.4	0.623	29.4±7.9	30.1±6.1	0.477	0.291	0.408
LA TEF (%)	62.6±10.4	62.5±9.8	0.943	61.8±9.1	60.9±9.6	0.648	0.743	0.538
LA PSV (mL)	20.2±6.7	18.2±5.6	0.232	16.1±7.6	17.6±5.8	0.305	0.114	0.402
LA PEF (%)	40±12.5	37.1±11.7	0.263	33.5±11.9	35.5±8.9	0.318	0.064	0.196
LA ASV (mL)	11.7±5.9	13.1±7.2	0.209	13.5±5.3	13.1±5.0	0.890	0.194	0.868
LA AEF (%)	36.8±11.8	39.8±11.9	0.992	42.5±13.2	40.6±12.7	0.788	0.074	0.760
Expansion index	155.7±76.4	158±65.2	0.753	162±66.6	162±71.6	0.908	0.398	0.557
LA reservoir strain (%)	31.4±8.8	34.7±9.6	**0.020**	34.9±10	33.7±14.6	0.546	0.133	0.818
LA conduit strain (%)	13.9±6	15.9±8.9	0.149	17.2±7.6	18.4±7.6	0.391	0.064	0.098
LVGLS (-%)	19.8±2.5	20.7±2.2	**0.002**	20.0±1.8	20.4±2.1	0.105	0.634	0.239

ID: **742**

Topic: **Cardiovascular Surgery » Pulmonary Hypertension Summit**

Presentation Type: **Oral**

ROLE OF COPEPTIN IN PREDICTING OUTCOME IN PATIENTS WITH PULMONARY HYPERTENSION

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Background

Pulmonary hypertension (PH) is a deadly disease, leading to right ventricular (RV) failure. The co-secreted copeptin serves as surrogate for plasma vasopressin and increases in various cardiovascular diseases. Nevertheless, copeptin has been studied less extensively in PH. This study aims to determine the predictive value of the copeptin for PH-related death and/or hospitalization at 12-month follow-up.

Methods

Total of 34 World Health Organization group 1 PH patients and 40 age- and gender-matched healthy controls were included. Patients were clinically followed-up to 12 months and were divided into two groups; patients reaching adverse end-point (PH-related death and/or hospitalization) and patients with stable condition. Baseline copeptin levels were compared with clinical, biochemical, echocardiographic and hemodynamic parameters between the two groups. ROC curve analysis was used to evaluate the prognostic value of copeptin concentrations in PH.

Results

Serum copeptin levels were significantly elevated in PH patients compared to healthy controls (10.6 vs. 1.7 pmol/l, $p<0.001$). Among the 34 included PH patients the pre-specified end-point occurred in 9 (26.5% event rate). There were higher baseline levels of copeptin in patients who reached the adverse end-point (18.4 vs. 8.4 pmol/l, $p=0.049$). They also had higher pulmonary vascular resistance, right ventricular end-diastolic diameter, N-terminal pro-brain natriuretic peptide and mean pulmonary artery pressure and lower 6 minute walking test, left ventricular ejection fraction, Tricuspid annular plane systolic excursion, RV fractional area change and TD cardiac output (Table 1). ROC curve analysis in the discovery cohort identified a serum copeptin cut-off threshold of 12.9 pmol/l as the best fit for predicting adverse end-point (AUC = 0.800, 95% CI = 0.608-0.992, $p=0.008$) (Figure 1).

Conclusions

In patients who reaching adverse end-point had elevated copeptin levels in our study. We suggest that copeptin may potentially be a prognostic biomarker for PH patients.

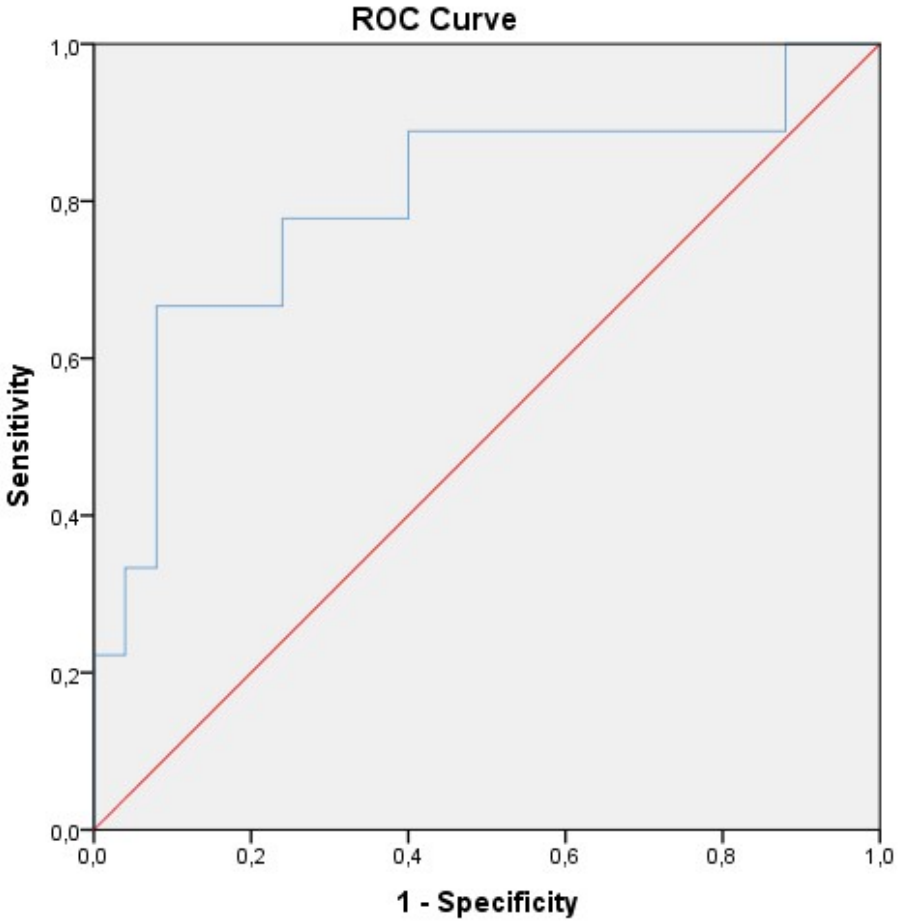
ROC Curve
Sensitivity
1 - Specificity
1,0
0,8
0,6
0,4
0,2
0,0
0,0
0,2
0,4
0,6
0,8
1,0

Table 1. Baseline clinical, laboratory and echocardiographic characteristics according to adverse end-point

	Patients reaching adverse end-point (n = 9)		Patients with stable condition (n = 25)		p
	Median	(IQR)	Median	(IQR)	
Age (years)*	50.0	(37.0-52.0)	49.0	(40.0-58.0)	0.565 [b]
BMI (kg/m2)*	25.7	(25.1-26.4)	25.8	(24.4-27.7)	0.818 [b]
SvO2 (%)	63.0	(58.0-70.0)	68.0	(63.0-71.0)	0.539 [a]
6MWT (m)	273.0	(263.0-295.0)	310.0	(284.0-358.0)	0.005 [a]
Borg dyspnoea score	6.0	(4.0-8.0)	4.0	(3.0-4.0)	0.050 [a]
LVEF (%)	56.0	(55.0-57.0)	60.0	(58.0-63.0)	0.008 [a]
mRAP (mmHg)	16.0	(14.0-18.0)	11.0	(10.0-15.0)	0.072 [a]
RVEDD (mm)	48.0	(43.0-52.0)	38.0	(34.0-47.0)	0.019 [a]
sPAP (mmHg) *	77.3 ± 11.2		72.6 ± 8.8		0.208 [b]
RV fractional area change (%) *	27.2 ± 6.9		31.5 ± 5.4		0.041 [b]
TAPSE (mm) *	16.9 ± 2.7		19.0 ± 2.4		0.038 [b]
Tricuspid TDI Sm velocity (cm/s) *	9.0 ± 2.6		10.6 ± 3.1		0.169 [b]
mPAP (cath, mmHg) *	48.9 ± 6.3		44.6 ± 4.6		0.037 [b]
PVR (dyn·sec·cm^{-5}) *	865.4 ± 349.6		539.4 ± 275.1		0.008 [b]
TD cardiac output (L/ min)	4.6 ± 1.4		5.6 ± 2.5		0.033 [b]
Creatinine (mg/dl)*	0.9 ± 0.2		0.9 ± 0.1		0.852 [b]
NT-proBNP (pg/ml)*	5197.1 ± 11363.9		821.2 ± 774.9		0.046 [b]
Copeptin (pmol/l)	18.4 (10.5-20.5)		8.4 (6.8-13.7)		0.049 [a]

Oral Presentation Session

Experiences in Congenital Heart Defects

Date: 30.10.2020 Time: 10:45 – 11:45 Hall: 4

ID: **212**

Topic: **Cardiology » PI for SHD - Others**

Presentation Type: **Oral**

PLATYPNEA-ORTHODOXY SYNDROME ABOUT TWO CASES

(RARE INDICATION OF FOP CLOSURE)

Zeıne El Abasse, Bah Ali Rida

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**Corresponding Author (abassedr@gmail.com)*

Platypnea-Orthodoxy Syndrome is a rare cause of refractory hypoxemia Positional. The pathophysiological hypotheses involve a change in position of the intra-auricular septum, with the mouth of the orifice of the inferior vena cava in the axis of the permeable oval foramen when standing.
The diagnosis is evoked by the demonstration, using a pulse oximeter, of a desaturation in oxygen, in orthostatism correcting in decubitus, often associated with a factor favoring anatomy and confirmed by an echocardiography of contrast of contrast Trans esophageal preference. Treatment is based on prosthetic closure of the shunt percutaneously with immediate results, often spectacular, on dyspnea as well as hematosis.

Orthopnea, exacerbation of dyspnea when lying down and its improvement by Sitting position is a common and caricatural symptom of heart failure. Paradoxically, the syndrome of platypnea-Orthodoxy - consequence of a right-left intracardiac shunt
Apart from any increase in pulmonary pressure - causes postural hypoxemia worsening in sitting position and orthostatism with often cyanosis and improving dramatically in supine position.

We present two observations OF Platypnea-Orthodoxy Syndrome:
OBSERVATION 1:
Patient aged 53 years old, admitted for dyspnea in standing position for a few days motivating his consultation with cardiological emergencies.
On Clinical Examination: Patient hemodynamic and respiratory stable. good saturation on its admission, asymptomatic at rest.
Electrocardiogram: Normal outside of a sinus tachycardia.
Echo transthoracic: Good bi-ventricular function, fevg 65%, we will note a 6mm and 9mm Asia with a right left shunt, with a positive bubble test in echo transthoracic and transesophageal with passage of more than 30 bubbles.
This result led to a saturation uptake which found desaturation in a standing position of 65% which disappears in the position of decubitus leading a confirmation of platypnea-Orthodoxy syndrome.

OBSERVATION 2:
60-year-old asthmatic patient known for basic therapy, hypertensive, hospitalized for a dyspnea assessment.
On clinical examination, she found a patient with dyspnea at the slightest effort but asymptomatic at rest, good hemodynamic consistency with 95% saturation at rest in supine position.
With a desaturation in the standing position 85% suspecting platypnea-orthodoxy syndrome.

Electrocardiogram: RRS at 75 bpm, incomplete right block without secondary repolarization disorder.
Echo Transthoracic: Objective an ASIA of 8x9 mm, without visualized color shunt leading to the realization of bubble test in Echo Transthoracic and transesophageal confirming the existence of a FOP with passage more than 30 bubbles.

Conclusion: Platypnea-Orthodoxy Syndrome is a rare clinical entity to think about when faced with
Refractory and positional hypoxemia associated with an anatomical factor favoring aortic, vertebral, or pleuro-parenchymatous and which requires for its diagnosis simple technical means (contrast echocardiography, ideally Trans esophageal). Percutaneous treatment allows

dramatic and lasting clinical improvement as well as prevention of paradoxical embolism, at the cost of rare complications. Injections of microbubbles into the inferior vena cava If, for technical reasons, the echocardiography is not contributory, an angiography can be considered.

ID: **2**

Topic: **Cardiology » Preventive cardiology**

Presentation Type: **Oral**

PATENT FORAMEN OVALE IS ASSOCIATED WITH NEUTROPHIL / LYMPHOCYTE RATIO

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INTRODUCTION: Patent foramen ovale (PFO) poses a risk for cryptogenic stroke. Increased inflammatory status plays an important role in the pathophysiology of many cardiovascular diseases. Neutrophil / lymphocyte ratio (NLR) is a new hematological parameter indicating inflammatory status. The aim of this study was to evaluate NLR in patients with PFO.

METHOD: In this retrospective study, 60 patients with PFO (mean age 33±13 years, 32 male) on transesophageal echocardiography and 60 healthy controls of similar age and sex were included. Complete blood count values of all patients were analyzed. None of the patients had a recent history of inflammatory disease or acute infection.

RESULTS: There was no statistically significant difference between the two groups in terms of basic clinical features. NLR was significantly higher in patients with PFO than controls (2.25 ± 1.3 and 1.82 ± 0.61, p = 0.04). Pearson correlation analysis showed a correlation between PFO and NLR (r=0.2 p=0.04).

DISCUSSION: NLR was high in patients with PFO and there was a correlation between them. NLR may be a predictor of cryptogenic stroke risk in patients with PFO.

ID: **103**

Topic: **Cardiology » PI for SHD - ASD,VSD,PDA closure**

Presentation Type: **Oral**

COMPARISON OF THE ASD DEFECT SIZE AND DEVICE WAIST DIAMETER SIZES AFTER PERCUTANEOUS ASD CLOSURE IN CHILDREN

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Introduction:
This study aimed to compare the Atrial Septal Defect (ASD) sizes and device waist diameter sizes after percutaneous ASD closure in children whether it correlates or not and to discuss our institutional experience

Material and methods:
The present study included children with ASD who were admitted to the Erciyes University Pediatric Cardiology Unit between the dates October 2018 to October 2019 and performed percutaneous ASD closure. We gathered demographic data, also angiographic data of these patients such as balloon sizing diameter, mean pulmonary arterial pressure, procedure and fluoroscopy duration, radiation dosage and defect diameters in transthoracic echocardiography (TTE) and transesophageal echocardiography (TEE), types of devices, device sizes including total disc diameters and waist diameters and complications were gathered retrospectively from patient records.

Result:
We evaluated 36 children with the median age of 4,75 years. The value of the mean defect size measured by echocardiography was 12,7 ± 5,14 mm. Balloon sizing measurement was performed to 22 patients, and the mean defect size was 13,75 ± 4,76 mm. TEE used in 29 cases, defect sizes were measured by transesophageal echocardiography on four-chamber, the aortic short-axis and the bicaval long-axis; the mean defect sizes were respectively 11,93 ± 4,04mm; 12,60 ± 4,84mm and 12,20 ± 4,55mm. The mean device size was 14,34 ± 5,06 mm and the mean device waist diameter was 12,02 ± 4,17mm. Types of devices used were Amplatzer Septal Occluder (32 patients), Cera Flex Septal Occluder (2 patients), Figulla Flex II Atrial Septal Occluder (1 patient) and Memopart Septal Occluder (1 patient). All ASD's were closed successfully, with no major complication was observed. Only a minor complication, transient arrhythmia seen in one patient. In one patient was seen as a migration of the occluder device and performed second transcatheter closure the next day with a larger device. The mean follow-up period of the patients was 4,8± 3,17 months.

According to our results the mean of the device waist diameter sizes was lower than the mean of TTE-derived sizes of the defects (12,02 ± 4,17 mm vs. 13,21± 5,11 mm; p=0,018) and mean of maximum defect sizes measured via balloon sizing (11,79 ± 4,48 mm vs. 13,75± 4,76; p<0,001); but there was good correlation between TEE sizing of the ASD on all axis and the device waist diameter.

Conclusion:
In this study we evaluate the Atrial Septal Defect (ASD) sizes measured via TTE, TEE, balloon sizing, and device waist diameter sizes after percutaneous ASD closure in children. Our results show that there was a good correlation between TEE sizing of the ASD on all axis and the device waist diameter. However, it is not sufficient to predict the exact size of the device before ASD closure via echocardiographic evaluation. In our opinion using the TEE technic is very useful to determine the exact size of the device. Further studies are needed.

ID: **95**

Topic: **Cardiology » PI for SHD - ASD,VSD,PDA closure**

Presentation Type: **Oral**

MID TERM RESULTS OF PERCUTANEOUS PDA CLOSURE OF VERY LOW BIRTH BABIES-SINGLE CENTER EXPERIENCE

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Introduction and Aim:

Percutaneous PDA closure in low birth weight babies has become accepted and nowadays performed in well experienced pediatric cardiology centers all over the world. In this article we want to share our experience in the midterm results of Preterm PDA closures

Methods:

The study was performed in our institute between June2014–June2019. Patients whose bodyweight less than 1500g were included in the study. Demographic, procedural and follow-up data were collected.

Results:

Total 32patients were included. Mean age and body weight during the procedure was 18±8days. 1147±256g(range750-1500g) respectively. 19patients suffer from the prematurity complications. Mean PDA diameter was 2.0±0.6mm. 20patients have tubular type and 12patients have conical type PDA. Mean time of procedure and fluoroscopy were 37.7±11.8minutes, 11.4±4.9minutes respectively. 4patients were died and we have lost contact of 5 patients. Finally; 21patients came to control visits regularly. Mean follow-up period was 26.5±14.5months. Maximum follow-up period was 54months long. In the follow-up of these patients:1device related coarctation, 4mild LPA stenosis, 2minimal residual shunts were observed. Coarctation was operated, LPA stenosis and residual shunts were revealed without an invasive procedure.

Conclusion:

PDA is one of preterm complications that may worsen the hemodynamic status of such patients. The distrust of many clinicians to percutaneous PDA closure in low birth weights is due to the lack of data in literature about their midterm, long term results. In this study we aimed to share our experience, lighten the literature with our results and to raise awareness of these clinicians about that subject.

ID: **87**

Topic: **Cardiology » Cardiac imaging - Cardiac MRI**

Presentation Type: **Oral**

MAGNETIC RESONANCE IMAGING AND ECHOCARDIOGRAPHY FINDINGS FOR EVALUATION OF RIGHT CARDIAC AND VALVULAR FUNCTIONS AFTER ARTERIAL SWITCH OPERATION FOR THE TRANSPOSITION OF GREAT ARTERIES

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Aims: The aim of the present study was to compare, and correlate data extracted from cardiac magnetic resonance images (MRI) and concurrent transthoracic echocardiography obtained in transposition of great arteries (TGA) patients who underwent arterial switch operation (ASO). We sought to define the optimal and most effective imaging modality to be utilized in the long-term follow-up of these patients.

Methods and results: This retrospective cohort was performed using data derived from the cardiac MRI views and transthoracic echocardiography images of 20 consecutive TGA patients (16 males, 4 females) who underwent ASO. The average age was 93.00±29.82 months (range: 60-144). Seventeen patients had TGA only, while 3 patients had TGA and ventricular septal defect (VSD) together. We noted that there were significant correlations between echocardiographic variables (right ventricular dilatation, right ventricular function, pulmonary insufficiency, myocardial performance index, tricuspid annular plane systolic excursion) and MRI parameters (ejection fraction, right ventricular dilatation, right ventricular function, pulmonary insufficiency).

Conclusion: The preoperative and postoperative evaluation of TGA patients necessitates careful evaluation of anatomical and functional cardiac indicators. In this aim, both echocardiography and MRI constitute useful, safe and reliable diagnostic modalities. Selection of the optimal imaging method and establishment of a diagnostic protocol which involves lifelong, serial assessment of right ventricular function is critical in the follow-up in order to predict possible complications and prevent possible morbidity. In clinical practice, awareness on the significances of the specific parameters employed for MRI or echocardiography is important for decision-making based on quantitative information.

Keywords: Transposition of the great arteries; atrial switch; diagnosis; echocardiography; magnetic resonance imaging

ID: **802**

Topic: **Cardiology » -**

Presentation Type: **Oral**

LONG QT SYNDROME WITH DIFFERENT CLINICAL PRESENTATIONS- A SINGLE CENTER EXPERIENCE:

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Long QT syndrome (LQTS) is a genetically transmitted or acquired cardiac channelopathy that can lead to lethal arrhythmia and sudden cardiac death in children. The clinical characteristics of LQTS are variable. We like to attract attention to these presentations with this study.

Case:1

Three years old girl, with congenital deafness; -no prior syncope or another complaint, was brought to the emergency service with seizure that begun after she had a cheerful joy upon her parents arrival. She was diagnosed as status epilepticus and had been intubated and multiple antiepileptic drugs were started. She was referred to our hospital and consultated to pediatric cardiology for cardiac functions. On the ECG QTc was 0,57 sn. Propranolol therapy had been started in addition to anti-seizure drugs. Genetic analyse showed mutation in SCN5A and RYR2 genes. After discharge , the patient had been suggested for ICD implantation as the syncope attacks went on.

Case 2:

16 years old healthy girl with no prior symptoms; couldn'be waken up and her father realized she had no heart beat and began cardiopulmoner resuscitation(CPR). When emergency ambulance service arrived, there was spontaneous contraction of body mimicing seizure. In the monitor there was ventricular fibrillation and the patient was defibrillated and amiodarone had been loaded once. Total CPR time was recorded as 45 minutes until hospital arrival. In the E.service the patient Glasgow coma Scale was 3, ECG showed sinusal rhythm, QTc:0,48 sn. The patient was intubated. Echocardiography was normal. Laboratory showed no specific cardiac or another abnormality. She had no positive familial history. Pre diagnosis, instead of cardiac disorders, include drug intoxication or seizure- neurometabolic diseases. Propranolol and antiepileptic therapy had been started randomly. 24 hour holter monitoring was normal. Due to severe hypoxia after a long CPR, central nervous system was badly affected as shown by Brain imaging. During follow up in the intensive care unit, hypotension developed and thereupon, after adrenalin infusion had been given , ventricular extrasystoles(VES) appeared with QTC prolongation, and though adrenalin infusion ceased, QTC prolonged definitely and intractable multiple(>3 in an hour) ventricular fibrillation attacks- torsades de pointes(tDP) couldn't be stopped(figure1,2). Electrical storm was in ahead of us and continuous magnesium and lidocain infusion had been started with defibrillation. tDP went on and dexmedetomidine had been started for both sedation and anticatecolaminergic effects. Hypokalemia with hypocalcemia presented in the beginning but despite replation and correction of electrolytes, fibirillation attacks continued. Mexiletine had been preferred to be added but because of absence of it in our city, alternatively phenytoin, which is an primarily antiepileptic but also antiarrhythmic drug, in the same group with mexiletine, had been given via infusion. The patients electrical storm had been interrupted after 2 IV doses and QTc shortened. As follows, propranolol and phenytoin therapy were carried on orally. ICD therapy is planned for this patient.

Case 3:

15 years old female patient with severe muscle disease, who was hospitalized for infectious disease in the intensive care unit. The day before her discharge, the patient had referred to cardiology for VES and non sustianed Ventricular Tachycardia attacks observed in the monitor. There was no prior events like syncope or another arrhytmic disorders. The patient had been given amiodarone infusion after this condition. On the ECG, there were polimorphic VES with tDP. QTC was so prolonged that R on T phenomenon was seen(figure 3). In the laboratory, there was hypokalemia and hypomagnesemia. Examining the drugs she received, there wasn't any drug that lead to QTC prolongation. Acquired long QT syndrome had been figured and based on this, amiodarone infusion had been ceased and magnesium and lidocain infusion wiith oral beta blocker therapy had been started. Via the correction of electrolytes , the rhythm returned to normal with normalization of QTC.

Discussion and Conclusion:

Long Qt syndrome may present with different clinical presentations, complicating treatment with differential diagnosis including neurometabolic disorders. Catecholaminergic drugs should be avoided in suspicious cases with sudden cardiac arrest story. Phenytoin may

be considered in therapy via the effects of QTc shortening. Ventricular arrhythmias may be caused by QTc prolongation due to electrolyte disturbances and amiodarone is not always the right choice.

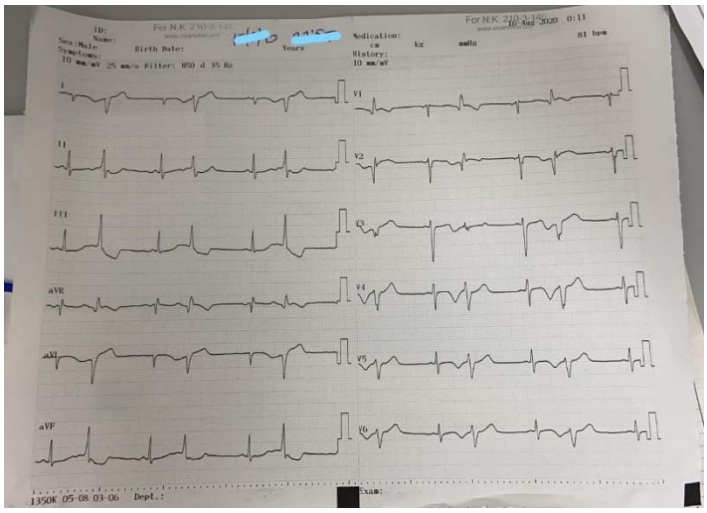

Figure 1.

Figure 2.

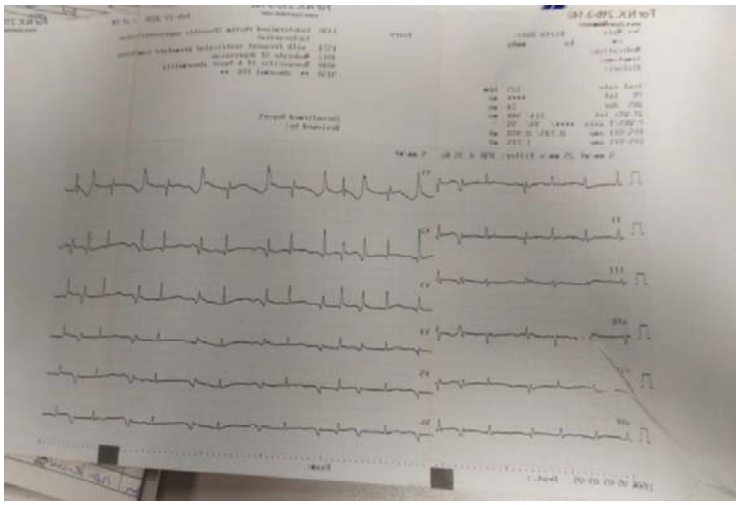

Figure 3.

Oral Presentation Session

How to Deal with the Complications of Coronary Surgery

Date: 30.10.2020 Time: 11:00 – 12:00 Hall: 5

ID: **378**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

ENOXAPARIN SODIUM MAY BE MORE APPROPRIATE DRUG FOR COMPARING NOACS IN REAL LIFE VTE TRIALS IN CANCER PATIENTS: AN IN-VITRO TRANSLATIONAL STUDY

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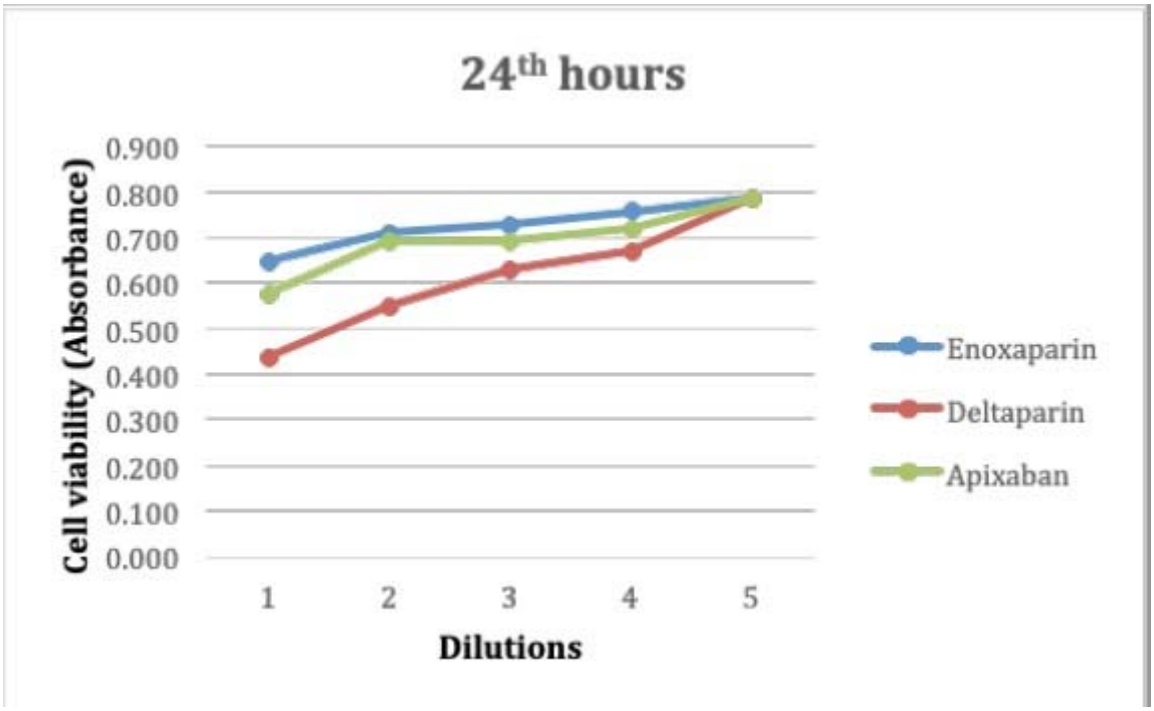
BACKROUND: Low molecular weight heparins (deltaparin, enoxaparine) and apixaban is the guideline-endorsed treatment for cancer associated venous thromboembolism (VTE). There have been a number of important treatment clinical trials of cancer-associated VTE for non-vitamin K oral anticoagulant (NOAC) usage. Most trials have compared NOAC with deltaparin sodium. Cytotoxicity of drugs also affects side effect profiles. But there are not enough preclinical studies in the literature about this topic. Therefore, in this study, it was aimed to compare the cytotoxic effects of apixaban, deltaparin and enoxaparin in in-vitro model and to correlate the results with real-world setting

METHODS: L929 fibroblastic cells were incubated with four different dilutions for all dugs. study dilutions were adapted to in vitro culture media according to the treatment doses of the drugs. (apixaban, enoxaparin, deltaparin) Morphological changes, cell viability were evaluated at 24 hours of incubation. The cell viability was determined by MTT assay and results were compared to the control group.

RESULTS: The results of MTT assay were showed that apixaban, enoxaparine and deltaparin had more cytotoxic effect in espescially dilution I than the other dilutions ($p<0.05$). When compare the drugs for dilution 1, enoxaparin had a lower cytotoxic effect than apixaban and deltaparin. ($p= 0.006$) In addition, enoxaparin showed lowest cytotoxic effect in all dilutions. ($p<0.005$)

CONCLUSIONS: In this in-vitro study results show that enoxaparin sodium had lowest cytotoxic effect compare with dalteparin and apixaban. Therefore, enoxaparin sodium may be more appropriate drug for comparative studies with NOAC in real life VTE trials in cancer patients.


24th hours
Cell viability (Absorbance)
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0.100
0.000
1
2
3
4
5
Dilutions
Enoxaparin
Deltaparin
Apixaban

ID: **352**

Topic: **Cardiovascular Surgery » Hybrid Cardiovascular Surgery**

Presentation Type: **Oral**

COMPARISON OF TWO TREATMENT METHOD OF SYMPTOMATIC PERICARDIAL EFFUSION AFTER CARDIAC SURGERY: PERICARDIAL WINDOW OR FLOROSCOPY GUIDED PERCUTANEOUS INTERVENTION

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Background: We aimed to compare the floroscopy guided subxiphoid percutaneous (FSP) intervention with the subxiphoid pericardial window (SPW) techniques in terms of efficiency and complications in the treatment of symptomatic pericardial effusion developing after cardiac surgery.

Methods: The data of 2492 patients with open-heart surgery collected from Nov 2011 to Apr 2017 were analyzed retrospectively. A total of 68 patients were included in the study. Patients were divided into two groups according to the method of treatment. In the first group, there were 30 patients who were treated with the subxiphoid pericardial window method. In the second group, there were 38 patients who were treated with the floroscopy guided subxiphoid percutaneous intervention method.

Results: Patients in both groups were treated successfully. However, FSP technique was found advantageous in favor of drainage volumes (771±177 mL, p=0.028), drainage times (1.2±0.4 days, p=0.001), hospital stay (2.6±0.9 days, p=0.010) and amount of blood transfusion (0.2±0.5 Units, p=0.023).

Conclusion: The floroscopy guided subxiphoid percutaneous intervention is easily applicable, less invasive, less painful, it can be done with local anesthesia and patients stay less at the hospital also it's as effective as the subxiphoid pericardial window. Therefore, we came into the conclusion that it is a safer and preferable method.

Key words: Drainage; percutaneous; pericardial effusion; pericardiostomy; subxiphoid.

ID: **474**

Topic: **Cardiovascular Surgery » Risk Management in Cardiovascular Diseases**

Presentation Type: **Oral**

THE RISK OF BLEDDING OF EXTENDED-ASPIRIN THERAPY IN PATIENTS UNDERGOING CORONARY ARTERY BYPASS GRAFTING

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BACKGROUND: Despite numerous retrospective and prospective analyses, it is still controversial whether to stop aspirin or not before coronary artery bypass grafting (CABG) is associated with significant postoperative bleeding. We tried to evaluate the relationship between the effect of preoperative aspirin duration therapy on postoperative blood loss and transfusion requirements after coronary artery bypass grafting.

METHODS: The study was a prospective, between December 2018 and May 2019, patients undergoing on-pump CABG were reviewed and divided into two groups. One group received aspirin until the time of surgery (aspirin group), while in the other was stopped at least five days before surgery (no aspirin group). Multivariate analysis was used to evaluate correlation between aspirin ingestion before surgery with postoperative bleeding and blood transfusion.

RESULTS: We divided samples into two groups which consist of 36 each group. The two groups were similar in demographic characteristics and all patients survived to be discharged home. Patients in the aspirin group had significantly increased chest-tube blood loss 8 hours after operation compared to the no aspirin group (1093.33 ± 625.29 vs 515.83 ± 143.48 ml; p<0.001, respectively). In addition, aspirin group had significantly increased requirements for postoperative packed red blood cells (578.33 ± 462.76 vs 126.36 ± 179.365 ml; p<0.001), fresh-frozen plasma (284.92 ± 206.93 vs 67.36 ± 124.320 units; p = 0.001), platelets (142.33 ± 45.20 vs 38.47+69.39, p = < 0.001) transfusions, and length of stay (12.08 ± 2.778 vs 7.58 ± 1.20, p<0.001). There was one re-exploration because of bleeding in the aspirin group which was statistically not significant.

CONCLUSIONS: We conclude that aspirin ingestion during preoperative time increases postoperative blood loss, transfusion requirements and length of stay. We still recommend discontinuation of aspirin therapy at least five days before CABG even with no statistically significant difference on reexploration.

Key words: aspirin, coronary artery bypass grafting, postoperative bleeding

ID: **796**

Topic: **Cardiology » Coronary Artery Disease - CABG Surgery**

Presentation Type: **Oral**

INTENSE OF POSTOPERATIVE STATIN TREATMENT HAS NO EFFECT ON PATENCY OF NATIVE CORONARY ARTERIES IN CORONARY ARTERY BYPASS GRAFTING PATIENTS

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Intense of postoperative statin treatment has no effect on patency of native coronary arteries in coronary artery bypass grafting patients

Abstract

Aim: Progression of stenosis and onset of de novo occlusion in preoperatively non-occluded native coronary arteries are commonly seen in coronary artery bypass grafting (CABG) surgery patients but clinical factors about this entity were not investigated in detail. The aim of this study was to search the effects of intense of statin treatment on the development of de novo occlusion in native coronary arteries of CABG patients in the postoperative period.

Materials and methods: All postoperative CABG population has been searched from the computer database at Başkent University Hospital Alanya Application and Research Center and patients with a recurrent coronary angiography (CAG) procedure after the first 6 months following surgery were involved in the study population. Recurrent CAG recordings were evaluated for the presence of de novo occlusion in native coronary arteries. Effect of intense of postoperative statin treatment on the development of de novo occlusion in native coronary arteries was investigated. Intense of statin treatment was divided into three groups as; high dose statin (40-80mg atorvastatin or 20-40mg rosuvastatin), low dose statin (10-20mg atorvastatin or 5-10mg rosuvastatin) and statin free groups.

Results: Seventy-three CABG patients with recurrent CAG out of 492 total CABG population were involved in the study group (Mean age was 65.2 ± 9.8 years; male gender 76.7%). Two hundred eighteen preoperatively non-occluded native coronary arteries were evaluated and 119 new CTOs were detected (54.5% of involved vessels). There was no difference for de novo occlusion in native coronary arteries between high dose statin, low dose statin and statin free groups ($p=0.349$). De novo occlusion in preoperatively non-occluded native coronary arteries was found to be related to severity of preoperative proximal stenosis ($p<0.001$) and absence of dual antiplatelet therapy (DAPT) ($p=0.036$).

Conclusion: De novo occlusion in preoperatively patent native coronary arteries is commonly seen in CABG patients postoperatively. Significance of preoperative stenosis and absence of DAPT seem to be the essential factors in development of de novo total occlusion in native coronary arteries. Intense of statin therapy does not have any effect on patency of native coronary arteries in CABG population. Competitive flow with surgical grafts has an additional stasis effect in native coronary arteries and this stasis may accelerate the development of de novo occlusion postoperatively.

Keywords: coronary artery bypass grafting; native coronary arteries; de novo total occlusion; postoperative statin treatment

ID: **798**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

RETROSPECTIVE COMPARISON OF VACUUM ASSISTED CLOSURE METHOD AND CONVENTIONAL TREATMENT METHODS IN STERNAL INFECTIONS DEVELOPING AFTER OPEN HEART SURGERY

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Retrospective Comparison of Vacuum Assisted Closure Method and Conventional Treatment Methods in Sternal Infections Developing After Open Heart Surgery

INTRODUCTION:

Nowadays sternal wound infections develop after open heartsurgery despite the antibiotic treatments, hospital infectioncontrol protocols and constantly improving postoperative careconditions, it remains important as the complications withhigh incidence. Sternal infections after cardiac surgery; It can be seen as superficial wound infections, sternal osteomyelitisor mediastinitis. Especially osteomyelitis and mediastinitis areimportant causes of morbidity and mortality after cardiacsurgery.This study was designed to compare the death, reinfection, and hospital stay times of patients treated withconventional treatment methods and Vacuum Assisted Closure(VAC) treatment in deep sternal wound infections after cardiacsurgery.

METHODS and MATERIALS:

Thirty patients who were treated with the diagnosis of deepsternal wound infection after open heart surgery in IstanbulBakırköy Dr. Sadi Konuk Training and Research Hospitalbetween May 2019-June 2020 in the same center wereincluded. Patient data were analyzed retrospectively. Patientstreated with conventional wound care and dressing wereclassified as Group 1 (n = 15), and patients treated withvacuum assisted closure as Group 2 (n = 15).

RESULTS:

7 of the patients in Group 1 were women and the mean agewas 58.4 ± 7.8 years. 9 of the patients in Group 2 were womenand the mean age was 66.2 ± 6.5 years. In the mediastinal orsternal wound discharge culture taken on the first day of treatment, there was microorganism growth in 6 patients(40%) in Group 1 and 11 patients (73.3%) in Group 2. Whilemortality did not develop in Group 2, it developed in 3 patients (20%) in Group 1. The average hospital stay of thesurviving patients was 40.1 ± 5.5 days in Group 1, and 25.2 ± 3.4 days in Group 2. While reinfection did not occur in Group2, reinfection developed in 2 (13.3%) patients in Group 1.

CONCLUSION:

In the treatment of deep sternal wound infections that developafter open heart surgery, we think that vacuum assisted closuremethod can be used as a safe and effective method thataccelerates wound healing, shorten the duration of hospitalstay and provides earlier eradication of microorganisms in thewound area compared to conventional treatment methods.

ID: **799**

Topic: **Cardiology » Coronary Artery Disease - CABG Surgery**

Presentation Type: **Oral**

Association Between Platelet To Lymphocyte Ratio And Syntax Score

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Background and Aim: Platelets play a crucial role in inflammatory and thrombotic processes and the physiopathology of cardiovascular disease. The platelet to lymphocyte ratio (PLR) has recently emerged as a potential inflammatory biomarker and is significantly associated with coronary artery disease (CAD). Therefore we aimed to explore the association of PLR and SYNTAX score.

Material and Method: The medical records of consecutive patients who underwent coronary angiography from January 2016 to January 2020 were retrospectively reviewed for PLR. PLR and clinical, echocardiographic, and biochemical parameters were evaluated. The independent variables for the higher SYNTAX score were defined and their predictive values were measured. The patients were divided into 2 groups according to SS (≥23= high, <23= low).

Results: There was a significant positive correlation between PLR and SYNTAX score. The high SYNTAX score (HSS) group was older and had higher PLR than the low SYNTAX score (LSS) group. The HSS group had a higher prevalence of diabetes mellitus (DM), hypertension (HT), hyperlipidemia (HL) patients than the LSS group. On univariate analysis, age, HT, DM, HL, and PLR were associated with HSS. On multivariate analysis, DM, HL and PLR were independent predictors of HSS.

Conclusion: In our study, we have found out that DM, HL and PLR were independent predictors of HSS. PLR might be used to predict the severity of coronary artery disease as a cheap and easy calculated parameter.

Oral Presentation Session

Heart Failure: Bench to Bedside

Date: 30.10.2020 Time: 12:00 – 13:15 Hall: 4

ID: **704**

Topic: **Cardiology » Chronic heart failure**

Presentation Type: **Oral**

NEUTROPHIL TO HIGH-DENSITY LIPOPROTEIN RATIO HAS A PROGNOSTIC VALUE IN HEART FAILURE PATIENTS TREATED WITH IMPLANTABLE CARDIOVERTER DEFIBRILLATOR TO PREDICT LONG TERM MORTALITY

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Introduction: Neutrophil to high-density lipoprotein ratio (NHR) is a new inflammation marker with proven prognostic values in myocardial infarction. However, a clinical study demonstrating the prognostic value of NHR in heart failure patients treated with an implantable cardioverter-defibrillator (ICD) is not yet available. In this study, it is aimed to demonstrate the relationship between NHR and mortality development in patients with heart failure with ICD.

Material and Method: 194 patients who underwent ICD implantation due to systolic heart failure between January 2015 and December 2019 have been included in this study. Information relating to the biochemical and hematological parameters and death status of the patients has been obtained through the hospital information system.

Results: The mean age of the patients was 59.84±13.26. The female gender ratio was 25.3%. Death developed in 16 patients (8%) after a median follow-up of 27 months. While basal urea, uric acid, GGT, CRP and neutrophil levels have been found to be high and hemoglobin and lymphocyte levels have been found to be low in the death developed group. While the rates of NHR have been statistically significantly higher in the group with death during follow-up (p:0.035). In ROC analyses, mortality has been predicted with 86% sensitivity and 62% specificity (p:0.035 AUC:0.74 CI:0,53-0,95) of values 0,16 of NHR and above.

Conclusion: In our study, it has been shown that NHR ratios, which is an inflammation markers, can predict mortality in patients with ICD implanted heart failure.. This is the first study demonstrating the predictive power of NHR in this patient group.

Key Words: Heart failure, Neutrophil HDL ratio, ICD

ID: **717**

Topic: **Cardiology » Chronic heart failure**

Presentation Type: **Oral**

COMPARISON OF THE PREDICTIVE POWER OF THE MEHRAN SCORE IN PATIENTS WITH HEART FAILURE WITH REDUCED EJECTION FRACTION AND HEART FAILURE WITH MID-RANGE EJECTION FRACTION

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Objective: Contrast induced nephropathy (CIN) is an important cause of increased mortality and morbidity in patients with heart failure (HF) requiring percutaneous coronary intervention(PCI). And also there is limited data about the relationship between CIN and heart failure subtypes.

In this study, we analyzed the predictive power of Mehran score in patients with heart failure mid range ejection fraction (under 40%) (HFmrEF) and reduced ejection fraction (HFrEF).

Methods: This retrospective analysis included 1631 consecutive in patients with HF for elective PCI between 2016 and 2020. CIN was defined as an elevated serum creatinine level ≥25% of baseline serum creatinine level at 48-72 hours after procedure.

Results: The incidence of CIN was 7.2% (117/1631).The patients with CIN were categorized into two groups according to HF subtype. There was nonsignificant difference between both groups regarding patient characteristics, Mehran score and procedure characteristics (p>0.05). Overall CIN was seen 7.8% (46/587) in HFrEF group and 6.8% (71/1044) in HFmrEF (p=0.034). We found that there is no significant difference between the two groups regarding the incidence of CIN (0.8% vs. 0.7%) among low-risk patients and (3.7% vs. 3.5%) moderate-risk patients by analyzing of risk groups (p>0.05). The incidence of CIN (317.3.5% vs. 15.4%) among high-risk patients and (37.9% vs. 33.2%) among very high-risk patients was significantly higher in HFrEF group compared to HFmrEF group (respectfully p=0.017 and p=0.031).

Conclusions: Although there is no difference regarding Mehran score, more CIN is observed in HFrEF patients, Therefore, we recommend that high-risk patients and very high-risk patients groups should be re-evaluated according to the subtype of HF.

ID: **165**

Topic: **Cardiology » Chronic heart failure**

Presentation Type: **Oral**

THE IMPORTANCE OF B-TUBULIN FROM CYTOSKELETAL PROTEINS AND MEMBRANE PROTEINS IN HEART FAILURE REDUCED EJECTION FRACTION

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Background

Beta Tubulin is a microtubule that binds with Alfa Tubulin to form tubulin heterodimer which is a structural protein of cardiomyocytes.

Objective

Our study aims to explore the relationship between Beta Tubulin plasma levels and heart failure.

Methods

Fifty patients who diagnosed with Heart Failure reduced Ejection Fraction (HFrEF) and 30 patients without a diagnosis as a control group were included in our study. In addition, the effect of etiological factors (ischemic/non-ischemic) and colchicine as a microtubule inhibitor on serum Tubulin-1 levels in patients who were followed-up due to HFrEF and included in the study to be investigated. Blood samples have been centrifuged and Beta Tubulin plasma concentrations were measured by the Elisa method with Human Beta Tubulin-1 Chain Elisa kit (Bioassay Technology Laboratory).

Results

We found higher levels of Beta Tubulin in HFrEF patients from healthy control group. But statistical analysis between the two groups showed no significant difference. Also, in subgroup analysis, Beta Tubulin levels had increased in ischemic HFrEF patients. Besides, in subgroup analysis of patients with non-ischemic HFrEF and also, patients used colchicine had decreased the levels of Beta Tubulin (p=0.29) and NT*proBNP(p=0.69). Colchicine used patient group had better EF(p=0.009) and smaller diastolic left ventricular diameters (p=0.002), respectively.

Conclusions

We concluded to understand the role of structural proteins cardiomyocyte, especially Beta Tubulin levels in heart failure diagnosis and follow up further studies are needed. Additionally, microtubule inhibitor drugs such as colchicine should be investigated as treatment options in heart failure.

Keywords: Heart Failure, Beta Tubulin, Colchicine, Cytoskeleton.

ID: **151**

Topic: **Cardiology » Chronic heart failure**

Presentation Type: **Oral**

PREVALENCE OF IRON DEFICIENCY/ANEMIA IN HEART FAILURE PATIENTS-SINGLE-CENTER REGISTRY IN TURKEY

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OBJECTIVE: Iron deficiency in patients with heart failure leads to greater morbidity and mortality and its treatment has been associated with significant improvements in quality of life. The aim of this study is to show the prevalence of iron deficiency in heart failure patients with or without anemia.

METHODS: This is a single-center observation study conducted in a tertiary hospital in Turkey. Patients who were followed up in the outpatient clinic with the diagnosis of heart failure were included in the study. Full iron profile of the patients was evaluated including serum iron, serum ferritin, total iron binding capacity and transferrin saturation. Absolute iron deficiency was defined as serum ferritin <100 mg / L and functional iron deficiency was defined as low total iron binding capacity and transferrin saturation (<20%) and normal serum ferritin (100–300 mg / L). According to the World Health Organization definition, anemia was accepted as hemoglobin <13 g / dl and <12 g / dl in women.

RESULTS: A total of 672 patients of heart failure (74.7% males and 25.3% females) were studied. Most of the patients had low New York Heart Association (NYHA) functional class (mean NYHA 1.95). Iron deficiency was present in 80.6% patients with 71.1% patients having absolute and 9.5% patients having functional iron deficiency (Table-1). The prevalence of iron deficiency was significantly higher in females than males (88.2% vs 78.1%; p = 0.004). We found that approximately half of patients had iron deficiency without anemia (58.9% males and 48.7% females). This data showed us that iron deficiency is more important than hemoglobin in heart failure patients. But there was not significant difference in all-cause mortality between patients having iron deficiency and not (14% vs.10.8%; p=0.328).

CONCLUSIONS: Our study is important in order to show how much iron deficiency is present in heart failure with or without anemia. This study recommends raising awareness of this treatable condition and early treatment.

KEYWORDS: Iron deficiency, Heart failure, Anemia

Table-1 Status of iron deficiency of study population

	Males(n=502)	**Females(n=170)**	**Total(n=672)**
Absolute iron deficiency	**343(68.3%)**	**135(79.4%)**	**478(71.1%)**
With anemia	141	68	209
Without anemia	202	67	269
Functional iron deficiency	**49(9.8%)**	**15(8.8%)**	**64(9.5%)**
With anemia	20	9	29
Without anemia	29	6	35
Total iron deficiency	**392(78.1%)**	**150(88.2%)**	**542(80.6%)**
With anemia	161(41.1%)	77(51.3%)	238(43.9%)
Without anemia	231(58.9%)	73(48.7%)	304(56.1%)

ID: **78**

Topic: **Cardiology » Chronic heart failure**

Presentation Type: **Oral**

EVALUATION OF THE ROLE OF AUTOPHAGY AND MICROTUBULIN INHIBITION WITH BLOOD BECLIN-1 LEVELS IN PATIENTS WITH LOW EJECTION FRACTION HEART FAILURE

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Background

All three types of cell death is involved in the development of Heart Failure; autophagic cell death, apoptosis and necrosis. In our study, the determination of the level of Beclin-1 in the markers of autophagy in serum is aimed to compare the serum Beclin-1 levels of individuals with heart failure and those without heart failure. In addition, the effect of etiological factors (ischemic / non-ischemic) and of colchicine as a microtubule inhibitor on serum Beclin-1 levels in patients who were followed-up due to heart failure and included in the study will be investigated.

Methods

The study included between June 2018 and December 2018 in Istanbul University-Cerrahpaşa, Cardiology Institute, and 50 patients with DEF-HF (25 with ischemic etiology, 25 with non-ischemic etiology) and 30 without heart failure. Serum Beclin-1 levels were determined by using ELISA method by ELISA Kit (Bioassay Technology Laboratory). All statistical analysis was performed using the SPSS 23.0 software (SPSS Inc., Chicago, IL, USA).

Results

Although serum Beclin-1 levels of the patient compared to the control groups did not reach statistical significance, increased serum Beclin-1 levels were found in patients with heart failure(p:0.64). When the relationship between ejection fraction and Beclin-1 levels of HFrEF group in the study was examined, we found that patients with lower ejection fraction had higher Beclin-1 levels. (p: 0.018, R^2: 0.088). When HFrEF groups with ischemic and non-ischemic etiology were compared, renal functions were similar. There was also no significant correlation between creatinine and eGFR levels and Beclin-1 (ATG6 analog in yeast cells), an autophagy marker in mammals (p: 0.482). Also, in the subgroup analysis of the heart failure group, statistically significant serum Beclin-1 levels were found in the non-ischemic etiology group. (p: 0.01).

In addition, low-dose colchicine (0.5-1 mg) was added to the treatment in some HF patients who developed hyperuricemia as a result of intensive diuretic therapy. We found lower levels of NT-proBNP that did not reach statistical significance and higher Beclin-1 levels to reach statistical significance in these cases (p: 0.015).

Discussion and Conclusions

We found that patients with lower ejection fraction had higher Beclin-1 levels because of higher autophagic activity compared to the control groups. Also, in the subgroup analysis of the heart failure group, statistically significant serum Beclin-1 levels because of higher autophagic activity were found in the non-ischemic etiology group. Although colchicine has been used in our patients with terminal, worse left ventricular function; low levels of NT-proBNP and higher Beclin-1 levels in low-dose colchicine-using HF patients; autophagy in these cases did not correspond to cell death, but rather on cytoprotective and selective autophagic clearance and regeneration activities. This discordance suggest that low dose colchicine clearly demonstrates selective and cytoprotective autophagic clearance and regeneration activities. There was also no significant correlation between creatinine and eGFR levels and autophagic activity. Our study reveals that when repeated in larger patient populations, results may be revealed to illuminate the place of autophagy in the etiology of heart

ID: **56**

Topic: **Cardiology » Chronic heart failure**

Presentation Type: **Oral**

NT-PROBNP LEVELS IN PATIENTS WITH ATRIAL FIBRILLATION AND PRESERVED EJECTION FRACTION HEART FAILURE: LONG TERM CLOSED COHORT DATA OF REAL WORLD

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Purpose: Heart failure with preserved ejection fraction (HFpEF) is defined as clinical heart failure in patients with a left ventricle ejection fraction (LVEF) ≥%50 and natriuretic peptides (NP) such as NT-proBNP are crucial for the diagnosis. The presence of atrial fibrillation (AF) in this population may cause some diagnostic difficulties, because AF itself is related with elevated levels of NT-proBNP. In the present study we aimed to investigate general features and NT-proBNP levels of patients with HFpEF and AF, who followed up in our clinic.

Materials and methods: Outpatient's data of İzmir Kemalpasa State hospital's clinic of cardiology between January and June 2018 is reviewed retrospectively through the hospital data management system (HDMS). Patients with the diagnosis of HFpEF and AF, who has at least one NT-proBNP result in the stable phase of HF, are included to the study. Demographics, laboratory, imaging studies and medication of the study group are searched through the HDMS.

Results: Study population consists of 244 patients. Mean age, LVEF, CHA2DS2 and CHA2DS2 VASc scores were 72.06±9.48 years, 52.92±2.37%, 3.29±1.46 and 4.63±1.48 respectively. Patients were followed up for 2.58±1.26 years by the same clinic. Mean NT-proBNP was 1456.24±1376.38 pg/ml in the stable phase. During follow-up, 48 patients present with decompensation and the mean NT_proBNP was 3385.9±3082.13 pg/ml. The level of NT-proBNP was correlated with age, CHA2DS2 and CHA2DS2 VASc scores, left atrial diameter and systolic pulmonary artery pressure positively, but with LVEF and hemoglobin negatively. The change in the NT-proBNP was correlated only with heart rate and left atrial diameter positively.

Conclusion: Patients with HFpEF and AF have higher levels of NT-proBNP in the stable phase and in the decompensated phase, it is expected that the NT-proBNP level of these patients may exceed the upper limits, which defined in the guidelines. Therefore, some new upper limits for the patients with AF are needed. The most important contribution of this study is to give us some idea about the NT-proBNP levels in stable and decompensated phases in patients with HFpEF and AF.

Key words: Heart failure with preserved ejection fraction, atrial fibrillation, NT-proBNP

ID: **5**

Topic: **Cardiology » Acute heart failure**

Presentation Type: **Oral**

INTRA-AORTIC BALLOON PUMP-RELATED THROMBOCYTOPENIA: ITS EFFECTS ON IN-HOSPITAL MORTALITY IN CARDIOGENIC SHOCK PATIENTS

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Background: The present study aimed to evaluate the potential role of intra-aortic balloon pump (IABP)-related thrombocytopenia in patients with cardiogenic shock (CS) due to ST elevation myocardial infarction (STEMI) died in hospital.

Material and Methods: We retrospectively included 142 consecutive CS patients who were treated with IABP support from September 2013 to March 2017 in a tertiary heart center. IABP-related thrombocytopenia was defined as a platelet count of 150.000 mm3 or a 50% or greater reduction in the platelet count from the baseline following the IABP's insertion. In-hospital, all-cause mortality was the primary endpoint.

Results: The incidence rate of thrombocytopenia was 19% (n=27 patients). In-hospital mortality was significantly higher in patients who experienced thrombocytopenia compared to those who did not [22 patients (81.5%) vs. 56 patients (48.7%), respectively; p=0.004]. In a multivariate analysis, a decline in platelet count (OR: 1.037, 95%; CI: 1.011–1.064; p=0.005) was found to be independently associated with in-hospital mortality. In a receiver operating characteristic curve analysis, the optimal cut-off value of the decline in platelet count for the prediction of in-hospital mortality was ≥ 18.2%, with a sensitivity of 60% and a specificity of 77% [area under curve (AUC): 0.70, 95%; CI:0.61–0.78; p0.001].

Conclusion: In the present study, we observed that the development of thrombocytopenia during IABP support was independently associated with in-hospital mortality in CS patients.

Figure 1 A receiver operating curve analysis of decline in platelet count for prediction of in-hospital mortality

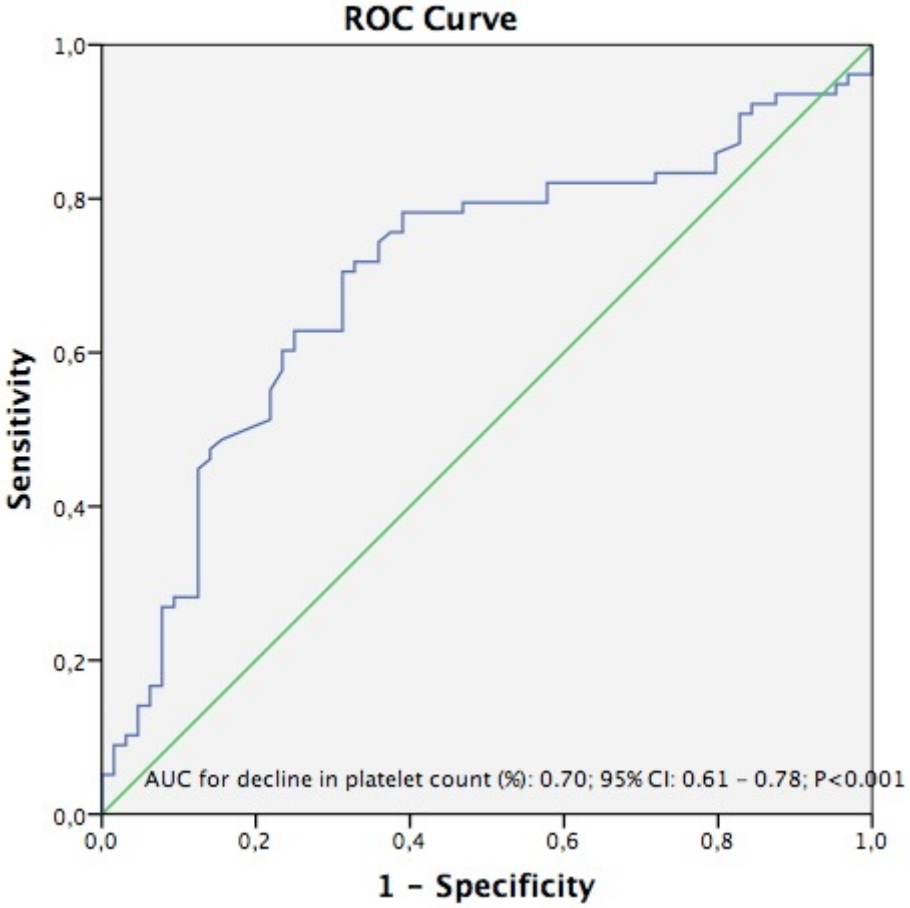

Table 1 Univariate and multivariate analyses of in-hospital mortality

	Univariate analysis			Multivariate analysis		
	P value	OR	95% CI	P value	OR	95% CI
Age	<0.001	1.079	1.038–1.122	-	-	-
CRF	<0.001	3.882	1.887–7.987	-	-	-
TIMI ≤2 after intervention	<0.001	9.545	4.014–22.701	<0.001	6.440	2.882–15.362
LVEF	<0.001	0.962	0.931–0.995	0.004	0.944	0.921–0.969
LVESD	0.022	1.837	1.211–2.787	-	-	-
BUN	0.007	1.031	1.008–1.054	-	-	-
Decline in platelet count	0.003	1.035	1.012–1.059	0.005	1.037	1.011–1.064

OR, odds ratio; CI, confidence interval.

Abbreviations: CRF, chronic renal failure; TIMI, thrombolysis in myocardial infarction; LVEF, left ventricle ejection fraction; LVESD, left ventricle end-systolic diameter; BUN, blood urea nitrogen.

ID: **593**

Topic: **Cardiology » Diabetes Mellitus and Cardiovascular Disease**

Presentation Type: **Oral**

DIAGNOSTIC UTILITY OF GALANIN, GALACTIN AND PROBNP AS BIOMARKERS FOR SUBCLINICAL DIASTOLIC DYSFUNCTION IN PATIENTS WITH DIABETES MELLITUS

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OBJECTIVE: Cardiac disease in diabetes mellitus (DM) consists of both vascular and myocardial abnormalities. The latter are characterized predominantly by diastolic dysfunction, which has been difficult to evaluate. Diastolic dysfunction reflects the structural and metabolic milieu in the myocardium. This study was aimed to investigate the potential role of NT-proBNP, galanin, galactin, and hsCRP as biomarkers for predicting subclinical diastolic dysfunction in patients with type 2 DM.

METHODS: Asymptomatic patients with DM without known cardiac disease underwent clinical evaluation, measurement of NT-proBNP, galanin, galactin, hsCRP, electrocardiography and detailed echocardiographic assessment. After exclusion of overt left ventricular (LV) dysfunction (LVEF ≤50%) or ischemia (positive treadmill exercise test or myocardial perfusion imaging), subclinical myocardial diastolic dysfunction was sought on the basis of E/A ratio, E/Ea ratio, left atrial volume index (LAVi) and peak tricuspid regurgitation (TR) velocity.

RESULTS: Of the 117 patients, 50 (45.5%) had left ventricular hypertrophy. The average NT-proBNP was 51.1+ 30.3 pg/ml and only 5 patients had NT-proBNP levels exceeding the normal range. NT-proBNP levels were correlated with galanin (r: 0.635) and hsCRP (0.529) levels. However, there was no correlation between NT-proBNP, galanin, galaktin, hsCRP with either LV mass index or LAVi. Abnormal E/A ratio (<0.8) was identified in 44 (37.6%) patients. Three patients had E/Eamean of >14 and 43 patients had E/Eamean of 8-14. Increased LAVi (>28 ml/m2) was identified in 13 (11.1%) patients. None of patients had a peak TR velocity >2.8 m/s. None of the markers were significantly changed in patients with abnormal parameters of diastolic function

CONCLUSIONS: Our results showed that none of NTproBNP, galanin, galactin or hsCRP measurements seems to be sufficiently sensitive to identification of subclinical LV diastolic dysfunction in diabetic patients without known heart disease.

Characteristics of the diabetic patients	
Age	54 +/- 6.2
Men (%)	46 (39.3)
Hypertension (%)	72 (61.5)
Hyperlipidemia	76 (65.5)
Current smoker	26 (23.0)
HbA1c	7.6 +/-1.7

Creatinine (mg/dl)	0.77 +/-0.19
NT-proBNP	51.1 +/-30.3
Galactin	87.6 +/-55.5
Galanin	25.8 +/-15.6
hsCRP	3.6 +/-2.0
Systolic blood pressure (mmHg)	138.4+/-19.4
Diastolic blood pressure (mmHg)	76.7 +/-10.8
Heart rate (bpm)	81.1 +/-12.8

ID: **577**

Topic: **Cardiology » Chronic heart failure**

Presentation Type: **Oral**

RBM SCORING SYSTEM FOR THE ASSESSMENT OF OPTIMAL VS. SUBOPTIMAL ADHERENCE TO THE GUIDELINE-DIRECTED MEDICAL THERAPY IN PATIENTS WITH CHRONIC HEART FAILURE AND REDUCED EJECTION FRACTION: RESULTS FROM ATA STUDY

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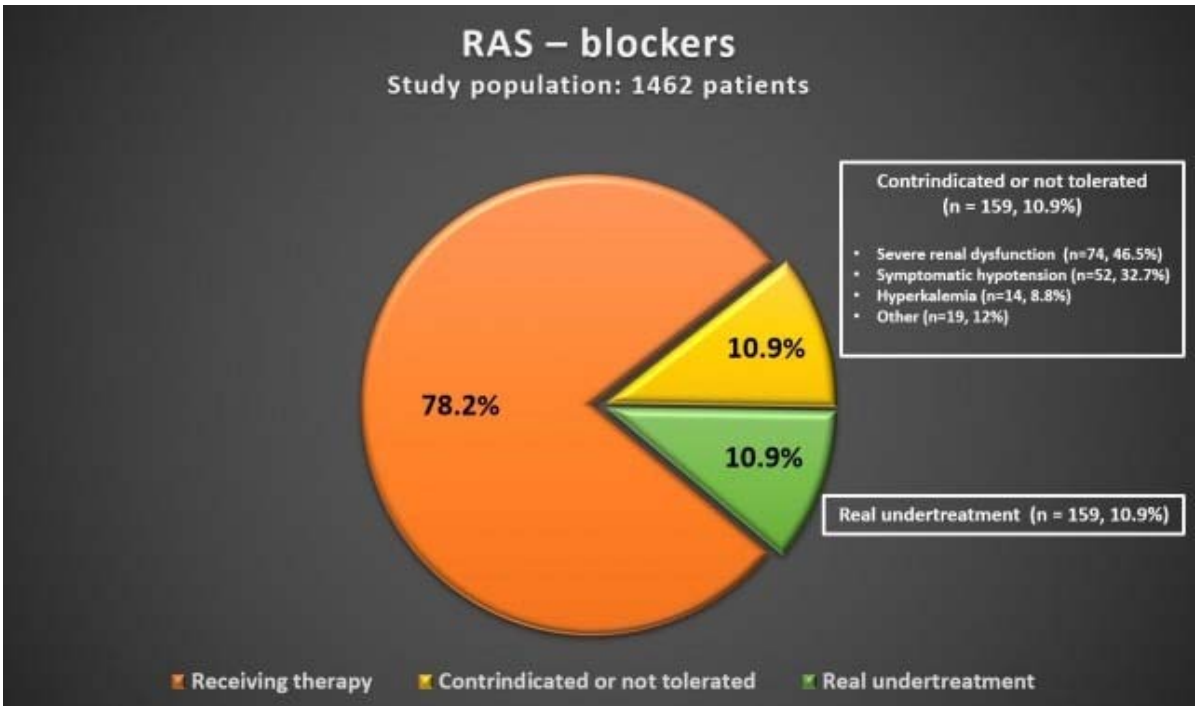
Background: Current heart failure guidelines recommend the use of medical therapies including renin–angiotensin system (RAS) blockers, beta-blockers, mineralocorticoid antagonists (MRAs) in patients with chronic heart failure and reduced ejection fraction (HFrEF). Despite the evidence-based recommendations to use of medical therapies at maximally tolerated target doses, many studies suggest that HFrEF patients are rarely received medical therapies at the target doses. The aims of this study were to determine: i) rate of optimal vs. suboptimal adherence to guidelines in according to use of guideline-directed medical therapies (GDMT), and ii) demographic and clinical differences between patients with optimal vs. suboptimal adherence to guidelines.

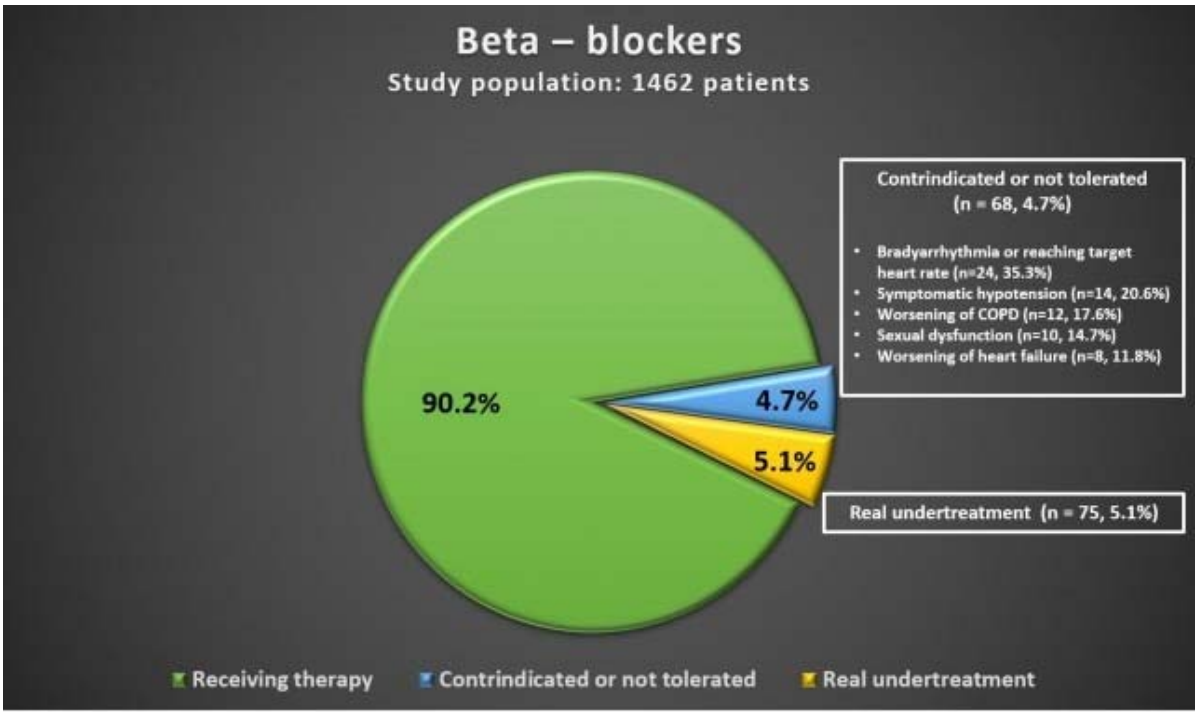
Methods: Adherence to guideline-directed medical and device **T**herapy in heart failure with reduced ejection fraction: **ATA** study is a prospective, multicenter, observational study conducted in 24 centers from seven geographical regions of Turkey from January 2019 to June 2019. For the assessment of optimal vs. suboptimal adherence to the GDMT, we designed a new **RBM** scoring system (**R**AS blockers + **B**eta-blockers + **M**RAs) on the basis of the use of target doses of HF therapies (Figure 1). A high RBM score (≥6) –in other words, use of RAS blockers, beta-blockers, and MRAs at least 50% of target doses– is indicative of the optimal adherence to the GDMT.

Results: The study included 1,462 outpatients (male: 70.1%, mean age: 67 ± 11 years, mean LVEF: 30 ± 6%) with chronic HFrEF. RAS blockers, beta-blockers, and MRAs were used in 78.2, 90.2, and 55.4% of patients, respectively. When we exclude medical reasons for non-use of RAS blockers, beta-blockers, and MRAs such as drug intolerance or contraindication, 'the real rate of undertreatment' can be given as 10.9, 5.1, and 28.8%, respectively (Figure 2–4). The proportion of patients receiving target doses of GDMT were 24.6% for RAS blockers, 9.9% for beta-blockers and 10.5% for MRAs. When we exclude medical reasons for inadequate up-titration of RAS blockers, beta-blockers, and MRAs such as drug intolerance or contraindication, 'the real rate of under up-titration' can be given as 46.8, 48.3, and 59.8%, respectively (Table 1). The proportions of patients according to RBM score are presented in Figure 5. Among study population, only 22.9% of HFrEF patients had optimal adherence to the GDMT (RBM score ≥6). Patients with suboptimal adherence to the GDMT were older and had low level of education and low household income than those presenting with optimal adherence. Patients with optimal adherence had more co-morbidities, including hypertension, diabetes mellitus, peripheral arterial disease, and smoking. Patients with optimal adherence were more likely to be on treatment with ivabradine, statins, and diuretics (Table 2a-b).

Conclusion: Although majority of HFrEF patients in ATA study population receive RAS blockers and beta-blockers –but not MRAs–, only 22.9% of HFrEF patients were treated with target doses of medications. Even after excluding medical reasons for inadequate up-titration, nearly half of the patients did not receive GDMT at target doses. Suboptimal adherence to the GDMT was related to older age and low level of household income and education. In our opinion, RBM score as an assessment tool of adherence to the GDMT can be used for individual risk analysis of HFrEF patients. This new score system should be tested in larger cohorts to predict mortality and morbidity in patients with HFrEF.

RBM score				
Dose	**RAS – blockers**	**Beta – blockers**	**MRAs**	**Total**
None	0	0	0	0
<50% of target dose	1	1	1	3
≥50% – <100% of target dose	2	2	2	6
≥100% of target dose	3	3	3	9
Suboptimal adherence: <6 Optimal adherence: ≥6 (use of RAS blockers, beta-blockers, and MRAs at least 50% of target doses)				




Beta – blockers
Study population: 1462 patients
Contrindicated or not tolerated
(n = 68, 4.7%)
Bradyarrhythmia or reaching target heart rate (n=24, 35.3%)
Symptomatic hypotension (n=14, 20.6%)
Worsening of COPD (n=12, 17.6%)
Sexual dysfunction (n=10, 14.7%)
Worsening of heart failure (n=8, 11.8%)
90.2%
4.7%
5.1%
Real undertreatment (n = 75, 5.1%)
Receiving therapy
Contrindicated or not tolerated
Real undertreatment

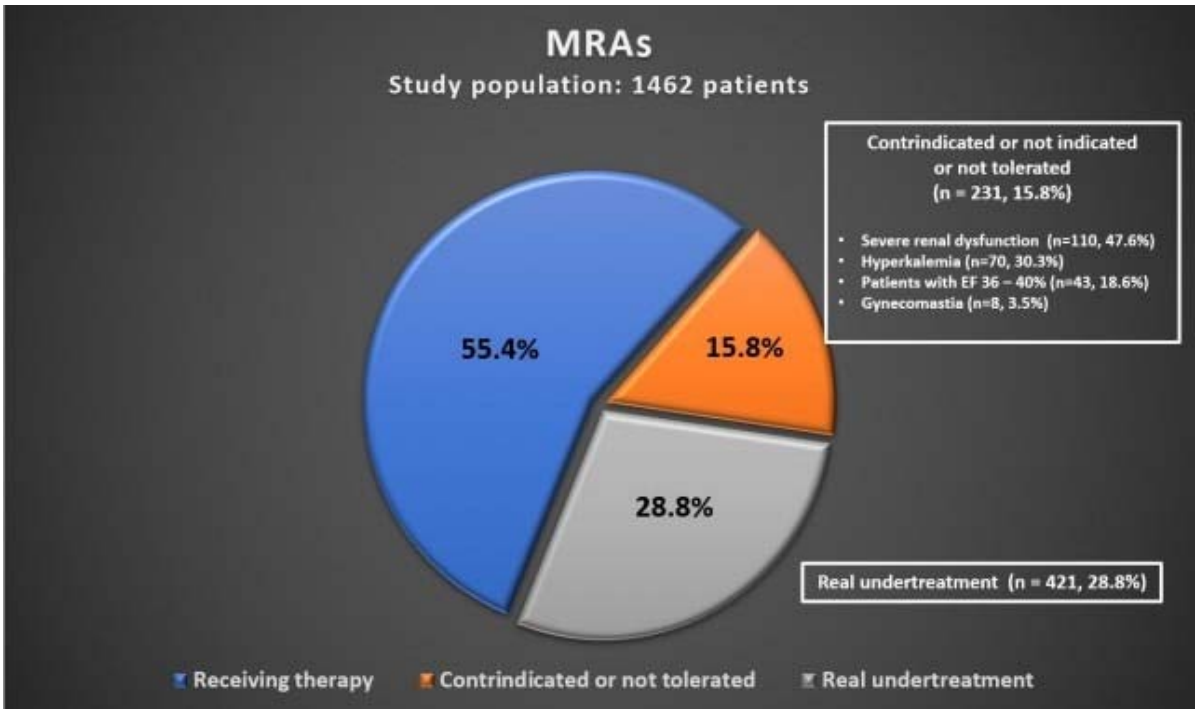
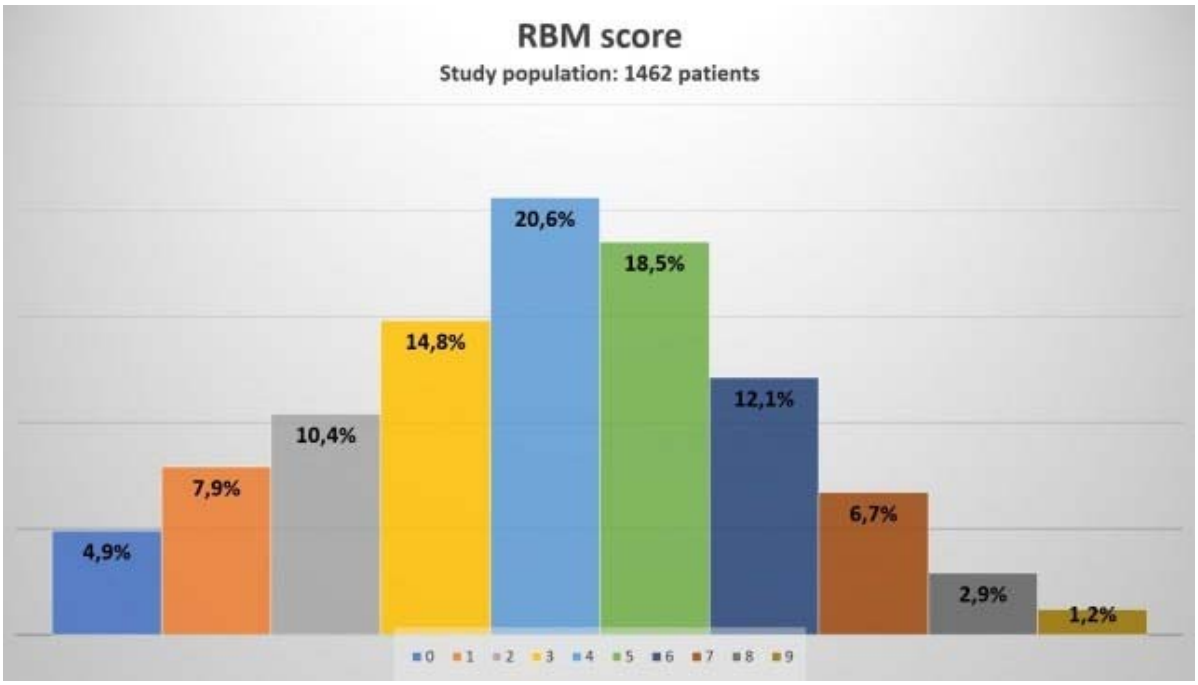

MRAs
Study population: 1462 patients
Contrindicated or not indicated
or not tolerated
(n = 231, 15.8%)
Severe renal dysfunction (n=110, 47.6%)
Hyperkalemia (n=70, 30.3%)
Patients with EF 36 – 40% (n=43, 18.6%)
Gynecomastia (n=8, 3.5%)
55.4%
15.8%
28.8%
Real undertreatment (n = 421, 28.8%)
Receiving therapy
Contrindicated or not tolerated
Real undertreatment

Table. Heart failure patients at target dosages of recommended pharmacological treatments and reasons for not achieving target dosages					
Study population: 1462 patients	Achieved target dose	Achieved ≥50% - <100% of target dose	Did not achieve target dose (<50% of target dose)	Reason for not achieving target dose	
RAS – inhibitors (1144 patients, 78.3%)	282 (24.6)	478 (41.9)	384 (33.5)	Symptomatic hypotension	196 (22.7)
				Still in up-titration	171 (19.8)
				Worsening renal function	67 (7.8)
				Hyperkalemia	16 (1.9)
				Others	9 (1)
				No clear medical reason	403 (46.8)
Beta – blockers (1319 patients, 90.2%)	130 (9.9)	412 (31.2)	777 (58.9)	Bradyarrhythmia or reaching target heart rate	232 (19.5)
				Still in up-titration	229 (19.3)
				Symptomatic hypotension	96 (8.1)
				Worsening of COPD	32 (2.7)
				Worsening of heart failure	16 (1.3)
				Sexuel disfunction	7 (0.6)
				Others	3 (0.2)
				No clear medical reason	574 (48.5)
MRAs (810 patients, 55.4%)	85 (10.5)		725 (89.5)	Still in up-titration	144 (19.9)
				Hyperkalemia	72 (9.9)
				Renal disfunction	52 (7.2)
				Gynecomastia	7 (0.9)
				Others	17 (2.3)
				No clear medical reason	433 (59.8)



Variable	RBM score <6 (n=1127, 77.1%)	RBM score ≥6 (n=335, 22.9%)	*P* – value
Age (years)	67.8 ± 11.4	64.4 ± 11	<0.001
Males	69.6	71.9	0.45
Marital status (single or divorced)	13.3	9.6	0.07
Low level of education	34.6	19.4	<0.001
Low household income	56.4	46.3	<0.001
Vital signs			
• Systolic BP (mm Hg)	120 ± 18	120 ± 17	0.95
• Systolic BP ≤110 mmHg	24.6	24.2	0.73
• Heart rate (b.p.m.)	78 ± 16	77 ± 16	0.48
• Heart rate ≥70 b.p.m.	65.9	62.4	0.34
Functional class, NYHA I–II	74.2	80.3	0.09
Prior HF hospitalization	43.3	42.1	0.91
Ischemic etiology	67.1	68.1	0.68
Comorbidities and risk factors			
• Coronary artery disease	72.6	74	0.66
• Myocardial infarction	51.6	55.2	0.26
• PCI	49.1	49.6	0.90
• Coronary artery bypass graft	20.3	19.7	0.87
• Hypertension	55.8	64.5	0.006
• Diabetes mellitus	33.3	39.4	0.04
• Dyslipidemia	37.5	39.7	0.48
• Atrial fibrillation	23.4	25.1	0.51
• Stroke or TIA	5.6	6	0.78
• Peripheral arterial disease	5	9.3	0.005
• Chronic kidney disease	19.2	14.6	0.06
• Asthma or COPD	22.6	25.4	0.30
• Anemia	17	18.5	0.56
• Thyroid disease	9.1	11	0.28
• Depression	6.1	9.6	0.03
• Cancer	4.4	5.1	0.65
• Current smoker	20.9	29.3	<0.001

Variable	RBM score <6 (n=1127, 77.1%)	RBM score ≥6 (n=335, 22.9%)	*P* – value
Electrocardiographic data			
• Sinus rhythm	72.8	71.6	0.72
• Left bundle branch block	17.3	12	0.06
Echocardiographic data			
• LVEF (%)	30 ± 6	30 ± 6	0.07
• Left atrial dilatation	74.2	75.5	0.67
• Moderate–to–severe VHD	52.3	49.6	0.63
• SPAP (mm Hg)	39 ± 14	40 ± 13	0.37
Laboratory data			
• Serum creatinine (mg/dL)	1.1 ± 0.6	1.1 ± 0.3	0.27
• GFR (ml/dk/1.73 m²)	68 ± 22	67 ± 20	0.08
• Hemoglobin (g/L)	13.1 ± 1.8	13 ± 1.9	0.89
• NT-proBNP (pg/mL)	4040 ± 12021	3495 ± 9047	0.59
• TSH (mU/L)	1.9 ± 2.8	1.8 ± 1.4	0.37
• LDL – cholesterol (mg/dL)	105 ± 32	98 ± 36	<0.001
Medical treatments			
• Ivabradin	9.2	21.8	<0.001
• Statins	41.8	58.5	<0.001
• Diuretics	66.4	73.1	0.02
• Digoxin	11.6	14	0.25
• Amiodarone	5.6	8.1	0.11
• Antiplatelets	67.9	64.5	0.26
• Warfarin	11.5	9	0.19
• DOACs	14.5	18.5	0.08
• DHP-CCB	12.3	16.2	0.08
• Nitrats	11.1	11.3	0.92
• Ranolazine	4.9	11.3	<0.001
• Trimetazidine	12.7	18.8	0.007

BP indicates blood pressure; NYHA, New York Heart Association; HF, heart failure; PCI, percutaneous coronary intervention; TIA, transient ischemic attack; COPD, chronic obstructive pulmonary disease; LVEF, left ventricular ejection fraction; VHD, valvular heart disease; SPAP, systolic pulmonary artery pressure; GFR, glomerular filtration rate; NT-proBNP, N-terminal pro–B-type natriuretic peptide; TSH, thyroid stimulating hormone; LDL, low-density lipoprotein; DOACs, direct oral anticoagulants; DHP-CCB, dihydropyridine calcium channel blockers.

ID: **782**

Topic: **Cardiology » Chronic heart failure**

Presentation Type: **Oral**

GENDER-RELATED CLINICAL AND MANAGEMENT DIFFERENCES IN PATIENTS WITH CHRONIC HEART FAILURE WITH REDUCED EJECTION FRACTION

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[2]*Fırat University, Elazığ, Turkey*

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Aim: Gender-related differences have been described in the clinical characteristics and management of patients with chronic heart failure with reduced ejection fraction (HFrEF). However, published data is conflictive in this regard.

Methods: We investigated differences in clinical and management variables between male and female patients from the ATA study, a prospective, multicenter, observational study that included 1462 outpatients with chronic HFrEF between January and June 2019.

Results: Study population was predominantly male (70.1%). In comparison to men, women with chronic HFrEF were older (66 ± 11 years vs. 69 ± 12 years, P<0.001), suffered more hospitalizations, and presented more frequently with NYHA class III or IV symptoms. Ischemic heart disease was more frequent in men, whereas anemia, thyroid disease, and depression were more frequent in women. No difference was seen between genders in the use rate of renin–angiotensin system inhibitors, beta-blockers, mineralocorticoid receptor antagonists, or ivabradine, or in the proportion of patients achieving target doses of these drugs. Regarding device therapies, men were more often treated with an implantable cardioverter-defibrillator and women received more cardiac resynchronization therapy.

Conclusion: In summary, although management seemed to be equivalent between genders, women tended to present with more symptoms, require hospitalization more frequently, and have different comorbidities than men. These results highlight the importance of gender-related differences in HFrEF and call for further research to clarify the causes of these disparities. Gender-specific recommendations should be included in future guidelines in HFrEF.

ID: **831**

Topic: **Cardiology » Chronic heart failure**

Presentation Type: **Oral**

THE UTILITY OF THE ECG BASED SYLVESTER SCORING METHOD TO PREDICT RE-HOSPITALIZATION IN PATIENTS WITH ISCHEMIC HEART FAILURE

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Objective: The Selvester QRS score on 12-lead electrocardiogram has prognostic implications in various cardiac event regarding myocardial scar. Furthermore, it has been shown that The Selvester QRS score system has a high degree of correlation with autopsy-measured myocardial infarct size. In this pilot assessment, we aimed to evaluate the role of The Selvester QRS score to predict re-hospitalization due to ischemic heart failure .

Methods: The data of consecutive fifty-four patients with ischemic heart failure were retrospectively analyzed. Selvester QRS scores were calculated at the time of hospital admission. The primary endpoint was the re-hospitalization rate within the first 3 months.

Results: At baseline, mean age was 62.1±12.7 years, the left ventricular ejection fraction (LVEF) was 29 ± 6%, plasma brain natriuretic peptide level was 2830 pg/mL, and mean Selvester QRS score was 5.2 points. Twenty-one re-hospitalization due to heart failure were observed. Cox proportional hazard regression analysis revealed that the Selvester QRS score was an independent determinant of re-hospitalization (hazard ratio, 1.12; 95% confidence interval, 0.95–1.34; p = 0.04). The best cut-off value was determined as 4.3 points, with 65% sensitivity and 49% specificity (area under the curve, 0.618, p = 0.02). Further, there was a significant positive correlation between Selvester QRS score with NT-proBNP and a significant negative correlation between Selvester QRS score and LVEF (respectively $r = 0.33$, $p < 0.05$ and $r = -0.67$, $p < 0.05$).

Conclusion:.Our findings suggest that baseline Selvester QRS score can be used as a predictor of re-hospitalization due to ischemic heart failure.

Oral Presentation Session

Novel Approaches for Good Old CABG

Date: 30.10.2020 Time: 12:15 – 13:30 Hall: 5

ID: **520**

Topic: **Cardiology » Coronary Artery Disease - CABG Surgery**

Presentation Type: **Oral**

CORONARY ARTERY BYPASS GRAFTING IN A LIPODYSTROPHY PATIENT

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Lipodystrophic syndromes are rare, and limited number of cases reported depending on the subtypes. Mostly known coronary artery disease associated subtype is Dunnigan-type familial partial lipodystrophy (Type-2 FPLD). FPLD2 (MIM: #151660) is a genetic disease caused by mutations in lamin A/C (LMNA) gene (ENSG00000160789). The disease is characterized by atrophy of subcutaneous adipose tissue on extremities and trunk with fat deposition in the face and neck. We present a lipodystrophy case who was operated successfully despite multiple comorbidities.

A 42-year-old patient admitted to hospital with chest pain was hospitalized with the diagnosis of NSTEMI. She had a clinical diagnosis of lipodystrophy but there was no genetic mutation shown in previous tests. The patient's body weight was 37 kg, height was 145 cm and body mass index (BMI) was 17.6 kg / m2. She had also insulin-dependent diabetes mellitus, hypertension, euthyroid multinodular goiter, hyperlipidemia, hepatosetatosis, multiple liver adenoma, cholelithisasis, polycystic ovaries, scoliosis, diabetic retinopathy and glaucoma, Coronary angiogram showed that she had severe multivessel coronary artery disease requiring coronary artery bypass surgery (CABG). 3 vessel cardiopulmonary bypass grafting operation (LAD-lima, OM1-Saphenous vein RCA-Saphenous vein) was performed. Aortic clamping time was 25 minutes and total CPB time was 63 minutes. The patient was extubated at the 6th postoperative hour and removed from the intensive care unit on the first postoperative day. No blood transfusion was needed in hospital stay. The patient was discharged on the 4th postoperative day without any complications. Blood samples taken from the patient were studied with 'Next Generation DNA Sequence Analysis (NGS)' technique. Sequence analysis of WRN gene showed a homozygous mutation at exon 8 (c.356-2A>T) as splice acceptor novel variant.

The WRN gene encoding RecQ-type DNA helicase, which has autosomal recessive inheritance, has also been implicated in the pathogenesis of mutations in the Lamin A / C gene. In the literature, the LMNA gene has been associated with muscle dystrophy, familial transitional lipodystrophy and dilated cardiomyopathy with autosomal dominant inheritance. According to ACMG criteria (value), mutation of WRN gene is classified as pathogenic (Class V).

Lypodystrophy associated cardiac complications mostly reported as cardiomyopathy. This patient is not only the first case reported about CABG operation in a WRN gene associated lipodystrophy but also the first lipodystrophy case operated before left ventricular dysfunction.

ID: **523**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

A RARE BENIGN CORONARY ARTERY ANOMALY IN A PATIENT PLANNING AORTIC CORONARY ARTERY BYPASS SURGERY: DUAL RIGHT CORONARY ARTERY

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Coronary artery anomalies are sometimes considered clinically insignificant. They may coexist with other congenital heart diseases, cause myocardial ischemia and ultimately reduce quality of life and duration.

All of the coronary artery anomalies that cause sudden deaths are known as interarterial type because they pass between aorta and pulmonary artery and they are called malignant coronary anomalies. Interarterial left main coronarv artery is the most common coronary anomaly causing ischemia and sudden death. Acute coronary syndrome without atherosclerotic disease has been reported due to interarterial right coronary artery. Two right coronary arteries are originating from two separate ostia and parallel to the right atrioventricular sulcus. Bilateral right coronary artery is a rare and bening anomaly.

We present a case of dual right coronary artery detected in coronary angiography by reviewing the literature.

Case Report

A 58-year-old male patient with no known coronary artery disease was admitted to coronary angiography unit because of chest pain and high troponin levels. He had a history of smoking. Coronary angiography showed 80% stenosis in the distal left main coronary artery, osteal 70% stenosis in the left anterior descending artery, osteal 50% stenosis in the circumflex artery, and 90% stenosis after a high optus marginal branch. Bifid course was also observed in the right coronary artery (Image 1). Proximal long lesion and bifid right coronary artery which was fedback second degree from distal left system was observed. Echocardiography was performed and the ejection fraction was 48%. Cladication was present in his anamnesis. Peripheral artery disease was detected on color doppler ultrasound and carotid artery stenosis was detected on carotid doppler ultrasound. Our patient did not have any recurrent chest pain. Following the decrease in troponin level, we planned to perform aortic coronary bypass surgery.

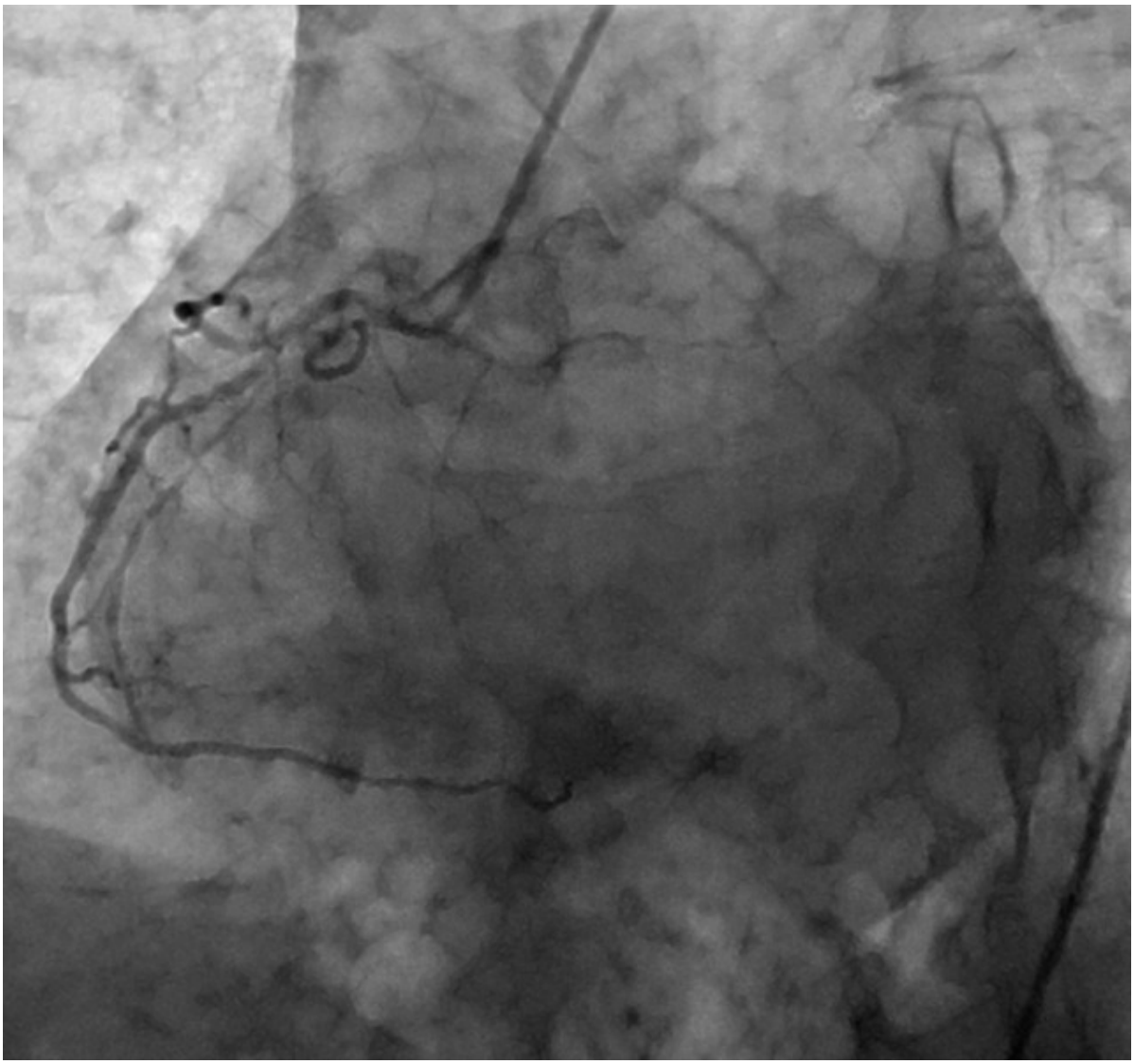
Usually, two right coronary artery cruxes emerge from seperature ostia. Sometimes the right coronary artery originating from a single ostium is divided into two after a few mm course. Some authors disagree about cases originating from a single ostium, and they suggest that these anomalies are actually high-output right ventricular branches.

There are only a few case reports in the literature. In a study conducted in our country, this anomaly was detected in 6 patients, the incidence of the anomaly was 3.5% and the incidence was 0.05%.

Although coronary artery anomalies are seen less frequently, they are of special importance because they may encounter important clinical conditions such as cardiac syncope, angina pectoris and myocardial infarction and cause sudden cardiac death especially in young people. A continuous murmur is sometimes the only symptom of coronary artery anomalies. Coronary artery anomalies alone account for about 20% of sudden deaths in young athletes.

Conclusion

Innovations in technology, advances in imaging systems and increased processing experience have led us to better recognize and identify these anomalies. As our knowledge and experience on coronary artery anomalies increases, the clinical significance and consequences of coronary artery anomalies will become clearer. For these reasons, coronary artery anomalies should be well known to all physicians.



ID: **544**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

IMPROVING THE RESULTS OF MYOCARDIAL REVASCULARIZATION USING WARM (THERMAL) BLOOD CARDIOPLEGIA IN PATIENTS WITH CORONARY HEART DISEASE

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Purpose of the study: improve the results of surgical treatment of patients with stenotic coronary atherosclerosis, undergoing surgery with cardiopulmonary bypass.

Materials and research methods: In Urgench branch of the Republican Specialized Scientific and Practical Medical Center for Cardiology from August 2018 to February 2019, 40 coronary bypass operations with cardiopulmonary bypass were performed in patients with coronary artery disease, of which 20 patients used pharmacological cold crystalloid cardioplegia (PhCCC) - group I, the remaining 20 patients had normothermic blood cardioplegia(NBC) - group II. Pharmacological cold crystalloid cardioplegia was performed at a rate of 20 ml/kg for 8-10 minutes, the interval between cardioplegia sessions was 60 minutes. Normothermic blood cardioplegia was performed using a cardiopulmonary bypass machine, at the rate of 3:1 in the first session, and in subsequent sessions 4:1, for 2 minutes and usually did not exceed 2 sessions, the interval between cardioplegia sessions was 20 minutes. The average number of grafts per patient in the groups was comparable and averaged 3.1. The time from the onset of PhCCC to the onset of asystole averaged 2.3 minutes, with NBC an average of 1.3 minutes. In group I, 14 patients restored cardiac activity through fibrillation, of which 12 patients after inhibition of cardiopulmonary bypass required inotropic support. In group II all patients had spontaneous recovery of cardiac activity, and 2 patients used inotropic support after stopping the cardiopulmonary bypass. Blood transfusion in group I was required in 15 patients, in group II - 3 patients. The ejection fraction (EF) of the left ventricle (LV) on average before surgery in group I was 54%, in the early postoperative period this indicator averaged 49%, in group II, the ejection fraction of the left ventricle was on average 51%, after surgery 53%. Hemoglobin in group I before surgery averaged 110 g/l, after surgery 88 g/l, in group II hemoglobin before surgery averaged 108 g/l, after surgery 96 g/l.

Results and discussion: In group II, unlike group I, asystole of the heart occurred faster after cardioplegia, the duration of the cardioplegia pumping session was reduced, hemodilution was less with NBC compared with PhCCC, which reduced the need for blood transfusion by 5 times, and a quick spontaneous restoration of sinus rhythm was observed with good LV contractile function. According to the literature, the advantages of normothermic blood cardioplegia are in the following positions (Ketskalo M.V. et al., Cardiopulmonary bypass and cardioplegic myocardial protection, 2009): autobloodwarm (thermal)cardioplegia provides better electromechanical stability of the myocardium during cardiac arrest and recovery, due to the absence of a cold injury, normothermicblood cardioplegia reduces cardiomyocyte and endothelial edema, thereby preventing microcirculation disorders and postischemic myocardial dysfunction.

Conclusions: The use of warm (thermal) blood cardioplegia reduces the number of perioperative complications, such as intraoperative acute myocardial infarction, acute postoperative heart failure, various cardiac arrhythmias and provides a significant improvement in the restoration of myocardial function and metabolism after cardiopulmonary bypass.

ID: **567**

Topic: **Cardiovascular Surgery » Medical and Surgical Treatment of Heart Failure**

Presentation Type: **Oral**

FATAL COMPLICATION AFTER THE MYOCARDIAL INFARCTION: VENTRICULAR RUPTURE AND VENTRICULAR PSEUDOANEURYSM; SURGERY OR FOLLOW-UP?

Serkan Asil[1], Veysel Özgür Barış[2], Suat Görmel[1], Murat Çelik[1], Uygar Çağdaş Yüksel[1]

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Introduction

A ventricular pseudoaneurysm develops after an acute myocardial infarction (MI) that is complicated by a ventricular free wall rupture that is contained by localized pericardial adhesions. The risk of rupture in untreated pseudoaneurysms is 30-45% and the mortality rate is 50%. Although there is no clear evidence of treatment in the literature, the main suggestion is to perform surgical treatment without delay. However, the age of the patients, additional comorbidities and the difficulty of the operation considerably increase the mortality rate of the surgical procedure. In this case reports, we will discuss our cases of giant ventricular pseudoaneurysm who are follow up under medical treatment.

Case report 1

A 72-year-old man underwent coronary angiography with the diagnosis of inferior STEMI in February 2018, but the procedure was terminated with TIMI 2 flow. After 1 week the patient admitted with shortness of breath, transthoracic echocardiography revealed pericardial effusion severe mitral regurgitation and CT angiography was performed with the prediagnosis of cardiac rupture. CT angiography shows ventricular aneurysm formation in the left ventricular posteroinferior region and self-limited rupture. We followed up the patient 2 weeks in hospital and then the clinical status of the patient was discussed in the cardiovascular surgery and cardiology council and the patient was advised to undergo cardiac transplantation, However, the patient and their relatives did not accept cardiac transplantation. After this point, the patient was discharged and followed up as an outpatient under medical treatment. In the echocardiography performed monthly, pseudoaneurysm sac and thrombus were observed enlarged. The size of the aneurysm was 105x95 mm and the thrombus size was 60x31 mm in echocardiography and the patient had severe eccentric mitral regurgitation the patient was reevaluated with CT angiography and it was seen that the aneurysm sac grew (120x100 x 95mm) and thrombus was present (Figure 1). As a result, we successfully followed up as an outpatient with NYHA 2 symptoms but, in December 2019, the patient died due to pulmonary edema and cardiogenic shock.

Case Report 2

A 59-year-old female patient admitted to our outpatient clinic for decompensated heart failure and NYHA 3-4 symptoms. In 2013, an unsuccessful PCI was performed to RCA with inferior STEMI in the different medical centers. The echocardiography revealed very low ejection fraction, restrictive type diastolic dysfunction and the pseudoaneurysm sac. As a result of inferoposterior region pseudoaneurysm, mitral valve posteromedial papillary muscle structure was distorted and it caused eccentric severe mitral regurgitation. CT angiography is performed and ventricular pseudoaneurysm formation of 85x60x90mm size is detected (Figure 2).. The patient's symptoms of hypervolemia and heart failure were controlled by medical treatment and discharged and follow-up under close supervision.

Conclusion

In asymptomatic patients and mildly symptomatic patients under medical treatment who have high surgical risks because of associated medical problems, conservative management may be considered.

Figure 1: Echocardiographic and Cardiac BT image of pseudoaneurysm of case 1.

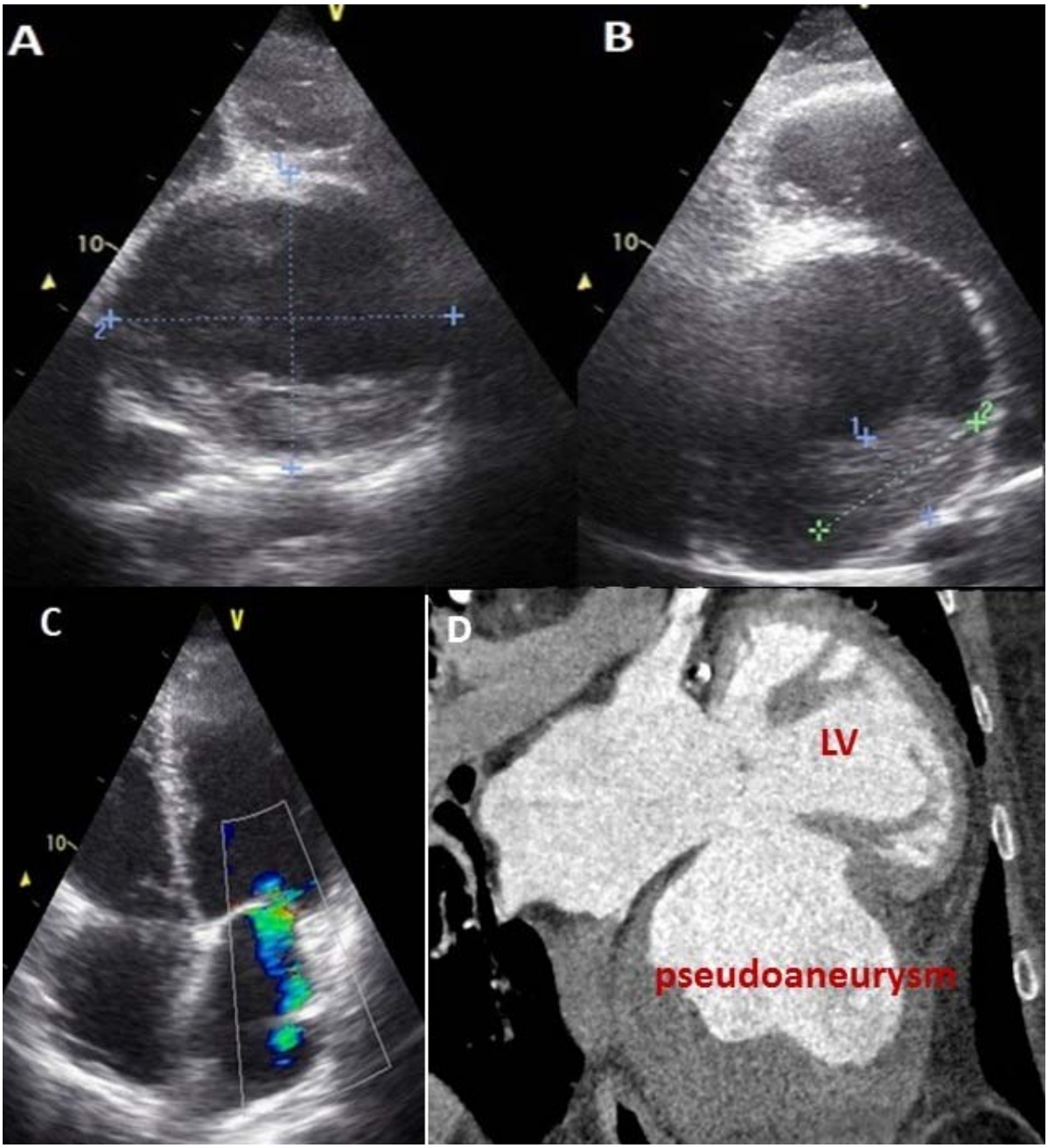
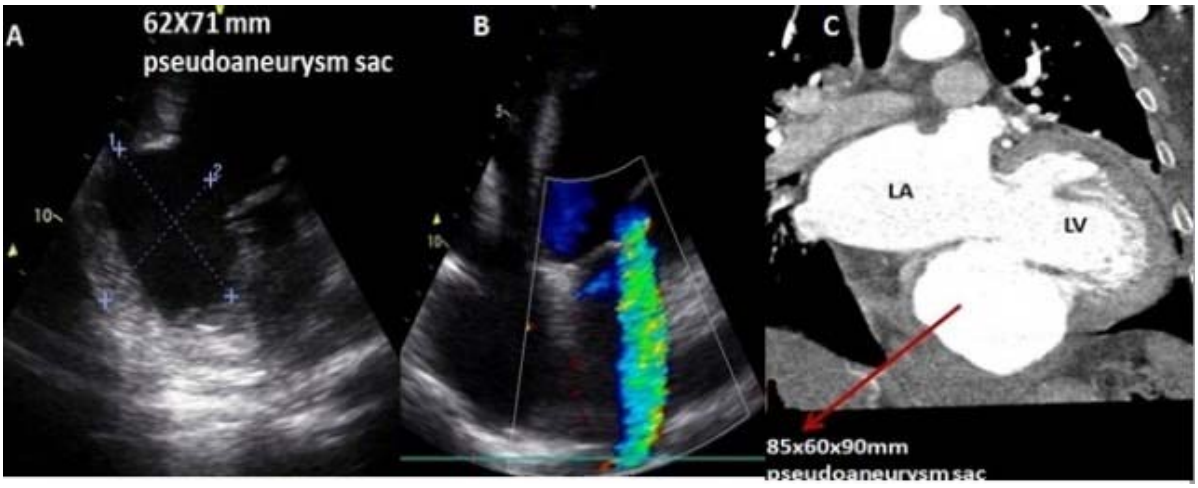


Figure 2: Echocardiographic and Cardiac BT image of pseudoaneurysm of case 2.


A
62X71 mm
pseudoaneurysm sac
B
C
LA
LV
85x60x90mm
pseudoaneurysm sac

ID: **569**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

OUR EXPERIENCES WITH STERNAL CABLE WIRES FOR STERNAL CLOSURE PATIENTS UNDERGOING CARDIAC SURGERY

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Objective: The objective of this retrospective study is to report our experience with the sternal cable system for sternal closure.
Methods: Between January 2018 and December 2019, prospectively collected data from 153 patients (96 males and 57 females with a mean age of 62,88 ± 8,99; range 43 to 83 years) undergoing cardiac surgery via median sternotomy and its closure using a multifilament sternal cable system (Pioneer Surgical Technology, Inc. ,Marquette, Michigan, USA) were retrospectively reviewed. Data were collected from hospital records. Patients were operated due to ischemic heart disease and/or valve disease and/or ascending aorta aneurysms. We classified the patients, according to American National Institutes of Health guidelines with normal body mass index' (BMIs) ranging from 18.5 to 24.9, overweight BMIs from 25 to 29.9, mildly obese BMIs from 30 to 34.9, moderately obese BMIs from 35 to 39.9, and extremely obese BMIs ≥ 40 [1]. Ninety-three patients were mildly obese, forty-nine patients were classified as moderately obese, and eleven patients were classified as extremely obese. Moreover, five patients needed to a revision due to bleeding. In addition, 25, 3 and 8 patients had chronic obstructive pulmonary disease (FEV1 <80%, FEV 1 / FVC <70%), advanced age (≥80 years) and end-stage renal failure, respectively. Every patient had four cables in a figure-eight fashion around the sternum, similarly.

Results: Cable reaction characterized by pain, edema, and redness were observed in three patients needed cables removal. No sternal dehiscence or deep sternal wound infection were observed in any patient. A patient whose sternum was closed with the cables was taken to the revision due to bleeding and his sternum was again closed using the cables at the end of the operation. During this operation, no problem occurred, removing the cables. This patient was discharged on the 7th day. No sternal dehiscence were detected in his follow-up.

Conclusions: Although this method is more expensive than conventional sternal steel wire closing method, we thought that closure with sternal cables are easy, safe and effective method even in high-risk patients for sternal dehiscence after sternotomy.
References

NHLBI Obesity Education Initiative Expert Panel on the Identification, Evaluation, and Treatment of Obesity in Adults (US). Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report. Bethesda (MD): National Heart, Lung, and Blood Institute; 1998 Sep.

ID: **579**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

MYOCARDIAL PROTECTION USING DEL NIDO CARDIOPLEGIA SOLUTION IN ADULT CARDIAC SURGERY WITH PROLONGED CROSS CLAMP TIMES

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Introduction

Blood cardioplegia (BC) is widely used in adult cardiac surgery. The aim of this study is to determine whether del Nido (DN) cardioplegia provides equivalent myocardial protection as compared to isothermic whole BC in patients with prolonged cross-clamp times.

Methods

The study population comprised 100 adult patients who underwent elective cardiac surgery with DN cardioplegia between January 2014 and December 2019.The control group comprised 100 adult patients who underwent elective cardiac surgery with isothermic whole BC between January 2014 and December 2019. Patients with prolonged cross-clamp times (≥90 minutes) were included in this retrospective study.

Results

The aortic cross clamp times were shorter with DN cardioplegia(104.3 ± 13.7 vs125.5 ± 18.01,$p<0.001$) while there were no significant difference in cardiopulmonary bypass and total operation times and requirement for intraoperative defibrillation. There were no significant differences between the groups in terms of the postoperative peak levels of cardiac biomarkers (troponin T), major postoperative adverse events, and in-hospital mortality.

Conclusion

This study revealed that the use of the DN cardioplegia solution in adult patients undergoing cardiac surgery with prolonged cross-clamp times may be a safe and efficient alternative to the traditional cardioplegia solutions.

ID: **588**

Topic: **Cardiovascular Surgery » Medical and Surgical Treatment of Heart Failure**

Presentation Type: **Oral**

COMBINED INTRAAORTIC BALON PUMP AND LEVOSIMENDAN IMPROVES POSTOPERATIVE OUTCOMES IN THE PATIENTS WITH LOW EJECTION FRACTION

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Objective: Low ejection fraction (EF) in cardiac surgery increases the risk of postoperative mortality and morbidity. The positive contribution of intra-aortic balloon pump (IABP) and levosimendan to the postoperative period has been reported in these patients. In this study, we report the results of the combined use of levosimendan and IABP in the patients with low EF.

Methods: Patients with low EF (<%35) who were operated in our clinic between 01.01.2016-31.12.2019 were retrospectively analysed. The patients who were treated with levosimendan in the preoperative period were included in the study. Totally 12.5 mg levosimendan was given to the patients. It was started at low dose; the dose was increased depending on the tolerability of the patient and the infusion was completed in 24-48 hours.

Results: In the study period, 31 patients received levosimendan preoperatively. Combination of levosimendan and IABP were administered in 16 of these patients. 20 of the patients had undergone valve surgery and 11 had coronary artery bypass grafting (CABG). In the postoperative 5 patients (3 of CABG patients and 2 of valve surgery) died due to prolonged intensive care unit staying time. IABP was not used in any of these harvests. Remanining patients were discharged on average 14.4 ± 3.5 days after an intensive care stay of 8 ± 1.9 days.

Conclusion: The use of perioperative IABP in addition to preoperative levosimendan treatment in the surgical treatment of patients with low ejection fraction contributes positively to postoperative recovery by reducing postoperative mortality and morbidity.

ID: **586**

Topic: **Cardiovascular Surgery » Medical and Surgical Treatment of Heart Failure**

Presentation Type: **Oral**

ISOLATED CABG IN PATIENTS WITH MODERATE ISCHEMIC MITRAL REGURGITATION WITH LEFT VENTRICULAR DYSFUNCTION

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BACKGROUND AND AIM:

The necessariness of mitral valve surgery in patients with advanced heart failure remains controversial. In this study we assessed the feasibility of isolated coronary artery bypass grafting (CABG) in patients with moderate ischemic MR with ejection fraction between 35-25%.

METHODS:

Between May 2013 and November 2018, 42 patients (mean age 65.7 +/- 8.4 years) with preoperative left ventricular ejection fractions between 35-25% and concomitant mitral valve regurgitation with grade 2 underwent isolated coronary artery bypass grafting. Both anterograde and retrograde cardioplegia rich with phosholipides was utilized. Perioperative and 1 year clinical and echocardiographic outcomes were evaluated in these patients.

RESULTS: The hospital mortality rate was 7.1% (3 patients). 2 patients required repair of a left ventricular aneurysm. Transient low cardiac output occurred postoperatively in 5 patients (12%) among which IABP was implanted in 2 patients. During the follow up of 1 year there were 2 cardiac deaths and 2 non-cardiac deaths. The 1-year actuarial survival and freedom from grade 2 MR were 83.3% and 65.7%, respectively. 12 patients had grade II mitral valve regurgitation, but none required mitral valve surgery. The New York Heart Association functional class improved significantly in all hospital survivors (from 3.2 +/- 0.7 to 1.9 +/- 0.8; $p > 0.001$), and left ventricular ejection fractions rose from 28.0% +/- 5.8% to 44.6% +/- 9.5%. Heart failure symptoms were improved ($p < 0.01$). Left ventricular reverse remodeling was achieved in 51.5% of patients.

CONCLUSIONS:

Revascularisation of coronary arteries without correcting the ischemic mitral valve can be performed safely in patients with low ejection fraction and moderate MR with acceptable mortality rate. Isolated CABG leads to reverse remodeling of the left ventricle which in turn decreases the tethering of the mitral leaflets and often results in a reduction in regurgitation. Optimal myocardial protection and quick revascularisation techniques may further improve surgical results in these high-risk population.

ID: **293**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

DURATION OF AORTIC CROSS-CLAMP AND CARDIOPULMONARY BYPASS: THE CONTRIBUTING FACTORS TO THE INCREASED IN POSTOPERATIVE INTRA-AORTIC BALLOON PUMP (IABP) APPLICATION AND MORTALITY IN ADULT CARDIAC SURGERY

Maria Felinsianita[1], Fitri Rokim[1], Amin Tjubandi[2], Bagus Herlambang[2], Dudy Hanafy[2], Dicky Aligheri[2], Sugisman Sugisman[2], Tri Soetisna[2]

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Abstract

Background:

The association of ischemia-reperfusion injury with aortic cross-clamp time (XCT) and cardiopulmonary bypass time (CPBT) remains a challenging problem. Moreover, the safety cut-off point duration of XCT and CPBT are still in dispute. This study aimed to determine the impact of prolonged XCT and CPBT on early postoperative outcomes after adult cardiac surgery.

Methods:

A retrospective study was conducted in our facility using clinical data from 2018-2019 including patients underwent coronary artery bypass graft (CABG), valvular surgery and combined surgery. A total of 623 patients (mean age 51.74+12.68 years, 408 (65.5%) male) were divided into two groups, based on aortic cross-clamping time (XCT), <75
minutes and >75 minutes group. The impact of prolonged CPBT (>160 minutes) was also evaluated. The primary endpoint was mortality in 30 days.

Results:

In this study, 374 patients in the XCT <75 minutes group (43.97+13.40) and 249 patients in XCT>75 minutes group (143.07+46.29), p=0.001. Mean CPBT was 85.71+34.16 vs 209.12+41.13 (p=0.001). The longer XCT (2.1% vs 12.0%; p<0.001) and CPBT (2.8% vs 19%, p<0.001) were independently significant associated with 30-days mortality. Notably, there was a higher rate of postoperative intra-aortic balloon pump (IABP) application in XCT >75 minutes group [8(2.13%) vs 16(6.42%), respectively]. The major postoperative complication rates were significantly higher in XCT>75; CPBT<160 group rather than XCT<75; CPBT<160 or XCT<75; CPBT>160 group, including re-operation due to bleeding, cerebrovascular accident, total ICU hours, renal dysfunction, and pneumonia. No significant difference was found among groups regarding postoperative left ventricular ejection fraction (LVEF), atrial fibrillation, sepsis and multiple organ failure (MOF). In this study, we found that contributing factors of prolonged XCT and CPBT were lower LVEF and older age.

Conclusion:

Prolonged XCT and CPBT were the strong independent predictors of mortality, and associated with increased in the use of postoperative IABP application. This study suggests that the duration of XCT<75 minutes and CPBT<160 minutes were associated with lower mortality rates and reduce the incidence of postoperative adverse events.

Keywords: aortic cross-clamp time, cardiopulmonary bypass time, postoperative outcomes, adult cardiac surgery.

Oral Presentation Session

A Glimpse into Percutaneous Transcatheter Valve Therapy

Date: 30.10.2020 Time: 13:30 – 14:30 Hall: 4

ID: **534**

Topic: **Cardiology » PI for SHD - Others**

Presentation Type: **Oral**

EVALUATION OF PERCUTANEOUS ANNULOPLASTY FOR TREATMENT OF FUNCTIONAL MITRAL REGURGITATION: A RETROSPECTIVE STUDY FROM TURKEY

Suat Görmel, Salim Yaşar, Erkan Yıldırım, Yalçın Gökoğlan, Serkan Asil, Mustafa Köklü, Barış Bugan, Murat Çelik, Uygar Çağdaş Yüksel, Hasan Kutsi Kabul, Cem Barçın

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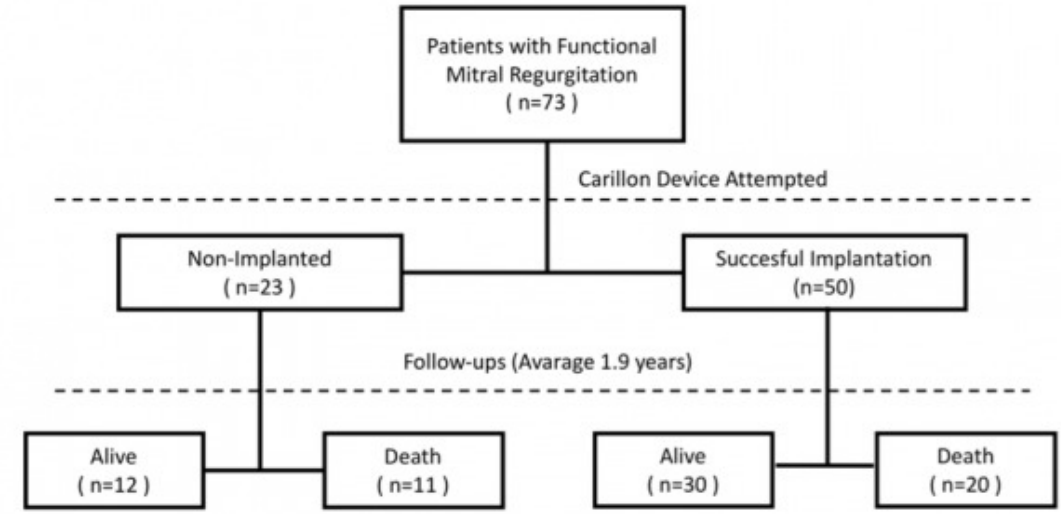
Objective: The management of severe functional mitral regurgitation (FMR) in patients with heart failure and low ejection fraction is controversial. Percutaneous transcatheter procedures are promising in this scenario. We currently report a retrospective analysis of our single center experience in inoperable severe FMR patients treated with Carillon Mitral Contour System focusing on its possible survival benefit.

Methods: A total of 73 patients with congestive heart failure (CHF), depressed left ventricular function (ejection fraction <35%) and severe FMR who underwent Carillon device implantation were analyzed retrospectively. Patients with successfully implanted device were compared with the ones in whom the device implantation was a failure.

Results: In six – year follow up, mortality rate was lower (40.0 % vs 47.8 %; HR: 0.83 95 % CI: 0.48 – 1.44) and life span after index procedure was longer (1.27 years vs 0.84 years; p=0.315) in device implanted group compared to non-implanted group. Postoperative 30-day rate of major adverse events was 1.3 % in spite of our more fragile study population.

Conclusion: Carillon Mitral Contour System implantation is an alternative and effective percutaneous transcatheter procedure especially in inoperable severe heart failure patients with FMR. The procedure has possible long-term survival benefits with high safety profile.


Patients with Functional Mitral Regurgitation (n=73)
Carillon Device Attempted
Non-Implanted (n=23)
Succesful Implantation (n=50)
Follow-ups (Avarage 1.9 years)
Alive (n=12)
Death (n=11)
Alive (n=30)
Death (n=20)

ID: **451**

Topic: **Cardiology » PI for SHD - Others**

Presentation Type: **Oral**

LONGTERM RESULTS OF MITRACLIP SYSTEM IMPLANTATION BY TWO-DIMENSIONAL SPECKLE-TRACKING BI-VENTRICLE ANALYSIS

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BACKGROUND AND AIM: The goal of this study was to determine changes in left ventricular (LV) and right ventricular (RV) function with two-dimensional speckle tracking echocardiography (2DSTE) after percutaneous mitral valve repair with the MitraClip system. Furthermore, we investigated whether baseline and/or changes in ventricles function after MitraClip repair had any impact on prognosis.

METHODS: A total of 25 consecutive patients (age: 57±12 years, 76% male) with moderate-to-severe or severe mitral regurgitation (MR) were included. Patients underwent two-dimensional transthoracic echocardiography before clip implantation and after 24-month follow-up. LV global longitudinal, radial and circumferential strain and RV free-wall longitudinal strain were obtained by 2D STE. Data analysis was performed offline. Prognostic data were also recorded via the use of telephone calls and follow-up visits for 24 months after the procedure.

RESULTS: During a follow-up of 24 months, LV global longitudinal strain and RV free-wall longitudinal strain were significantly improved (p = 0.001, p = 0.004 respectively). Of note, procedural success had a significant impact on reverse LV remodeling: (91%) patients with residual MR ≤ 1 showed a ≥10% increase in GLS in contrast to (50%) patients with residual MR grade 2 (p = 0.001). LV global radial and circumferential strain showed no significant improvement (p N 0.05 for all). On the other hand, conventional LV and RV indices did not change. The areas under the receiver operating characteristic curves for RV free-wall longitudinal strain showed high discriminative values (range, 0.85–0.92) in predicting unfavorable outcomes with persistent symptoms (New York Heart Association class > II) after the procedure. Clinically, reverse LV remodeling was accompanied by improved NYHA-class (p = 0.001), 6-minutes walk test (p = 0.007) and Minnesota Living with Heart Failure quality of life questionnaire (MLHFQ) (p = 0.012).

CONCLUSIONS: In conclusion, a successful MitraClip procedure can reverse the process of LV remodeling within 24 months, and this can be detected by 2DSTE. Also, patients with preprocedural lower RV free-wall longitudinal strain had the worst prognoses at the 2-year follow-up.

ID: **562**

Topic: **Cardiovascular Surgery » Transcatheter Aortic Valve Replacement**

Presentation Type: **Oral**

SURGICAL TREATMENT OF INFECTIVE ENDOCARDITIS AFTER TRANSCATHETER AORTIC VALVE IMPLANTATION IN EARLY PERIOD

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Introduction
Aortic stenosis (AS) is one of the most common valvular diseases in adults and the prevalence of AS increases with age. Transcatheter aortic valve implantation is an aortic stenosis treatment option for patient with high surgical risk factors such as advance aged, low ejection fraction. Prosthetic valve endocarditis is an important complication of any kind of valve replacement. Herein, we present a case who underwent successful surgical intervention due to transcatheter aortic valve endocarditis

Method:
83 years old male patient with high surgical risk factors for cardiac surgery. TAVI was performed three months ago before the admission. The patient has fever and dyspnea. 3/6 systolic murmur in aortic area and fever (37 0C) were noted in physical examination. Transthoracic echocardiography, which revealed a moderately reduced ejection fraction (40%), grade 2-3 mitral regurgitation, grade 2-3 paravalvular aortic leak. Transesophageal echocardiography revealed that grade 2-30 paravalvular leak of aortic left coronary cusp and 2-30 mitral regurgitation due to mitral anterior valve leaflet disruption. TAVI endocarditis was diagnosed after evaluation. Surgical procedure was planned to the patient.

Results:
Infected transcatheter aortic valve was removed. Calcified aortic cusps were excised. Defect of mitral anterior leaflet was repaired with pericardial patch using 5-0 polypropylene suture. After that, Edwards Intuity Elite no:25 sutureless valve was implanted to the aortic position. The patient had an uneventful postoperative period. The patient was discharged on the postoperative 6th day after the operation

Conclusion
Valve endocarditis after TAVI procedure in early period should be suspected if the patient has resistant fever. It should be noted that there is a possibility of valve endocarditis in early period after TAVI procedure.

ID: **753**

Topic: **Cardiology » PI for SHD - Transcatheter aortic valve replacement**

Presentation Type: **Oral**

OUTCOMES AND PREDICTORS OF FIVE-YEAR MORTALITY IN SEVERE AORTIC STENOSIS FOLLOWING TRANSCATHETER AORTIC VALVE REPLACEMENT – SINGLE CENTER EXPERIENCE

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Background: Transcatheter aortic valve replacement (TAVR) was introduced as an alternative therapy for surgical aortic valve replacement (SAVR) in high risk or inoperable patients with severe aortic stenosis twenty years ago. It has gained broad acceptance due to less invasive nature and low complication rates. However long-term mortality after TAVR remains an important issue, raising the need to identify the patients who will benefit from TAVR. The study aimed to evaluate the outcomes and predictors of long-term mortality in patients with severe aortic stenosis undergoing TAVR.

Methods: A total of 303 patients with severe aortic stenosis undergoing TAVR were included in this retrospective cohort study. Five-year follow up data was available. Clinical outcomes and predictors of long-term mortality were investigated.
Results: The study included 303 consecutive patients with a mean age of 80.69 ± 7.98 years and a mean logistic euroSCORE of 13.94 ± 5.78. Five-year mortality was 47.2%. Survivors and nonsurvivors showed multiple differences in patient characteristics, echocardiographic findings, procedural aspects and postintervention complications. Cox proportional hazards analysis revealed the following independent predictors of mortality: among demographical characteristics: age (HR 1.042, 95% CI 1.004-1.082; p = 0.032) and chronic obstructive pulmonary disease (HR 2.019, 95% CI 1.085-3.757; p = 0.027); among postprocedural events: stroke (HR 10.314, 95% CI 1.161-91.608; p = 0.036) and acute kidney injury (HR 4.069, 95% CI 1.911-8.662; p < 0.001).

Conclusion: TAVR constitutes a safe and viable therapeutic option for high operative risk patients with severe aortic stenosis. Long-term prognosis is conditioned by associate comorbidities.

Keywords: Long-term mortality, Transcatheter aortic valve replacement

ID: **756**

Topic: **Cardiovascular Surgery » Transcatheter Aortic Valve Replacement**

Presentation Type: **Oral**

PULMONARY FUNCTIONS IMPROVE IN HEART FAILURE PATIENTS WITH RESTRICTIVE PATTERN UNDERGOING TRANSCATHETER AORTIC VALVE REPLACEMENT

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Background: The study aimed to evaluate the improvement of pulmonary functions in heart failure patients with restrictive pattern undergoing transcatheter aortic valve replacement. (TAVR)
Methods: A total of 80 heart failure patients with restrictive pattern undergoing TAVR due to severe aortic stenosis were included in this retrospective cohort study. Spirometry and gas diffusion (diffusing capacity for carbon monoxide) were assesed before and 4 to 6 months after TAVR. Pre- and post- TAVR measures were compared using either paired Student's t tests or Wilcoxon's matched-pair test.

Results: Spirometry after TAVR demonstrated increased absolute and percentage predicted total lung capacity (3.90 ± 0.37 vs 4.61 ± 0.26 p < 0.001 and 64.56 ± 2.84 vs 80.20 ± 4.19 p < 0.001), forced vital capacity (1.90 ± 0.34 vs 2.09 ± 0.63 p < 0.001 and 67.50 ± 4.63 vs 74.46 ± 5.74 p < 0.001), residual volume (1.47 ± 0.75 vs 1.69 ± 0.53 p < 0.001 and 64.43 ± 3.85 vs 75.73 ± 5.26 p < 0.001), forced expiratory volume in first second (FEV1)(1.45 ± 0.3 vs 1.49 ± 0.28 p < 0.001 and 59.54 ± 3.43 vs 60.73 ± 3.19 p < 0.01), forced vital capacity (FVC)(1.90 ± 0.34 vs 2.09 ± 0.63 p <0.001 and 67.50 ± 4.63 vs 74.46 ± 5.74 p <0.001). Spirometry revealed decreased FEV1/FVC (91.13 ± 5.46 vs 88.33 ± 5.33 p=0.027) due to pronounced increase in FVC respectively. Diffusing capacity for carbon monoxide increased significantly (10.04 ± 0.51 vs 10.84 ± 0.39 p < 0.001 and 42.40 ± 4.62 vs 46.74 ± 2.00 p < 0.001)

Conclusion: Pulmonary function significantly improves in heart failure patients with restrictive pattern undergoing TAVR.

Keywords: Pulmonary function, Heart failure, Transcatheter aortic valve replacement.

ID: **313**

Topic: **Cardiology » PI for SHD - Transcatheter aortic valve replacement**

Presentation Type: **Oral**

GENDER DIFFERENCES IN TRANSCATHETER AORTIC VALVE IMPLANTATION

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Objectives: Transcatheter Aortic Valve Implantation (TAVI) is now a widespread procedure and it becomes a treatment option for with severe aortic stenosis (AS) patients who are not at low risk for surgery in the recently published guidelines. In randomized studies and registries, female and male patients are at a similar rate of half. Although some studies indicate that female patients have lower mortality and complication rates, the gender effect of TAVI has not been fully elucidated. In this study, we wanted to evaluate the difference between the genders in TAVI in our preliminary results.

Methods: A total of 416 patients with severe symptomatic AS, and high or prohibitive operative risk underwent TAVI at our institution between June 2011 and December 2017. TAVI patients were grouped as male and female.

Results: Of 416 TAVI patients, 58% of the patients were female and the mean age of women was 78.6±7.5 years and the mean age of men was 60 76.3±8.2 years and there was a statistically significant difference. Baseline characteristics and procedural details of groups which are shown in Table. BMI, STS scores, LVEF, aortic mean gradient and left ventricular hypertrophy were significantly higher in females and CABG, CAD rates and aortic valve area were significantly higher in males (p<0.001). In 30-day and one-year follow-up, patients have improvement in functional capacity with no moderate or severe PVL seen in two genders but the increase in LVEF was statistically higher in females. Permanent pacemaker rates were similar in both genders and major vascular complications were significantly higher in women. While in-hospital mortality was statistically higher in females (p=0.003), 1-month and 1-year mortality rates were similar in both genders.

Conclusion: The main finding of this study is that although mortality and complications rates are higher in women post TAVI, similar rates are observed in both genders in the medium and long term.

Parameters	**Malen=175 (42%)**	**Femalen=241 (58%)**	**p value**
Age (years)	76.3±8.2	78.6±7.5	0.004
BMI (kg/m2)	26.0±3.7	28.6±7.1	<0.001
NYHA (%) - 2 - 3 - 4 - Pulmonary edema	 28.5 58.3 12.6 0.5	 23.6 55.1 17.4 3.7	0.075
DM (%)	31.9	28.6	0.53
HT (%)	79.4	84.6	0.23
CABG (%)	37.7	15.3	<0.001
AF (%)	23.4	24.4	0.80
STS score	5.2±2.9	6.6±3.8	0.001
CAD - Normal	14.8 46.2 38.8	26.9 39.4 33.6	0.01

- Non-obstructive
- Obstructive

Echocardiographic parameters			
LVEF (%)	48.2±15.3	54.3±12.5	<0.001
Aortic mean gradient (mm Hg)	48.8±14.1	54.0±15.7	0.001
AVA (cm^2)	0.7±0.16	0.6±0.15	<0.001
LVH (%)	80.3	89.7	0.007
RWT	0.51±0.11	0.59±0.12	<0.001
LA (cm)	4.67±0.6	4.65±0.6	0.77
sPAB (mmHg)	43.2±17.1	45.1±15.5	0.26
Procedural characteristics			
Edwards Sapien XT (%)	88.0	86.6	0.68
Edwards Sapien 3 (%)	1.1	3.75	0.002
Lotus (%)	0.5	9.5	<0.001
Prosthesis size ≥29mm (%)	26.8	1.7	<0.001
Pace Maker (%)	7.4	8.3	0.90
Major vascular complication (%)	8.5	13.2	0.04
In-hospital mortality (%)	1.1	7.4	0.003
First month mortality (%)	2.9	4.4	0.42
First year mortality (%)	15.6	11.1	0.19

Oral Presentation Session

Complex Aortic Surgery Needs Experience

Date: 30.10.2020 Time: 13:45 – 14:45 Hall: 5

ID: **61**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Oral**

AORTIC ROOT REPLACEMENT IN PATIENTS WITH MARFAN SYNDROME: A COMPARISON OF COMPOSITE VALVE GRAFT REPLACEMENT VERSUS VALVE-SPARING AORTIC ROOT REPLACEMENT

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BACKGROUND: Aortic root replacement improves survival in patients with Marfan syndrome (MFS) with aortic root disease. Composite valve graft replacement (CVG) and valve-sparing root replacement (VSRR) both show favorable mid and long-term outcomes. The purpose of this study was to evaluate the early and late clinical outcomes after CVG and VSRR in patients with Marfan syndrome

METHODS: Marfan syndrome patients who had CVG or VSRR at King Chulalongkorn Memorial Hospital between August 1999 and August 2019 were identified. Follow-up information was obtained from hospital charts and telephone contact. Kaplan-Meier survival analyses were performed. The mean follow-up time was 7years.

RESULTS: Thirty-seven adult patients with Marfan syndrome had either CVG(n=24) or VSRR(n=13) procedures. CVG patients had more aortic root dissection (62.5% vs 23.1 %, p=0.022), shorter aortic cross-clamp time (120 vs 175 minutes, p=0.007) and shorter cardiopulmonary bypass time (161 vs 216 minutes, p=0.042). In-hospital mortality was 4.2%(n=1) in CVG and 0% in VSRR group (p=1.0). Five, ten, fifteen and twenty-year survival was 75.0%,75.0%,62.5% and 58.3% in CVG group, 92.3% ,92.3%,92.3% and 92.3% in VSRR group (Log rank test, p=0.063). Freedom free from reoperation on aortic valve or root was higher in CVG compared to VSRR (100% vs 61.5 %, p=0.004). There was no case of endocarditis detected during follow-up. There was no significant difference in long-term survival and freedom from thromboembolic/hemorrhagic complication between the 2 procedures.

CONCLUSIONS: After aortic root replacement in patients with Marfan syndrome, patients undergoing CVG had worse survival outcome compared to VSRR but not statistically significant. Lower late survival among CVG patients probably reflects the preferential use of the CVG procedure for higher risk patients. CVG have similar freedom from thromboembolic/hemorrhagic complication but higher freedom from reoperation on aortic valve or root compared to VSRR.

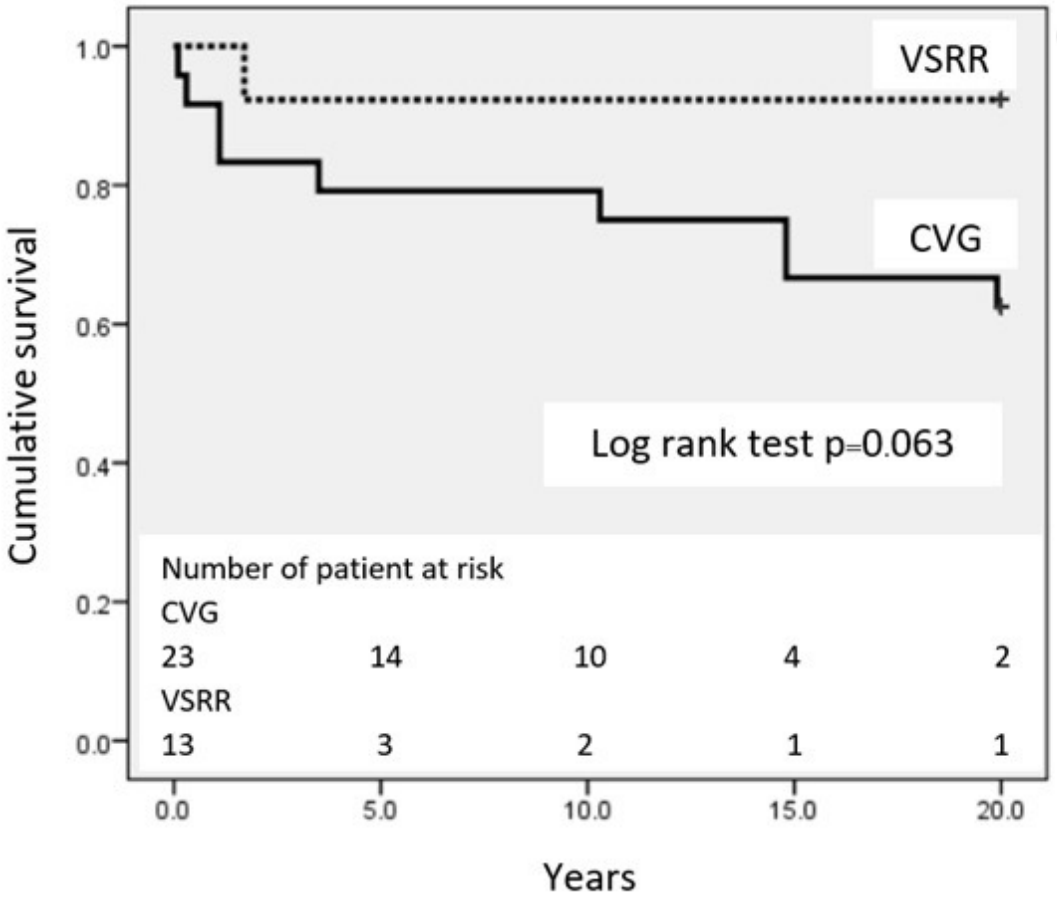

Figure 1. Comparison of overall survival between patients with Marfan syndrome undergoing composite valve graft replacement (CVG) versus valve-sparing aortic root replacement (VSRR).

Table 1. Preoperative characteristics

	CVG	VSRR	P value
n	24	13	-
Age (year)	35.9 ± 10.3	35.6 ± 11.2	0.93
Male	16 (66.7%)	7 (53.8%)	0.49
Hypertension	5 (20.8%)	2 (15.4%)	1.0
Dyslipidemia	0 (0%)	1 (7.7%)	0.35
Atrial fibrillation	2 (8.3%)	0 (0%)	0.53
Previous cardiac surgery	2 (8.3%)	2 (15.4%)	0.60
NYHA class III or IV	5 (20.8%)	3 (23.1%)	1.0
Ejection fraction	56% ± 12.9	55% ± 19.3	0.87
Aortic sinus diameter (cm)	6.0 ± 1.2	6.1 ± 1.0	0.87
Aortic annulus diameter (cm)	3.4 ± 1.0	2.9 ± 0.9	0.29
Moderate or severe AR	23 (95.8%)	11 (84.6%)	0.27
Dissection on aortic root	15 (62.5%)	3 (23.1%)	0.02
Acute type A dissection	10 (41.7%)	1 (7.7%)	0.057
Urgent or emergent surgery	10 (41.7%)	1 (7.7%)	0.057

Value are presented as mean ± standard deviation or n (%)

CVG, Composite valve graft replacement; VSRR, Valve sparing aortic root replacement; NYHA, New York Heart Association; AR, aortic regurgitation.

ID: **359**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Oral**

THE EVALUATION OF LONG-TERM NEUROCOGNITIVE FUNCTIONS AFTER AORTIC ARCH REPAIR WITH SELECTIVE ANTEGRADE CEREBRAL PERFUSION VIA UPPER RIGHT BRACHIAL ARTERY

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BACKGROUND:

The aortic arch repair with selective cerebral antegrade perfusion is a well-established, widely used method with satisfactory outcomes. But the evaluation of neurocognitive functions on long term following the repair with selective cerebral perfusion, still needs to be illuminated.

METHODS:

This study is organized to evaluate the long-term neurocognitive functions of patients, following an aortic arch repair with low flow antegrade selective cerebral antegrade perfusion. The study started with 22 patients (19 male, 3 female, with a mean age of 46.8 +/- 12; range: 26 to 70 years old), who underwent aortic arch repair using right brachial artery perfusion (8 to 10 mL x kg(-1) x min(-1)) under moderate hypothermia (26 degrees C). There were 6 Stanford type-A dissections and 16 ascending aortic and hemi-arch aneurysms. But the latest follow-up and analysis included 15 patients (13 male and 2 females), who were able to complete all the tasks for psychological evaluation. All patients were evaluated preoperatively, postoperatively (at seventh day and second month) and long-term follow-up was at 4 years for neurocognitive functions.

RESULTS:

There was no operative mortality. The average cardiopulmonary bypass time was 112,5 ± 24,05minutes and the average antegrade cerebral perfusion time was 29,2±5,40 minutes (19 to 38 minutes). No major neurologic abnormality was observed in the immediate postoperative period. In terms of neurocognitive test results, between the preoperative and postoperative assessments for both hemispheric cognitive functions, no deterioration was detected. In the follow up, the neurocognitive functions showing improved results on the long-term, which were regarded as false-positive, due to low cognitive functions under the pressure of anxiety and depression during the pre-operative evaluation.

CONCLUSIONS:

The low-flow selective antegrade cerebral perfusion technique through the right brachial artery may safely be used for the patients undergoing aortic arch repair without causing deteriorations in long-term neurocognitive functions.

ID: **308**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Oral**

AN EPIC APPROACH TO BICUSPID AORTIC VALVE ASSOCIATED AORTOPATHY

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Objectives: Bicuspid aortic valves are the commonest congenital malformation and predispose to ascending aortic aneurysms. The mechanisms underlying this aortopathy remain incompletely characterized. We sought to identify epigenetic pathways predisposing to aneurysm formation in this patient population.

Methods: 15 ascending aortic aneurysm tissue samples were collected at the time of aortic surgery in subjects with bicuspid aortic valve disease. Genome-wide DNA methylation status was determined on DNA from tissue using epic Illumina 850K methylation chips.

Results: Probe methylation associations correlated most with different genes, including OR2B11, (figure1) CACNA1B, EBF2, FLJ46284, PADI1. OR2B11, CACNA1b and FLJ46284 displayed hypomethylation with aortic diameter increased whereas methylation in EBF2 increased with aortic diameter. The association with OR2B11 reached statistical significance (adjusted p value=0.02).

Conclusion: Using an epigenome wide approach, we identified novel gene associations with ascending aortic aneurysms in patients with bicuspid aortic valves. The top hit gene identified has previously been associated with aortic wall stiffness.

ID: **602**

Topic: **Cardiovascular Surgery » Abdominal Aortic Aneurism**

Presentation Type: **Oral**

INTRAOPERATIVE EPIAORTIC ULTRASOUND SCANNING IN PATIENTS WITH ASCENDING AORTIC ATHEROMA AND SURGICAL TREATMENT TACTICS

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BACKGROUND: Stroke after coronary artery bypass surgery is severe life-threatening complication in cardiac surgery. There are few methods to minimize the risk of stroke and other systemic embolisations: intraoperative transesophageal echocardiography, palpation of the aorta and epiaortic ultrasound scanning. Intraoperative revision allows to determine the final plan of the operation.

METHODS: We studied a cohort of 1439 consecutive patients who underwent isolated coronary artery bypass grafting. Patients were subdivided into two groups. The Group-1 included 950 patients operated in 2018-2019 with routine use of epiaortic ultrasound scanning. Group-2 included 489 patients who underwent epiaortic ultrasound scanning from 2016 to 2017 selectively after palpation of the ascending aorta.

RESULTS: Pronounced atherosclerotic changes in the ascending aorta were revealed in 48 (5.1%) cases in the Group-1 and in 15 (3.1%) patients in the Group-2, $p<0.05$. In the immediate postoperative period in Group-1 there was one acute cerebrovascular accident (0.1%), in Group-2 it was in 3 (0.6%) patients, $p<0.05$. Postoperative encephalopathy was more common in Group-2, Group-2 3.7% (18/489) vs. Group-1 0.4% (4/950); $p<0.05$. There was no death associated with cerebrovascular disease in Group-1, in Group-2 in-hospital mortality was 0.4% (2/489), $p>0.05$.

CONCLUSIONS: Intraoperative epiaortic ultrasound scanning technique is easily reproducible and available to perform procedure during the revision of the aorta in patients with coronary artery bypass grafting.

ID: **132**

Topic: **Cardiovascular Surgery » Abdominal Aortic Aneurism**

Presentation Type: **Oral**

CAN WE SECURELY LIGATE THE LEFT RENAL VEIN DURING THE OPEN SURGICAL REPAIR OF THE JUXTARENAL ABDOMINAL AORTA ANEURYSMS?

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Background:

In this article we aimed to evaluate the effect of the ligation of the left renal vein for the open surgical repair of the juxtarenal located abdominal aorta aneurysms on the serum creatinine and urea levels.

Methods:

We included 21 patients in our study among the total 171 patients underwent open surgical aneurysm repair with juxtarenal aortic aneurysm diagnosis between August 2011-August 2019 as elective or emergency procedure in our institution. In entire of these 21 cases the surgical procedure required ligation of the left renal vein imperatively. 3 patients excluded in this study due to intraoperatively rupture and mortality either in O.R. subsequently.
We collected the data retrospectively and we compared the urea and creatinine levels postoperative first , second, third day and during discharge disposition consecutively.
We used Shapiro-wilk tests for normality analysis, paired sample t-test and repeated ANOVA tests for comparing the urea and creatinine levels in various times.

Results:

The patients were all male (n=21,100%). Mean age was 67.71±9.06. Mean cross clamp time 18.03±2.3 minutes. Mean hospital stay was 7.6±1.2 days. There were no significant differences between the urea nor creatinine levels among the discharge and preoperative results. ($p>0.05$) However the levels in first, second and third days after operation were established significantly higher than preoperative ones. ($p<0.005$)

Conclusions:
Even though the increasing of urea and creatinine levels in the first three days after operation the values normalized and decreased to the preoperative values till discharge. Herewith, the abdominal aorta aneurysms which located juxtarenal position can be treated safely and securely within ligation of left renal vein from the point of junction with the inferior vena cava; via open surgery despite all the pitfalls such as finding the proximal neck of the aneurysm and appropriate undamaged aortic tissue for anastomose line.

ID: **814**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Oral**

A RETROSPECTIVE EVALUATION OF EARLY AND MID-TERM OUTCOMES IN PATIENTS WHO UNDERWENT AORTIC ARCH SURGERY

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Objective

This study aimed to investigate retrospectively the early and midterm results of patients who were operated for aortic arch pathologies.

Methods

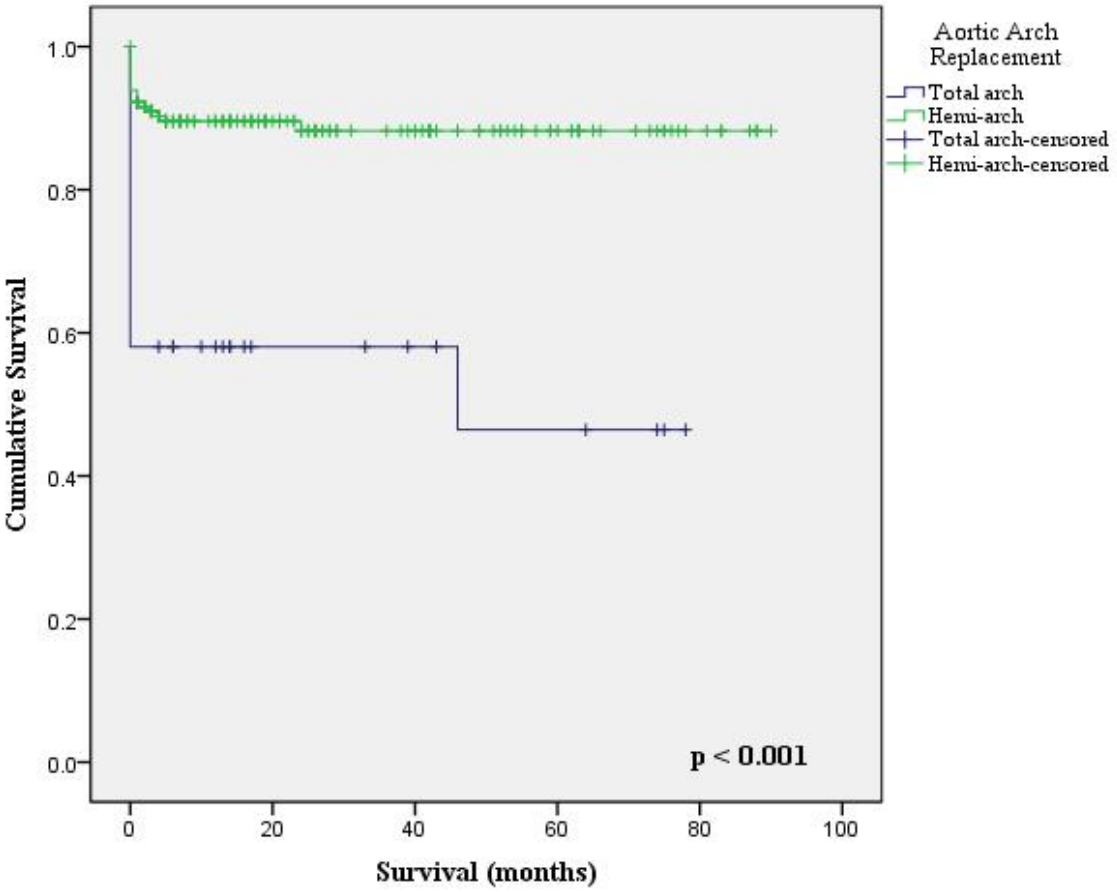
Between February 2007 and October 2016, 211 patients who underwent aortic arch surgery were included in the study and the data were analyzed retrospectively. Preoperative, intraoperative and postoperative data were investigated; mortality and morbidity results were evaluated and analyzed statistically. Of the patients participating in the study, 73 (34.6%) were female and 138 (65.4%) were male. The mean age was 58.2 ± 13.4 years. 64 patients (30.3%) were urgent and 147 patients (69.7%) were operated under elective conditions. 54 patients (25.6%) were treated with acute dissection, and 182 patients (86.3%) with aortic aneurysm. Hemiarch replacement was performed in 179 patients (84.8%) and total arch replacement was performed in 32 patients (15.2%).

Results

The mortality rate was 11.8% for the first 30 days postoperatively and 13.3% for the hospitalization period. We observed temporary neurological dysfunction in 2 patients (0.9%) and permanent neurological dysfunction in 5 patients (2.4%) postoperatively. The 30-day survival rate was 98.3% among patients who underwent hemiarch replacement, while this rate was 58.1% among patients who underwent total arch replacement ($p < 0.001$).

Conclusions

Total arch replacement has worse mid and early outcomes compared to hemiarch replacement, especially in emergency cases, in terms of mortality and morbidity. We believe that avoiding total arch replacement surgery to the maximum extent and limiting the surgery to aggressive hemiarch replacement will be more appropriate and meaningful.


Aortic Arch Replacement
Total arch
Hemi-arch
Total arch-censored
Hemi-arch-censored
Cumulative Survival
1.0
0.8
0.6
0.4
0.2
0.0
p < 0.001
0
20
40
60
80
100
Survival (months)

Oral Presentation Session

Update in Biomarkers in Acute Coronary Syndromes

Date: 30.10.2020 Time: 14:45 - 15:45 Hall: 5

ID: **443**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

THE RELATIONSHIP BETWEEN SERUM HOMOCYSTEINE LEVELS AND DEVELOPMENT OF CORONARY COLLATERAL CIRCULATION IN PATIENTS WITH ACUTE CORONARY SYNDROME

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Group I (n=120)	Group II (n=56)	p	
White blood cells (×103 µL)	9,9 ±3 ,2	10,0 ±3,1	0,91
Hemoglobin (gr/dl)	13,7±1,9	13,4 ± 1,9	0,28
Mean platelet volume (fL)	9,0 ± 1,1	8,6 ± 1,0	**0,03**
Homocysteine (µmol/L)	18,2±7,0	15,7±5,1	**0,02**

OBJECTIVE: Coronary collateral circulation is a potential vessel that develops between different coronary arteries or sections of the same coronary artery to provide blood flow to the ischemic area in order to maintain the viability of the myocardium when a severe stenosis or total occlusion occurs that reduces blood flow in the coronary artery. Homocysteine is an amino acid that plays a role in folate metabolism and inhibits endothelial cell proliferation which is important for angiogenesis. In this study, we aimed to investigate the relationship between serum homocysteine levels and coronary collateral development.

METHODS: 176 consecutive patients, with acute coronary syndrome and chronic total occlusion, were divided into two groups according to coronary collateral development. Rentrop 0 and 1 were regarded as group I and Rentrop 2 and 3 as group II.
RESULTS: A total of 176 patients with 120 group I and 56 group II included in this study. The mean age of the patients was higher in group II than group I (p=0,04). Mean platelet volume was higher in the group I. There was no difference between the groups in terms of biochemical parameters except homocysteine. Plasma homocysteine levels were 18,2 ± 7,0 µmol/L in the group I and 15,7 ± 5,1 µmol/L in the group II. Homocysteine levels were higher in the group I compared to the group II (p= 0,02). Univariate logistic regression analysis showed that mean platelet volume and homocysteine were associated with poor coronary collateral. Multivariate logistic regression analysis showed that homocysteine level was independently associated with poor coronary collateral circulation (OR 1,069 [95% CI 1,012-1,130]; P=0,018).

CONCLUSIONS: In the present study, we investigated the relationship between serum homocysteine levels and coronary collateral development in patients with chronic total occlusion. Our findings showed that serum homocysteine levels were higher in the poor collateral group than the good collateral group in patients with acute coronary syndrome and chronic total occlusion. In addition, higher homocysteine levels were found as an independent predictor of poor collateral development in patients with acute coronary syndrome.

ID: **444**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Oral**

THE RELATIONSHIP BETWEEN SERUM FIBRINOGEN LEVEL AND STENT RESTENOSIS IN PATIENT WITH ACUTE CORONARY SYNDROME

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OBJECTIVE: In-stent restenosis is a gradual re-constriction of the stented area after stent implantation in the coronary arteries. Although the rate of drug-eluting stents has been reduced with the introduction of stents, it remains a major problem. In this study, we aimed to investigate the relationship between stent restenosis and fibrinogen levels in patients undergoing coronary angiography for acute coronary syndrome.

METHODS: We enrolled 321 patients with a history of coronary angioplasty who underwent coronary angiography between December 2014 and June 2019. The patients were divided into two groups with and without stent restenosis and their biochemical data were analyzed.

RESULTS: There was no difference between the groups in terms of age, hypertension, diabetes mellitus, smoking and left ventricular ejection fraction (respectively; p=0,66, p=0,61, p=0,18, p=0,98, p=0,89). Male gender and hyperlipidemia rate was higher in ISR group than non-ISR group (p=0,04 ve p=0,007). Biochemical parameters were not different between the groups except homocysteine and fibrinogen. Serum homocysteine and fibrinogen levels were significantly higher in the ISR group than in the non-ISR group (respectively; p=0,009, p=0,032). Dyslipidemia, homocysteine and fibrinogen identified as independent predictors of ISR.

CONCLUSIONS: Plasma fibrinogen levels may be an important biochemical parameter in predicting the risk of restenosis in patients with bare metal stents implanted for coronary artery disease.

ID: **450**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Oral**

FIBRINOPEPTID A IS ASSOCIATED WITH INCREASED CORONARY ARTERY DISEASE SEVERITY IN PATIENTS WITH ACS

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Background: ACS is the leading cause of death worldwide despite the development of new treatment modalities. Thrombosis plays an important role on the basis of atherosclerosis which is known to be chronic process. Therefore, interest in hemostatic factors increases. In this study, the impact of FPA which is one of the hemostatic process markers on ACS patients was investigated.

Methods: Between 2015-2017 patients who admitted to emergency service and diagnosed with NSTEMI, STEMI were enrolled. 67 patients were NSTEMI and 40 patients were STEMI. Patients who admitted to outpatient clinics consisting of 69 chronic coronary syndromes were accepted as a control group. Serum FPA levels of a total of 176 patients were measured.

Results: FPA levels were positively correlated with admission level of troponin, maximum troponin, admission level of CK-MB, maximum CKMB, SYNTAX, and Gensini scores; but negatively correlated with admission time and LVEF, significantly. FPA was found to independently predict MI. We performed ROC curve analysis and found that FPA>3.38 ng / mL had sensitivity and specificity of 89.7%, and 78% respectively (% 95 CI 0.745-0.905; P <0.001).

Conclusion: Increased FPA level indicating higher thrombogenic activity, may lead to more aggressive anti-thrombogenic treatment in patients diagnosed with ACS.

Keywords: Acute coronary syndrome, Fibrinopeptide A, Syntax score

ID: **376**

Topic: **Cardiology » Chronic stable angına pectoris**

Presentation Type: **Oral**

THE ASSOCIATION BETWEEN SYNTAX SCORE-II AND ERECTILE DYSFUNCTION IN PATIENTS UNDERGOING CORONARY ANGIOGRAPHY DUE TO ANGINA PECTORIS

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Objective: Coronary artery disease (CAD) is one of the leading causes of mortality and morbidity worldwide. Atherosclerosis (AS) is a chronic inflammatory disease caused by chronic endothelial damage. AS can affect different arteries of various diameters, and it can result in tissue ischemia when it causes more than 50% stenosis of the lumen diameter. Syntax score (SS) indicates the severity of CAD according to the number of lesions as well as their functional effects, location, and complexity. SS II is calculated by adding some clinical parameters such as left ventricular ejection fraction, chronic obstructive pulmonary disease (COPD), renal failure, and peripheral arterial disease (PAD), etc. in addition to the severity of CAD. Therefore, it becomes a more comprehensive risk score in the evaluation of the CAD patients compared to the SS alone. Erectile dysfunction (ED) is the inability to achieve and maintain an erection for satisfactory sexual intercourse. ED has similar risk factors and pathophysiology as CAD, and endothelial dysfunction is seen as a common resemblance affecting several vascular beds. ED can be easily evaluated using the shortened International Erectile Function Index (IIEF-5) questionnaire. Our aim was to investigate the relationship between SS II and ED in men undergoing CAG for a stable CAD.

Methods: Male patients over 40 years of age without history of CAD and undergoing CAG between 2018-2019 were included. All demographic data, laboratory parameters as well as ED score determined by IIEF-5 questionnaire were obtained before the procedure. ED was classified into five categories as; severe (5-7), moderate (8-11), mild to moderate (12-16), mild (17-21), and no ED (22-25). For each patient, SS II was calculated after CAG. The patients were divided into two groups according to the SS II and the two groups were compared.

Results: A total of 112 patients were included in the study. The frequency of hypertension, COPD, and PAD were significantly higher in high SS II group than those with low SS II. The ED score was also lower in patients with high SS II than those with low SS II (20 ± 9 vs 25 ± 7, $p<0.05$). Besides that, we observed that patients whose ED scores were moderate and severe had higher SS II compared to those with low SS II.

Conclusion: There was a significant association between the severity of ED assessed by IIEF-5 and the SS II in patients who underwent CAG due to stable CAD.

All patients (n:112)	Patients with high syntax score II (n:56)	Patients with low syntax score II (n:56)	p value	
Age, years	64±12	56 ±10,1	71 ±7,9	<0,001
Diabetes mellitus, n (%)	28 (25,0%)	11 (19,6%)	17,00 (30,4%)	0,192
Hypertension, n (%)	66(58,9%)	25 (44,6%)	41 (73,2%)	0,002
Dyslipidaemia, n (%)	41(36,6%)	24 (42,9%)	17 (30,4%)	0,172
COPD, n (%)	23(20,7%)	4 (7,3%)	19 (33,9%)	0,001
PAD, n (%)	27(24,1%)	0 (0,0%)	27 (48,2%)	<0,001
Haemoglobin, (g/dL)	13,88±1,8	14,44±1,5	13,32±1,9	0,001
WBC Count, 103/µL	8,70±3,4	8,78±2,5	8,63±4,1	0,198
Creatinine, (mg/dl)	0,95±0,3	0,84±0,12	1,06±0,4	<0,001

Left Ventricular Ejection Fraction, (%)	49,83±10,1	54,29±7,5	45,37±10,4	<0,001
Syntax Score II for PCI	31,24±14,29	19,98±4,05	42,50±11,70	<0,001
Syntax Score I	15,00(9-21)	12,50(7,5-19)	16,00(11-24,75)	0,012
ED Score	22±8	25±7	20±9	0,001
ED Group				
None; (%)	62(55,4%)	39 (69,6%)	23(41,1%)	
Mild; (%)	16(14,3%)	7 (12,5%)	9(16,1%)	
Mild- Intermediate; (%)	10(8,9%)	4 (7,1%)	6(10,7%)	
Intermediate; (%)	11(9,8%)	2 (3,6%)	9(16,1%)	
Severe; (%)	13(11,6%)	4 (7,1%)	9(16,1%)	

ID: **783**

Topic: **Cardiology » Chronic stable angına pectoris**

Presentation Type: **Oral**

ABDOMINAL AORTIC INTIMA-MEDIA THICKNESS IS ASSOCIATED WITH MICROVASCULAR ANGINA: A PROSPECTIVE STUDY.

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Abdominal aortic intima-media thickness is associated with microvascular angina: a prospective study.

Objective: Some patients referred for evaluation of anginal symptoms and evidence of myocardial ischemia on noninvasive testing have no significant atheroma on epicardial coronary arteries, suggesting that coronary microvascular disease (CMD) was responsible for the ischemia. Risk factors for CMD are similar to the traditional risk factors of atherosclerosis. Thickening of the arterial wall is a hallmark of atherosclerosis. Therefore, it has been theorized that arterial intima-media thickness (IMT) measurements can be a non-invasive marker of CMD as a reliable and reproducible method. In this study, we aimed to evaluate the IMT at different arterial sites in patients with microvascular angina (MVA).

Methods: This study enrolled 51 patients (27 females; mean age: 56 ± 10.5) who have been diagnosed with MVA and 51 controls (28 females; mean age: 55 ± 9.6). Patients who had anginal symptoms with detectable ischemia on non-invasive tests (treadmill stress test or myocardial perfusion scintigraphy) and without any evidence of stenosis or vasospasm of epicardial coronary arteries during invasive coronary angiography were diagnosed as MVA. Age- and sex-matched controls with normal results of non-invasive tests constituted the control group. Common carotid arteries, common femoral arteries, and distal abdominal aorta were examined on B-mode ultrasonography.

Results: The abdominal aorta intima-media thickness (AAIMT) was significantly higher in MVA patients (1.17 ± 0.17 vs. 1.09 ± 0.13mm; p =0.014). Multivariable logistic regression analysis demonstrates that increased AAIMT was an independent predictor of MVA (OR=1.421; 95% CI 1.081-1.869; p=0.012). In receiver operating characteristic curve analyses, the AAIMT above 1.15 mm predicted MVA with a specificity of 57% and a sensitivity of 67% (AUC=0.632, 95% CI=0.524-0.762; p=0.021).

Conclusion: Ultrasonographic evaluation of the distal abdominal aorta, which is the earliest zone of atherosclerotic manifestations, is gaining clinical importance. The AAIMT value was determined significantly higher in MVA patients as compared to controls. Increased AAIMT values may be associated with the mechanisms that play an important role in the pathogenesis of MVA.

ID: **845**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

COMPARISON OF SOLUBLE UROKINASE PLASMINOGEN ACTIVATOR RECEPTOR (SUPAR) LEVELS OF PATIENTS WITH ACUTE MYOCARDIA INFARCTION AND PATIENTS WITHOUT CORONARY ANATOMY DISPLACED WITH SERIOUS CORONARY ARTERY DISEASE

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Despite all the developments in cardiology, death due to cardiovascular diseases is the leader in the world. Its prevalence and incidence increases with age. Although the development of MI at a young age is relatively low, it is observed in 5-13%. In Turkey, this rate is up to 19%. The young MI, which is so common in our country, is an important health problem and causes serious labor loss. Therefore, biomarker studies that have the ability to predict cardiovascular events are important in young patient groups. In this study, we aimed to compare patients with MI by age to compare plasma suPAR concentration with the control group. We also aimed to compare suPAR, a new inflammatory marker, with the traditional inflammatory markers Hs-CRP and ESR.

In the study, a total of 332 patients were analyzed, the number of patients who had young myocardial infarction was 100, the number of patients who had old myocardial infarction was 127, and the control group was 97 patients. The mean age of the patients who had young MI was 48.11±5.95, and the mean age of the patient group who experienced the MI was 68.70±7.72 and the mean age of the control group was 59.01±10.08 ($p < 0.001$). The suPAR plasma concentration of all patients examined before the procedure was 2.989±1.042 in the young MI group, 3.683±1.951 in the elderly MI group, 2.583±0.83 in the control group, and the AMI population was significantly higher compared to the control group ($p < 0.001$). However, when the young MI and the control group were examined among themselves, although suPAR plasma concentration was significantly higher in the young MI group; No significant difference was observed between the two groups in Hs-CRP and ESR (suPAR $p = 0.008$, Hs-CRP $p = 0.725$, ESR $p = 0.685$).

As a result, plasma suPAR concentration was significantly higher in the population undergoing AMI. Although the plasma suPAR concentration was significantly higher when the young MI population and the control group were compared, no significant difference was observed in Hs-CRP and ESR. suPAR has been shown to be superior to other inflammatory markers, especially in patients who have had MI at a young age. However, more comprehensive studies are needed for the role of suPAR in MI.

Tablo 2: Hastaların dağılımı ve demografik özellikleri

Değişkenler	Genç MI n=100	Yaşlı MI n=127	Kontrol n=105	Toplam N=332	P Değeri
Yaş, yıl	48,11±5,95	68,70±7,72	59,01±10,08	59,43±11,70	P<0,001
Erkek n(%)	88/88	83/65,4	48/45,7	219/66	P<0,001
VKİ (kg/m²)	28,01±4,04	27,69±3,51	27,75±4,38	27,80±3,95	P=0,774
Hipertansiyon n (%)	23/23	69/54,3	63/60	155/46,7	P<0,001
Sigara n (%)	62/62	59/46,5	29/27,6	150/45,2	P<0,001
Aile öyküsü n (%)	40/40	28/22	35/33,3	103/31	P=0,012
DM n (%)	19/19	41/32,3	31/29,5	91/27,4	P=0,07
Hiperlipidemi n (%)	13/13	35/27,6	17/16,2	65/19,6	P=0,013
STEMI n (%)	52/52	53/41,7	0	105/31,6	P<0,001
Sov EF %	49,68±9,84	44,84±9,58	54,27±7,35	49,29±9,82	P<0,001
SKB (sistolik kan basıncı)	117,75±17,03	118,77±16,72	121,19±14,97	119,23±16,29	0,180
DKB(diyastolik kan basıncı)	73,65±10,84	71,81±11,08	74,38±8,39	73,17±10,26	0,038
Verilen karar					
PTCA+STENT n (%)	81/81	83/65,4	0	164/49,4	P<0,001
PTCA n (%)	1/1	11/8,7	0	12/3,6	
CABG n (%)	6/6	14/11	0	20/6	
Medikal n (%)	12/12	19/15	105/100	136/41	
MEDİKASYON					
ASA n (%)	99/99	121/95,3	50/47,6	270/81,3	<0,001
Klopidogrel n (%)	80/80	111/87,4	0/0	190/57,2	<0,001
Ticagrelor n (%)	20/20	14/11	0/0	34/10,2	<0,001
Statin n (%)	100/100	127/100	23/21,9	250/75,3	<0,001
ACE/ARB n (%)	15/15	57/44,9	44/41,9	116/34,9	<0,001
Betabloker n (%)	17/17	53/41,7	39/37,1	109/32,8	<0,001
MRA n (%)	2/2	3/2,4	5/4,8	10/3	0,442
CCB n (%)	4/4	20/15,7	20/19,0	44/13,3	0,004
OAD n (%)	12/12	41/32,3	20/19	73/22	0,001

Tablo 3: Laboratuar Sonuçlarının Karşılaştırılması

Değişkenler	Genç MI n=100	Yaşlı MI n=127	Kontrol n=105	Toplam N=332	P değeri
SUPAR	2,989±1,042	3,683±1,951	2,583±0,83	3,126±1,487	P<0,001
Hs-CRP	8,92±13,67	18,97±28,08	7,04±14,75	11,98±21,06	P<0,001
Sedimantasyon	9,72±8,09	17,77±16,02	10,99±8,96	13,13±12,40	P<0,001
Hb (g/dL)	14,33±1,71	12,65±1,86	13,70±1,65	13,48±1,89	P<0,001
WBC (10^3/µL)	10,85±2,99	10,05±2,95	7,48±2,05	9,54±3,05	P<0,001
Patelet (10^5/µL)	228,15±59,99	216,44±67,01	246±64,06	228,75±64,99	P=0,001
Glukoz (mg/dL)	153±88,89	150,62±78,56	124,09±48,81	143,37±75,47	P<0,001
e-GFR (ml/dak /1.73 m2)	101,87±10,06	84,07±17,68	98,24±12,72	93,91±16,19	P<0,001
Kreatinin (mg/dL)	0,77±0,16	0,84±0,24	0,74±0,15	0,79±0,19	P=0,003
Üre	24,45±6,81	34,84±14,60	30,40±9,92	30,32±12,02	P<0,001
Total kolesterol (mg/dL)	205,51±45,57	187,86±45,45	188,45±41,54	192,28±45,09	P=0,002
HDL (mg/dL)	38,26±8,43	39,51±9,10	44,95±11,93	40,78±10,22	P=0,015
LDL (mg/dL)	130,01±39,22	119,70±39,15	112,56±32,80	120,74±37,90	P<0,001
Tg (mg/dL)	187,30±97,67	184,63±45,66	162,37±142,24	178,69±99,66	P<0,001

Tablo 4: Grupların Kendi Aralarında Karşılaştırılması

	Genç MI	Yaşlı MI	Kontrol	P* değeri	P** değeri	P*** değeri
SUPAR	2,989±1,042	3,683±1,951	2,583±0,83	0,002	0,008	<0,001
Hs-CRP	8,92±13,67	18,97±28,08	7,04±14,75	0,003	0,725	<0,001
Sedimentasyon	9,72±8,09	17,77±16,02	10,99±8,96	<0,001	0,658	<0,001
SoV EF	49,68±9,84	44,84±9,58	54,27±7,35	0,001	0,001	<0,001
Hb	14,33±1,71	12,65±1,86	13,70±1,65	<0,001	0,029	<0,001
WBC (10^3/µL)	10,85±2,99	10,05±2,95	7,48±2,05	0,134	<0,001	<0,001
e-GFR (ml/dak /1.73 m2)	101,87±10,06	84,07±17,68	98,24±12,72	<0,001	0,071	<0,001
Kreatinin (mg/dL)	0,77±0,16	0,84±0,24	0,74±0,15	0,037	0,322	<0,001
Üre	24,45±6,81	34,84±14,60	30,40±9,92	<0,001	<0,001	0,019
Total kolesterol (mg/dL)	205,51±45,57	187,86±45,45	188,45±41,54	0,002	0,019	0,901
HDL (mg/dL)	38,26±8,43	39,51±9,10	44,95±11,93	0,634	<0,001	0,001
LDL (mg/dL)	130,01±39,22	119,70±39,15	112,56±32,80	0,147	0,003	0,366
Tg (mg/dL)	187,30±97,67	184,63±45,66	162,37±142,24	0,992	0,390	0,57

*Genç MI ve Yaşlı MI karşılaştırılmasına ait p değerleri

** Genç MI ve kontrol grubu karşılaştırılmasına ait p değerleri

*** Yaşlı MI ve kontrol grubu karşılaştırılmasına ait p değerleri

ID: **762**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

THE IMPACT OF THE PANDEMIC ON THE ACUTE CORONARY SYNDROME PROFILE: A RETROSPECTIVE COMPARATIVE ANALYSIS

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BACKGROUND AND AIM:The coronavirus outbreak of 2019 (COVID-19) was announced as a pandemic by the World Health Organization (WHO) on March 11, 2020. Similar to many other countries, a national emergency was declared in our country. In order to reserve the healthcare capacity for the COVID-19 patients by preventing hospitals from overloading, the routine of healthcare systems had to be remodeled. In many centers worldwide, the number of ACS patients applying to emergency services and being followed in coronary intensive care units were reported to be reduced following the COVID-19 pandemic, along with increased time before treatment and increased in-hospital mortality rate. These aspects have not been thoroughly evaluated in our country so far.METHODS:In this retrospective study, the data of the ACS patients who applied to our clinic before (March-April 2019) and during (March-April 2020) the COVID-19 pandemic were evaluated in regards to the type of application to the clinic, symptom duration, door-to-balloon times, treatment approaches, length of hospitalization, in-hospital mortality and complication rates. The data were obtained from the patient files and the hospital's database.RESULTS:The number of ACS patients that applied to our clinic, which operated as a 'COVID-free' tertiary referral center, before (n=98) and during (n=98) the pandemic was the same. In these two periods, NSTEMI diagnosis was similar (n=53, 54% vs. n=52, 53%), however, a decrease in the number of patients diagnosed with USAP (n=11, 11% vs. n=5, 5%), and an increase in STEMI patients (n=34, 34% vs. n=41, 42%) was remarkable. We observed an increase in the interval between the onset of symptoms and hospital admission during the pandemic (median 88.3 hrs vs. 106.5 hrs, p=0.02). In the patients treated with PCI revascularization, there was no significant change in the door-to-balloon time (median 64 min vs. 76 min, p=0.96). While there was a numerical increase in the complication rate during PCI, this increase was not statistically significant (n=6, %6.1 vs. n=11, %11.2, p=0,20). In-hospital mortality was %1.0 (n=1) before the pandemic, and increased to 3.1% (n=3) during the pandemic (p=0.14).CONCLUSIONS:During the COVID-19 pandemic, there was an increase in the interval between the onset of symptoms and hospital admission among ACS patients, which may either be attributed to patient or transfer issues. On the other hand, door-to-balloon times were similar. While there was an increase in patients with STEMI, there was a decrease in patients with USAP. Unlike the observations worldwide, the total number of ACS patients remained stable during the pandemic. We attributed this to the fact that our clinic operated as a 'COVID-free' tertiary referral center, and there was an increase in the number of patients referred from other clinics in this period. There were no significant changes in the complication and mortality rates.

	Before COVID-19		During COVID-19		*p*-value
	n	%	n	%	
ACS patients	98	100	98	100	
STEMI	34	34.7	41	41.8	
NSTEMI	53	54.1	52	53.1	
USAP	11	11.2	5	5.1	
Complications	6	6.1	11	11.2	0.20
Mortality	1	1.0	3	3.1	0.14
Symptom duration (median)	88.3 hours		106.5 hours		0.02
Door-to-balloon time (median)	64 minutes		76 minutes		0.96

ACS: acute coronary syndrome, STEMI: ST-elevated myocardial infarction, NSTEMI: non-ST-elevated myocardial infarction, USAP: unstable angina pectoris

Oral Presentation Session

Surgical Treatment Modalities in Congenital Cardiac Abnormalities

Date: 30.10.2020 Time: 15:00 – 16:00 Hall: 5

ID: **48**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

SITUS INVERSUS TOTALIS WITH ANOMALOUS ORIGINATION OF LEFT CORONARY ARTERY FROM THE RIGHT CORONARY SINUS OF VALSALVA

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Objective

Situs inversus totalis and coronary anomalies are rare diseases. The coexistence of these diseases is less frequent and they make it difficult to visualize coronary arteries.

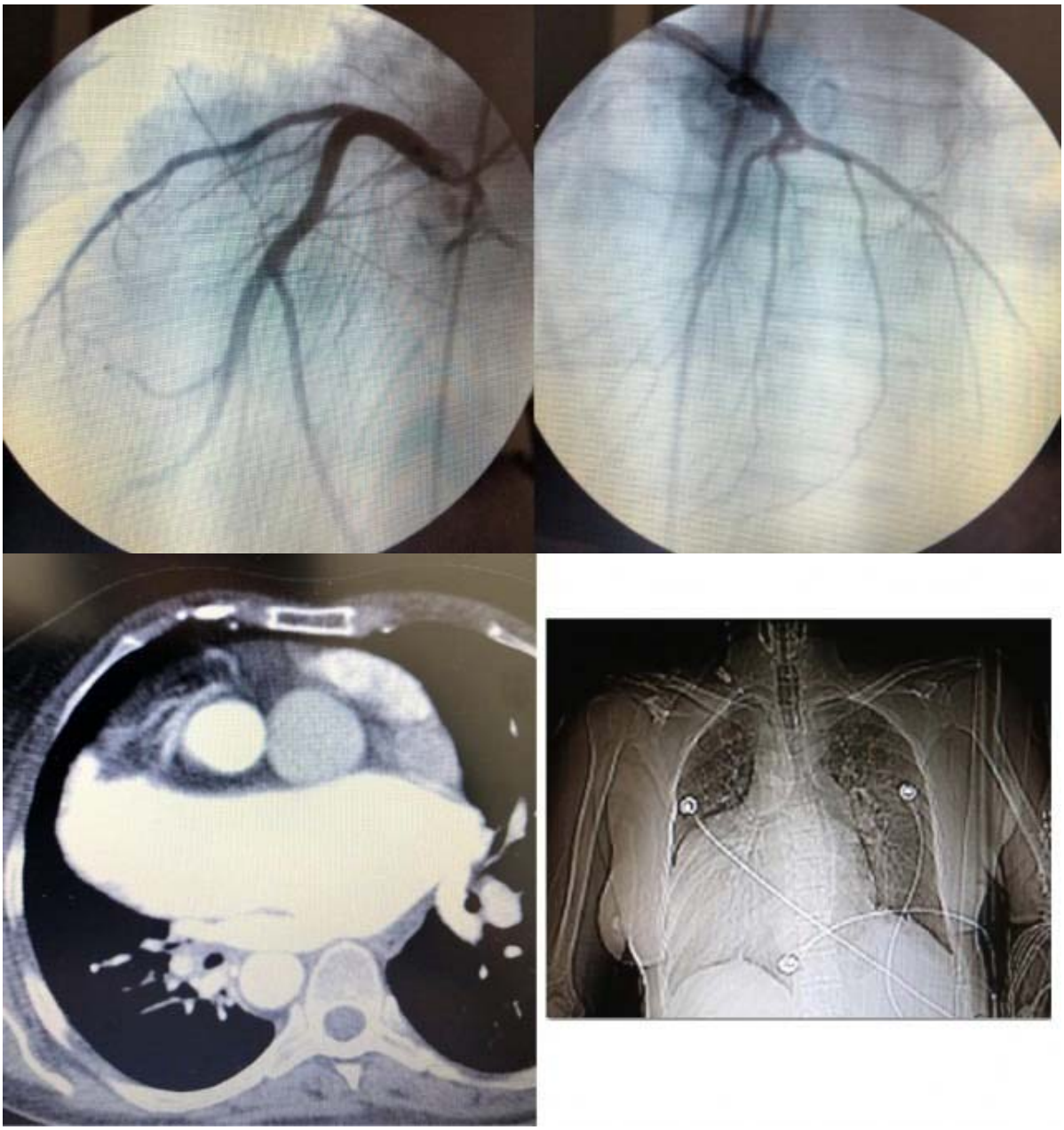
Case report

This is the case of a 59 year old woman with a history of progressive dyspnea and angina. The chest X-ray demonstrated dextrocardia as peace of situs inversus totalis (Figure 2). The echocardiography showed severe mitral regurgitation and low ejection fraction (45%). The coronary angiography displayed anomalous origin of left coronary artery from the right coronary sinus. Both of the left and right coronary artery catheterization was performed using a Judkins Right 4 catheter and determined no obstructive atherosclerotic disease (Figure 1). The angiotomography confirmed an anomalous left coronary artery from the right coronary sinus (Figure 2). Our patient was suggested mitral valve replacement.

Situs inversus totalis' prevalence is 1/10000 births. This syndrome characterized by the abnormal rotation of the cardiac tube during fetal life. It occurs functionally and structurally in a normal heart in 95% of cases. The most common anomalies related to situs inversus totalis are tetralogy of fallot, pulmonary atresia and atrial septal defect. In dextrocardia, locations of the coronary artery ostia relative to the the aortic arch and sinuses are a mirror image of the normal anatomy. Thus, they continue their standard relationships to the coronary ostia. Coronary angiography can be performed with the standard catheters. But rotation of the catheters to the opposite direction is necessary. However, the presence of coronary anomaly in the same patient makes it difficult to visualize the coronary vessels.

Coronary artery anomalies are seen in approximately 1% of the population. Left coronary artery originating from the right coronary sinus is more rare (0.0024% to 0.02%). Manifestations vary from asymptomatic patients to those who present with angina, arrhythmias, syncope and sudden cardiac death. Distinguishing the benign or malignant course of coronary artery anomaly is important in terms of patient surveillance. Surgery may need in patients presenting with ischemia, resuscitated from sudden cardiac arrest or syncope with ventricular arrhythmias.

Few angiographers will see more than one patient with dextrocardia in their catheter laboratory. The presence of dextrocardia with a coronary anomaly is much less frequent. Considering mirror image coronary anatomy and using the catheter rotation of the opposite direction in patients with dextrocardia will facilitate the visualization of the coronary arteries. Using aortagraphy or nonselective injections to the right sinus of valsalva can visualize to determine the correct ostea of the coronary arteries. Also, computed tomography imaging of the coronary arteries is helpful for distinguishing benign and malignant course.



ID: **97**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

OFF PUMP SIDE TRACK IN A DIFFICULT GLENN WITH BILATERAL SVCS.

Aıtızaz Uddın Syed[1], Mansour Bader Al Mutairi[2], Abdul Hameed Al Najjar[2], Abdul Quadeer Qadeer[3], Shadda Zubaidi[2]

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[*]*Corresponding Author (aitizaz@hotmail.com)*

A previously healthy 3-year-old child presented with fever and low oxygen saturation. Cardiac Investigations showed a complex univentricular heart with bilateral SVCs, tiny bridging vein and Total anomalous pulmonary venous connection to mid LSVC.

Off pump right Glenn was completed after patch enlargement of the bridging vein. LSVC was ligated above the confluence of anomalous veins which was draining, un interrupted to coronary sinous.

Conclusion:

in complex situations with bilateral SVCs, requiring Glenn shunts, alternative pathways with one sided Glenn can be performed as in our patient.

ID: **170**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

REDO DORV WITH LVOTO AND DOUBLE CHAMBER RIGHT VENTRICLE

Ramal Hasanov[1], Dinara Mammadzada[2], Umid Mahmudov[1], Tural Mammadzada[1]

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[2]*Central Hospital of Oilworkers, Baku, Azerbaijan*

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BACKGROUND: The results of surgical treatment of VSD type DORV are excellent with long-term postoperative survival. VSD closure is recommended within first 6 months of life. In this report, we want to discuss VSD type DORV with LVOT obstruction after pulmonary banding.

METHODS: 11 years old 25 kg male patients were admitted to our clinic with exercise intolerance Pulmonary band operation was performed at 6 months of age. During preoperative evaluations (CT angio, cardiac catheterization, echocardiography) was revealed DORV, VSD 10 mm, double chamber right ventricle, mild pulmonary valvular stenosis, severe LVOTO, effective pulmonary band. The patient underwent complete correction (intraventriculary tunnel type repair). During operation VSD was enlarged, because VSD was narrow for tunneling. LVOT was enlarged, Double Chamber Right Ventricle was repaired, pulmonary valve commissurotomy and debanding were performed. X clamp time was 130 minutes.

RESULTS: In postoperative period patient was evaluated by echocardiography. LVOTO or RVOTO weren't observed.

CONCLUSION: Patients after intraventriculary tunnel repair may have postoperative subaortic stenosis, especially in the long term. Therefore, in cases with borderline size of VSD, complete correction should be considered with VSD enlargement.

ID: **600**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

LONG-TERM RESULTS OF RECONSTRUCTIVE SURGERY FOR CONGENITAL AORTIC VALVE DISEASES AND ECHOCARDIOGRAPHIC PREDICTIONS OF REOPERATION

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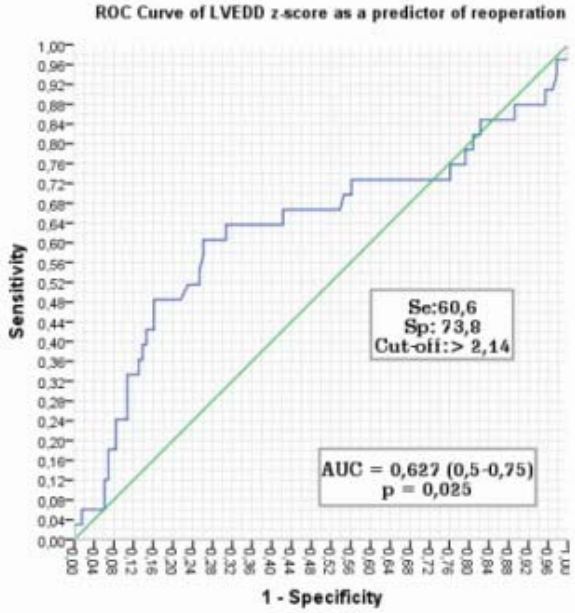
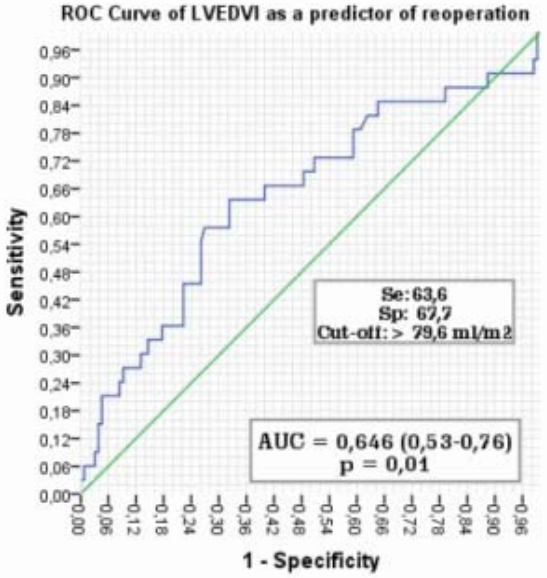
BACKGROUND: To report long-term retrospective results of reconstructive surgery for congenital aortic valve (AV) diseases and define preoperative echocardiographic predictors that could contribute to reoperation.

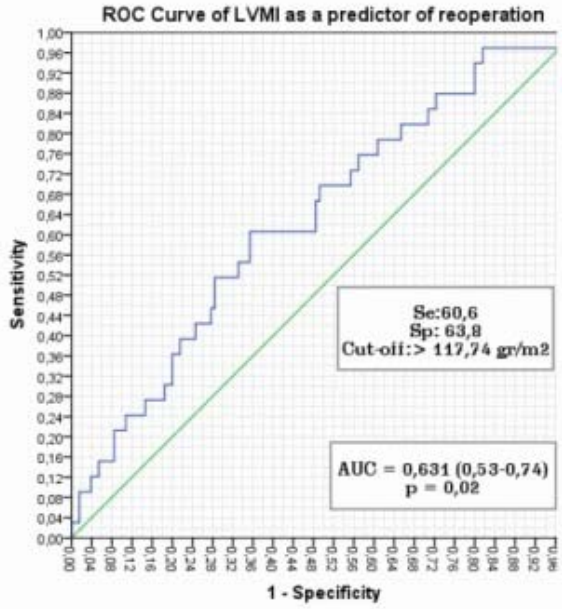
METHODS: A total of 163 patients with biventricular physiology and morphologic left ventricle who underwent several aortic valve repair techniques for congenital diseases from 2004 to 2019 were assessed in a follow-up clinic with echocardiography. Echocardiographic data were gathered and retrospectively reviewed at presurgical visit, and most recent follow-up. Multivariate analysis was performed using Cox regression model to identify independent predictor of reoperation.

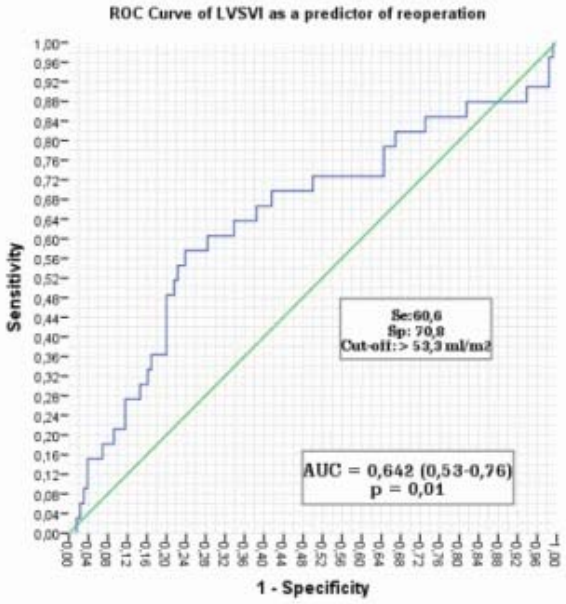
RESULTS: There were 80 patients with aortic stenosis, 38 with aortic regurgitation and 43 with mixed AV diseases. There were 130 female and 33 male patients. At operation, their mean age was 9,58±9,3 years. Preoperative valve phenotype was tricuspid in 33 patients, whereas bicuspid in 130. Of the latter phenotype, the Sievers type 0 was in 6 patients, type 1 in 90, type 2 in 34. Post-repair tricuspid arrangement was conducted in 61 patients (percentage increase, 19,0%). A peak pressure gradient dropped from 60,53±34,38 to 25,8±16,63mmHg, left ventricle end-diastolic diameter (LVEDD) z-score from 1,13±2,3 to 0,93±2,13, left ventricle mass index (LVMI) from 108,16±42,41 to 102,27±45,51 gr/m2 (p=0,000). There was no hospital mortality. 33 patients needed reoperation. By multivariate analysis (p=0,016), LVEDD z-score, (HR= 6,3 (1,4-28,28); p=0,016), left ventricle end-diastolic volume index (HR= 1,84 (1,07-3,14); p=0,026), left ventricle stroke volume index (LVSVI) (HR= 0,57 (0,33-0,96); p=0,035), LVMI (HR= 1,06 (1,0-1,11); p=0,032) were echocardiographic predictors for reoperation with the following cut-off values: LVEDD z-score= 2,14 (AUC=0,63 (95% confidence interval, 0,50-0,75); p=0,025), LVEDI= 79,6 ml/m2 (AUC=0,65 (95% confidence interval, 0,53-0,76); p=0,01), LVSVI= 53,3 ml/m2 (AUC=0,64 (95% confidence interval, 0,53-0,76); p=0,01), LVMI= 117,74 m2, (AUC=0,63 (95% confidence interval, 0,53-0,74); p=0,02). The mean follow-up period was 3,6±1,8 years (95% confidence interval, 3,23-3,93). Actuarial freedom from death, cumulative incidence of reoperation, and that of recurrent moderate or greater aortic regurgitation, stenosis was 99,4 %, 35,5%, and 57,9% respectively, with the longest follow-up of 7 years.

CONCLUSIONS: The long-term results of AV reconstruction were satisfactory in patients with congenital AV disease, but in order to preclude from reoperation, reconstructive surgery should be performed before above underscored predictors reach their cut-off values.


ROC Curve of LVEDD z-score as a predictor of reoperation
Sensitivity
1 - Specificity
Se:60,6
Sp: 73,8
Cut-off:> 2,14
AUC = 0,627 (0,5-0,75)
p = 0,025


ROC Curve of LVEDVI as a predictor of reoperation
Sensitivity
1 - Specificity
Se:63,6
Sp: 67,7
Cut-off:> 79,6 ml/m2
AUC = 0,646 (0,53-0,76)
p = 0,01


ROC Curve of LVMI as a predictor of reoperation
Sensitivity
1 - Specificity
Se:60,6
Sp: 63,8
Cut-off:> 117,74 gr/m2
AUC = 0,631 (0,53-0,74)
p = 0,02


ROC Curve of LVSVI as a predictor of reoperation
Sensitivity
1 - Specificity
Se:60,6
Sp: 70,8
Cut-off:> 53,3 ml/m2
AUC = 0,642 (0,53-0,76)
p = 0,01

ID: **370**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

DIFFERENT APPROACH FOR UNIFOCALIZATION; AORTIC SEGMENT RESECTION

Sercan Tak, Ali Kutsal

Dr. Sami Ulus Kadın Doğum Çocuk Sağlığı ve Hastalıkları EAH, Ankara, Turkey

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Pulmonary atresia (PA) with ventricular septal defect (VSD) is a rare and serious congenital heart defect characterized by undevelopment of right ventricle outflow tract with atresia of pulmonary valve, a large VSD and pulmonary collateral vessels. There is an anatomically wide spectrum of this disorder according to the presence or size of main, right or left pulmonary arteries. In the absence of patent ductus arterious (PDA), pulmonary blood circulation is provided by major aorticopulmonary collateral arteries (MAPCAs). Different unifocalisation techniques can be performed in this condition.

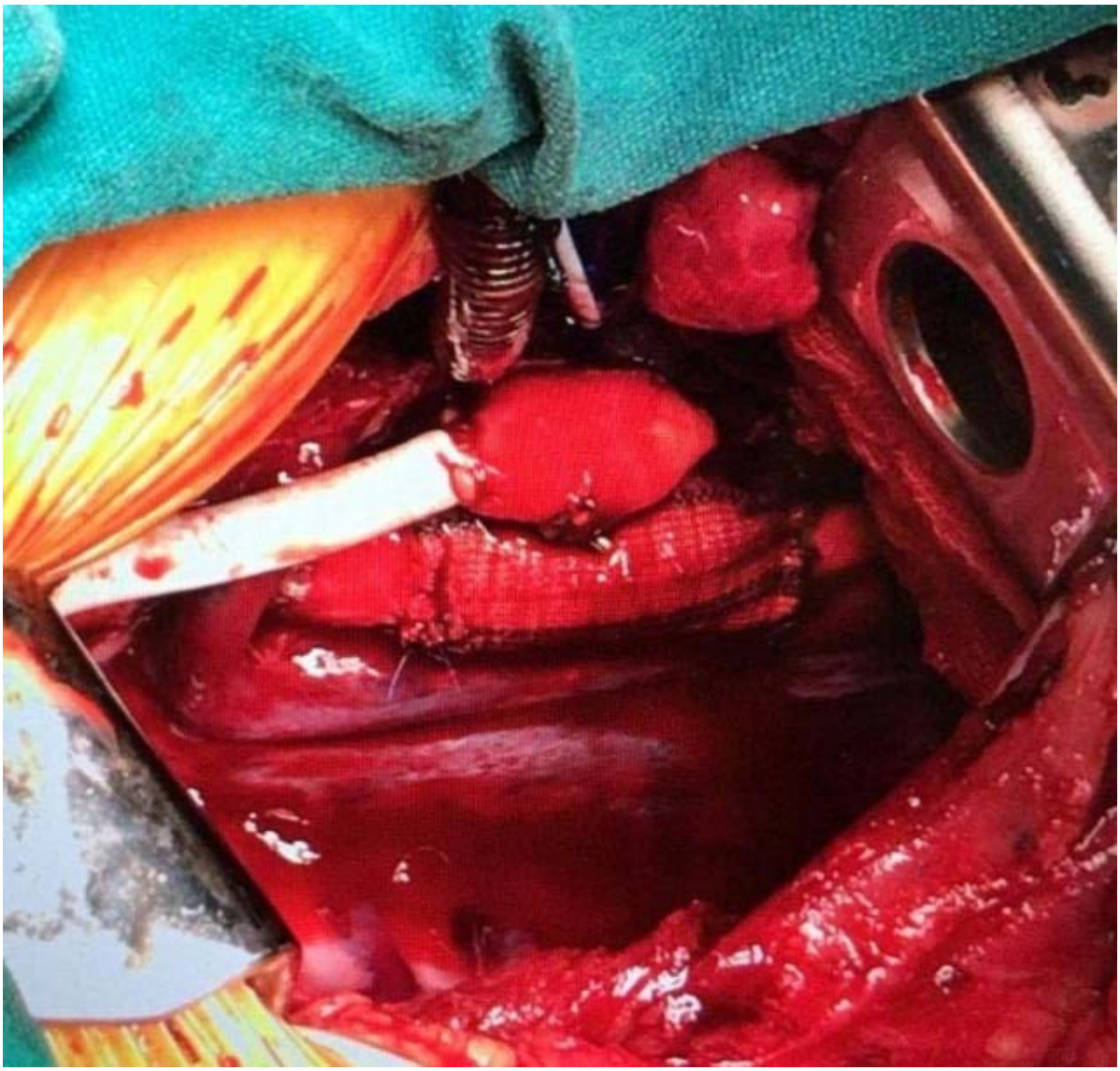
Case Report:

A 11-months-old girl with VSD-PA was referred to our hospital. Cyanosis and murmur was detected in the physical examination. A large VSD, absence of pulmonary arteries and PDA, MAPCAs from descending aorta that provides pulmonary blood supply were observed in the echocardiographic and angiographic analysis. Unifocalization procedure was performed to the patient with the diagnosis of type 4 VSD-PA.

In the operation, 2 large MAPCAs were seen medial and proximal to the descending aorta. The proximal and distal sides of this aortic segment which originates these MAPCAs were clamped during cardiopulmonary bypass and this segment was resected. A dacron graft size of 12 mm was interposed in the aorta. The distal side of the aortic segment was sutured continuously and the proximal side was narrowed for a suitable anastomosis. Then a 5 mm graft was placed between this narrowed proximal segment and subclavian artery for pulmonary circulation. The patient was removed the operation with ECMO device and the weaning from ECMO was succeeded postoperatively seventh day.

Discussion:

Unifocalization is often a very challenging and high-risk procedure. En-bloc resection of aortic segment originates MAPCAs and establishing a connection with this segment and subclavian artery by a shunt graft can be performed in these patients successfully.



ID: **267**

Topic: **Cardiovascular Surgery » Adult Congenital Heart Disease**

Presentation Type: **Oral**

A SUCCESSFUL REOPERATION OF PVR AND ASCENDING AORT TUBULAR GRAFT INSERTION 26 YEARS AFTER A SIMULTANEOUS TOTAL CORRECTION FOR TOF AND RAVITCH OPERATION

Şahin Karakılıç

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A patient who has been operated for fallot tetralogy and pectus excavatium, operated for pulmonary valve replacement for long time results

Abstract

Fallot tetralogy is the most common siyanotic congenital heart disease. Fallot tetralogy with pectus excavatium is also rare situation. Pulmonary valve regurgitation is common result after totally correction operation for fallot tetralogy. Our presentation is about a patient who has been operated with totally correction fallot tetralogy and ravicth operation for pectus excavatium, after 15 years results that aneurisms of aorta and right ventricular outflow tract.

Case

37 years old male patient, when he was 11 years old, got a diagnosis of pink fallot. He also has pectus excavatium. When he is 15 years old, he has got dyspnea, cough, tachycardia. Ecocardiography results fallot tetralogy with 2 degree pulmonary stenosis. He operated with totally correction fallot operation and ravicth operation. At least 5 years, he went to chest physician for dyspnea. There was no problem with pulmonary examination. Then he got the control echocardiography. It's results right ventricular outflow tract aneurysm, asendan aorta aneurysm, pulmonary valve regurgitation, 1 degree aortic valve regurgitation, 2 degree tricuspid valve regurgitation. The patient was talked at pediatric-cardiovascular weekly meeting and it was decided to operation.

Conclusion

The patients, totally correction for fallot tetralogy, get a high possibility to reoperate for secondary pulmonary valve regurgitation. That patient's operation time is very important to survey. Experienced hospitals operate this patient with low risk of mortality and morbidity. Even so, we need long time results.

ID: **329**

Topic: **Cardiovascular Surgery » Minimally Invasive and Robotic Cardiac Surgery**

Presentation Type: **Oral**

A RARE TUMOR OF THE HEART: INFLAMMATORY MYOFIBROBLASTIC TUMOR

Reha Topak[1], Şebnem Paytoncu[2], Şahin Karakılıç[1], Tuğra Gençpınar[1], Öztekin Oto[1]

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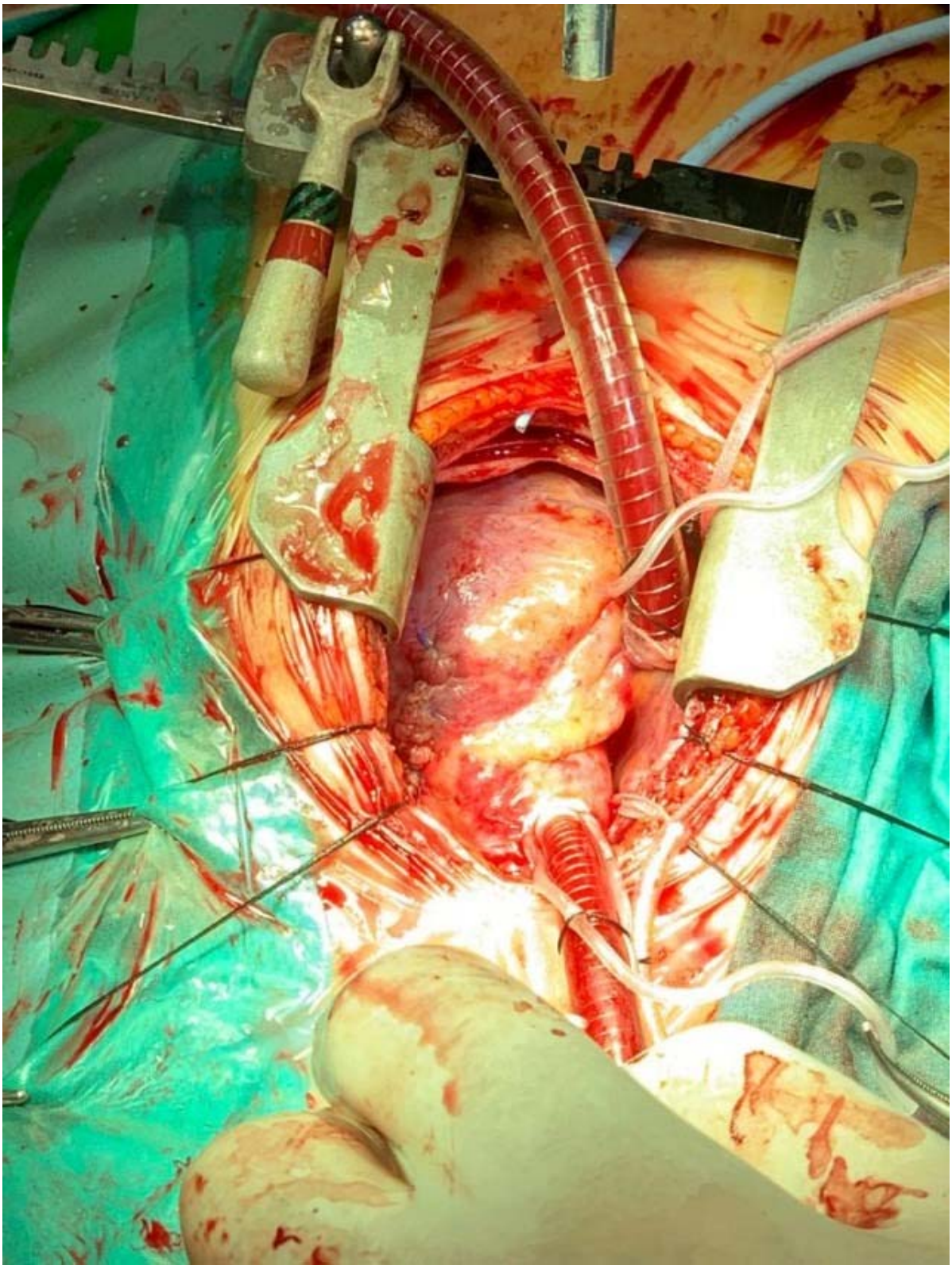
Inflammatory myofibroblastic tumor (IMT) of the heart are rare lesions occurring in young patients. They present histologically, presenting spindle cell proliferation with a distinctive fibroinflammatory and even pseudosarcomatous appearance. IMT has been described by various terms because of its variable cellular components, which include plasma cell granulomas, inflammatory pseudotumor, xantogranuloma, and fibrous histiocytoma.

The case was 5 year old child with symptoms of dyspnea and syncope episodes. Physical examination revealed no additional features other than systolic murmur. Echocardiographic examination revealed a mass of approximately 2x1.5 cm in size, causing obstruction in the right ventricular outflow tract. The mass was observed to move with the heart cycle. Excision of the RVOT mass was planned with a minimally invasive approach.

Under general anesthesia, juguer vein cannulation was performed percutaneously and limited superior median sternotomy was performed. Arterial cannulation was performed centrally and inferior venous cannulation was placed via right atrium. Due to the patient was suddenly hypotensive and desaturated, cardiopulmonary bypass (CPB) was initiated and pulmonary arteriotomy was performed including RVOT. The mass that created almost total obstruction in the RVOT was visualized and excised. Pulmonary arteriotomy and right ventriculotomy were

closed primarily. CPB support was gradually terminated and the operation was terminated without complications. The pathological evaluation of the specimens taken during the operation was consistent with the inflammatory myofibroblastic tumor. The patient was followed up in the intensive care unit overnight and discharged on the 6th postoperative day. The patient did not have residual mass and RVOT obstruction in the first and sixth month control echocardiographic evaluations.

Although inflammatory myofibroblastic tumors can be seen in almost all parts of the body, they are rare masses in the heart. Surgical treatment is useful in such masses that cause obstruction.

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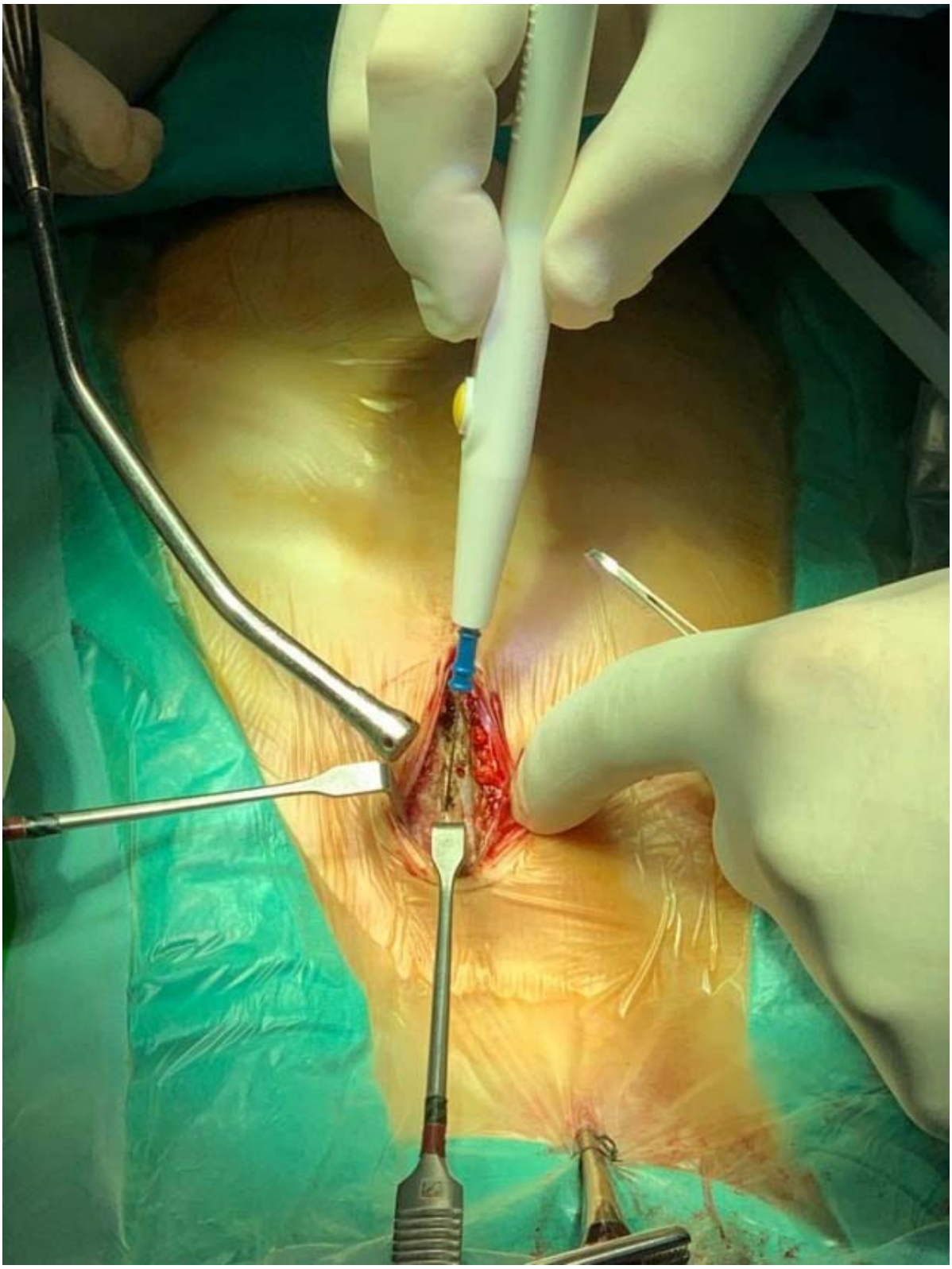

Oral Presentation Session

Perspectives in Acute Coronary Syndromes

Date: 30.10.2020 Time: 16:00 – 17:15 Hall: 4

ID: **134**

Topic: **Cardiology » Diabetes Mellitus and Cardiovascular Disease**

Presentation Type: **Oral**

DIABETES MELLITUS –BEST PREDICTOR OF WORST PROGNOSIS IN ACQUIRED VENTRICULAR SEPTAL RUPTURE

Sajjad Alı

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OBJECTIVE: To determine the predictors of mortality in acquired ventricular septal rupture among various cardiovascular risk factors and clinical parameters and also to compare these variables between diabetics and non-diabetics.

METHODOLOGY: This is a retrospective study done at cardiology department of Lady Reading Hospital, Pakistan in which a data of 69 patients with post myocardial infarction with ventricular septal rupture who admitted over a period of five years between January 2012 and December 2016 were analyzed. Logistic regression model was applied for predictive analysis by determining odds ratio of mortality for various enrollment clinical parameters. P-value of less than or equal to 0.05 was taken as significant.

RESULTS: Mean age of included patients was 63.16 ± 8.8 years which is a decade younger, with 53.6% were male patients. Mean time of development of VSR was 4.1 ± 2.2 days. Diabetes was found to be the best predictor of mortality acquired VSR patients with OR of 13.72, followed by presence of heart block (OR: 13.21), renal impairment (OR: 8.9), higher killip class (OR: 8.5), high admission glucose level (OR: 6.8), multiple VSR, tachycardia and shock with significant P-value. Among diabetics with acquired VSR: only heart block, HTN, and higher killip class were found to be predictors of death.

CONCLUSION: Diabetic status is a strong independent predictor of mortality in acquired VSR patients followed by heart block and renal impairment. HTN only in the presence of diabetes can be a predictor of mortality.

KEY WORDS: Ventricular Septal Rupture, Diabetes mellitus

ID: **322**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

PREDICTION OF IN-HOSPITAL MAJOR ADVERSE CARDIAC EVENTS (MACE) OF PATIENTS WITH ACUTE CORONARY SYNDROME USING GRACE AND TIMI RISK SCORES IN A TERTIARY HOSPITAL OF BANGLADESH

Bishnu Pada Saha

NICVD, Dhaka, Bangladesh

**Corresponding Author (dbps99@gmail.com)*

BACKGROUND: Patient with acute coronary syndrome (ACS) has considerable variability in outcome and mortality risk. Global Registry of Acute Coronary Events (GRACE) & The Thrombolysis in Myocardial Infarction (TIMI) were a convenient bedside clinical risk scores for predicting in-hospital Major Adverse Cardiac Events (MACE) of patients with ACS at presentation. The aim of this study was to predict in-hospital Major Adverse Cardiac Events (MACE) in patients with ACS by using GRACE and TIMI risk scores. Outside the country, several studies have been found to in predicting to MACE of patients with ACS by using GRACE and TIMI risk scores. But in our country even south Asia, no study has been done to compare these scores in predicting of the in-hospital MACE of patients with ACS. So, this study has been undertaken to predicting of the in-hospital MACE of patients with ACS by using the GRACE and TIMI risk scores.

METHODS: This prospective observational study was carried out in the Department of Cardiology, Dhaka Medical College and Hospital (DMCH), Dhaka. After considering all ethical issues data were collected from 279 admitted patients with ACS by using questionnaire, clinical examination, ST changes in electrocardiogram, and relevant laboratory investigations. The GRACE & TIMI risk score was calculated for each patient. Patients were followed up till death or discharge and in-hospital MACE were noted. Tested predictive (sensitivity & specificity) accuracy of both GRACE & TIMI risk score to predict in-hospital MACE of the patients with ACS by receiver operative characteristics (ROC) curve.

RESULTS: The study included 279 patients, 144 (51.6 %) had STEMI & 135 (48.6%) had UA/NSTEMI. In-hospital MACE were significantly ($p<0.001$) higher in patients with STEMI than patients with UA/NSTEMI (53.5% vs 29.6%). Sensitivity of both GRACE & TIMI risk score to predict in-hospital MACE of patients with STEMI as well as patients with UA/NSTEMI remained close to 100% with specificity >60% at the specified best cut off values ($p<0.05$). The best value for predicting of in-hospital MACE was a GRACE score of ≥165 and TIMI score of ≥ 6.0 in patients with STEMI whereas GRACE score of ≥123 and TIMI score of ≥3.0 in patients with UA/NSTEMI that is lower than established studies. Both GRACE & TIMI risk score had high c-statistics (≥ 0.70) but the different was <0.05.

CONCLUSIONS: Both the GRACE and TIMI risk score could predict in-hospital MACE of patients with ACS and may be readily applied as a prognostic tool at the bed side of hospital but no one is superior.

ID: **263**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

PREDICTION OF IN-HOSPITAL MAJOR ADVERSE CARDIAC EVENTS (MACE) OF PATIENTS WITH ACUTE CORONARY SYNDROME USING GRACE AND TIMI RISK SCORES IN A TERTIARY HOSPITAL OF BANGLADESH

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Background: Patient with acute coronary syndrome (ACS) has considerable variability in outcome and mortality risk. Global Registry of Acute Coronary Events (GRACE) & The Thrombolysis in Myocardial Infarction (TIMI) were a convenient bedside clinical risk scores for predicting in-hospital Major Adverse Cardiac Events (MACE) of patients with ACS at presentation. The aim of this study was to predict in-hospital Major Adverse Cardiac Events (MACE) in patients with ACS by using GRACE and TIMI risk scores. Outside the country, several studies have been found to in predicting to MACE of patients with ACS by using GRACE and TIMI risk scores. But in our country even south Asia, no study has been done to compare these scores in predicting of the in-hospital MACE of patients with ACS. So, this study has been undertaken to predicting of the in-hospital MACE of patients with ACS by using the GRACE and TIMI risk scores.

Methods: This prospective observational study was carried out in the Department of Cardiology, Dhaka Medical College & Hospital (DMCH), Dhaka. After considering all ethical issues data were collected from 279 admitted patients with ACS by using questionnaire, clinical examination, ST changes in electrocardiogram, and relevant laboratory investigations. The GRACE & TIMI risk score was calculated for each patient. Patients were followed up till death or discharge and in-hospital MACE were noted. Tested predictive (sensitivity & specificity) accuracy of both GRACE & TIMI risk score to predict in-hospital MACE of the patients with ACS by receiver operative characteristics (ROC) curve.

Results: The study included 279 patients, 144 (51.6 %) had STEMI & 135 (48.6%) had UA/NSTEMI. In-hospital MACE were significantly ($p<0.001$) higher in patients with STEMI than patients with UA/NSTEMI (53.5% vs 29.6%). Sensitivity of both GRACE & TIMI risk score to predict in-hospital MACE of patients with STEMI as well as patients with UA/NSTEMI remained close to 100% with specificity >60% at the specified best cut off values ($p<0.05$). The best value for predicting of in-hospital MACE was a GRACE score of ≥165 and TIMI score of ≥ 6.0 in patients with STEMI whereas GRACE score of ≥123 and TIMI score of ≥3.0 in patients with UA/NSTEMI that is lower than established studies. Both GRACE & TIMI risk score had high c-statistics (≥ 0.70) but the different was <0.05.

Conclusions: Both the GRACE & TIMI risk score could predict in-hospital MACE of patients with ACS and may be readily applied as a prognostic tool at the bed side of hospital but no one is superior.

Table-Association of in-hospital MACE and best cut off value of GRACE & TIMI risk score of patients with STEMI & patient with UA/ NSTEMI.

Risk Score	Cut off value	In-Hospital	MACE	of STEMI		p- value
Yes	(n=77)	No	(n=67)			
N	%	N	%			
GRACE Risk Score	≥165	62	80.5%	13	19.4%	<0.001s
GRACE Risk Score	<165	15	19.5%	54	80.6%	<0.001s
TIMI Risk Score	≥6.0	68	88.3%	18	26.9%	<0.001s

TIMI Risk Score	<6.0	09	11.7%	49	73.1%	<0.001s
In-Hospital MACE	of	STEMI				
Yes	(n=40)	No	(n=95)			
GRACE Risk Score	≥123	32	80.0%	27	28.4%	<0.001s
GRACE Risk Score	<123	08	20.0%	68	71.6%	<0.001s
TIMI Risk Score	≥3.0	34	85.0%	31	32.6%	<0.001s
TIMI Risk Score	<3.0	06	15.0%	64	67.4%	<0.001s

ID: **237**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Oral**

THE PATTERN OF CORONARY ARTERY INVOLVEMENT AS DIAGNOSED BY CORONARY ANGIOGRAPHY IN PATIENTS PRESENTED WITH ST-ELEVATION MYOCARDIAL INFARCTION

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Background: ST-elevation myocardial infarction (STEMI) is considered to be one of the most lethal presentations of myocardial infarction, and the most common cause of mortality and morbidity among cardiovascular diseases in Afghanistan.

Methods: A Descriptive case series design was applied to achieve the study objectives. All patients who visited French Medical Institute for Mother and Children, cardiology department and diagnosed with ST-elevation myocardial infarction between 1st June to 1st December 2018 were included in the study. Participants were recruited via consecutive sampling technique. A data collection form was developed by the investigator to collect the data; descriptive as well as inferential statistics were used to analyze the data.

Results: A total of 107 STEMI patients were enrolled in the study. The mean age at presentation was 57.12 +/-12.32. The predominant gender was male (74.8%). Among the risk factors, Hypertension was the leading risk factor (51.5%), followed by Diabetes Mellitus (29%). Majority of the patients suffered from anterior STEMI (56.1%). There was a statistically significant association between culprit artery and diabetes (p-value 0.035) and also between type of STEMI and culprit artery (p-value <0.001). Among the complications, a statistically significant association was noted between type of STEMI and left ventricular dysfunction (p-value 0.001) and complete heart block (p-value 0.032).

Conclusion: Identification of the patterns of coronary artery disease would help cardiologists understand the etiology and corresponding clinical characteristics of patients with STEMI. This would also guide them to design better treatment options for the patients.

ID: **168**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

STRESS AT WORKPLACE AND RISK OF ACUTE CARDIOVASCULAR DISEASES IN POPULATION 25-64 YEARS IN RUSSIA/SIBERIA. MONICA-PSYCHOSOCIAL EPIDEMIOLOGICAL STUDY

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Purpose: To determine the impact of stress on work on the risk of cardiovascular disease over 16-years of follow-up in an open population of 25-64 years in Russia/Siberia.

Methods: Under the third screening of the WHO MONICA-psychosocial program (MOPSY) random representative sample including both genders aged 25–64 years was surveyed in Novosibirsk in 1994 (n=1346, 48.8% males; mean age 44,9 ± 0,4 years; response rate was 77.3%). Stress at work was assessed by means Karazek scale. New-onset cases of myocardial infarction (MI), stroke were identified from 1994 to 2010. This longitudinal survey performed in frame budgetary issue # AAAA-A17-117112850280-2.

Results: A high level of stress at work was in 29.5% of men and in 31.6% of women. The middle level was in 48.9% of men and in 50.7% of women ($\chi 2=2.574$ $\upsilon=2$ $p=0.276$). The risk of MI over 16-years period in persons experiencing stressful situations at work was as follow: in men HR=3.592 and women HR=3.218 (95%CI 1.146-9.042); stroke risk was in men HR=2.603 (95%CI, 1.06-4.153) and in women HR was 1.956 (95%CI 1.008-3.795). In multivariate analysis risk of MI in men was HR=1.15 (95%CI 0.6-2.2) and in women HR=2.543 (95%CI 1.88-7.351); risk of stroke in men was HR=3.8 (95%CI 1.6-8.8) and in women it was HR=1.95 (95%CI 0.984-3.887). The risk of stroke was higher in those who are living alone, divorced and widowed men HR=4.2 (95% CI 1.5-13.2) and in women with high school or primary education degree HR=3 (95%CI 0.852-11.039).

Conclusions: It was established that a high level of stress at work is not gender-specific. The risk of MI incidence over a 16-years period is higher in women than in men but stroke in men; the risk of myocardial infarction and stroke is affected by the social gradient in both genders.

ID: **357**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Oral**

ASSOCIATION OF HBA1C LEVEL WITH THE SEVERITY OF CORONARY ARTERY DISEASE IN NON-DIABETIC PATIENT

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ABSTRACT

Background: In non-diabetic patients whose HbA1c level exceeded 4.6%; an increase in haemoglobinA1c of 1 percentage point increased the relative risk of coronary artery disease to 2.36%. However, if the HbA1c level was not greater than 4.6%; an increase of HbA1c level was not associated with CAD risk. Diabetes mellitus is an independent risk factor for coronary artery disease. Even in non-diabetic patients who had higher HbA1c levels are significantly associated with the development of coronary artery disease. As the studies related to the HbA1c level and the severity of coronary artery disease in non-diabetic patients with non-ST-segment elevation myocardial infarction have predominantly been carried out in the developed countries, so the data obtained from these studies may not be applicable to other populations including ours.

Method: Cross-sectional study was done in department of Cardiology National Institute of Cardiovascular Diseases in July 2015 to 2018 July all patients with NSTEMI without diabetes mellitus.

ID: **133**

Topic: **Cardiology » Preventive cardiology**

Presentation Type: **Oral**

ANTHROPOMETRIC MEASUREMENTS – PREDICTORS OF MAJOR ADVERSE EVENTS IN NON-ST ELEVATION MYOCARDIAL INFARCTION PATIENTS AND THEIR SURVIVAL – A COHORT STUDY

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OBJECTIVE: The objectives of this study is to determine the anthropometric measurement that best associated with angiographic severity and best predictor of major adverse cardiovascular and cerebrovascular event in patients who are successfully re-vascularized after non-ST elevation myocardial infarction.

METHODOLOGY: This is a prospective cohort study done in Cardiology unit, Lady Reading Hospital, Peshawar from 1st July, 2016 to 31st December, 2017. Cohort was selected on the basis of complete revascularization after non-ST elevation MI in the first 6-months period and were followed over a period of 12 months with a 3-months clinical and monthly telephonic follow-up, to observe for any major adverse cardiovascular and cerebrovascular events (MACCE). Raised level of BMI, waist, wrist, neck circumferences and waist-to-hip ratio were defined as >25 kg/m2, >102cm & >88cm, >20cm & >18cm, ≥40cm & ≥37cm for male and female, and ≥0.55 ratio respectively. Chi-square test used to correlate anthropometric values with angiographic severity and incidence of MACCE. Logistic regression model was applied for prediction of MACCE. Kaplan-Meier curve used for survival of these patients through one year.

RESULTS: Total of seventy-three patients having successful revascularization after NSTEMI, with a mean age of 59.25 ± 10.34 years were enrolled in the study. Of these 47.9% were males. 31 (42.4%) patients had triple vessel disease. Neck circumference is best correlated with angiographic severity (X2= 22.59) followed by BMI (X2= 22.2) with significant P-value for all except for waist circumference. Similarly, all were associated with incidence of MACCE, with WrC as the best (X2= 16.12) followed by NC. Relative risk for occurrence of MACCE was with NC (RR=4.5) and also, NC best predicts MACCE. Kaplan Meier curves show significant correlation of raised anthropometric values with incidence of MACCE i.e. all patients who had MACCE had raised anthropometric values except for two cases who had normal WrC.

CONCLUSIONS: Raised anthropometric values are significantly associated with angiographic severity (NC as best) and incidence of MACCE (WrC as best) in NSTEMI patients, with the neck circumference as its best predictor. Follow-up of these patients show similar significant results for MACCE occurrence.

KEY WORDS: Anthropometric measurements, angiographic severity, MACCE, non-ST elevation MI

ID: **71**

Topic: **Cardiology » Preventive cardiology**

Presentation Type: **Oral**

CLINICAL INDICATIONS FOR REQUESTING HIGH-SENSITIVITY TROPONIN I IN THE EMERGENCY DEPARTMENT

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Objective: The objective of this study is to evaluate the presenting symptoms, risk factors and cardiac origin of High Sensitivity Troponin I (Hs-TnI) and to investigate the validity of requesting an Hs-TnI routinely.

Method: A retrospective cohort study with 904 patients presenting at a tertiary hospital Emergency (ER) with an Hs-TnI requested. The study was conducted over a period of 15 months.

Results: Of the sample, 20.4% (n=184) presented with dyspnea, 18.03% (n=163) with chest pain and a small proportion (12.94%, n=117) with epigastric abdominal pain. Patients presenting with chest pain and a history of dyslipidemia were at a higher risk of developing Acute coronary syndrome (ACS) compared to the group without dyslipidemia (RR=1.62 (1.01-2.58) P=0.044). Diabetes and hypertension were the most prevalent chronic co-morbidities in patients with dyspnea with a risk of (RR=5.19 (0.68-39.27) P<0.068). Patients who presented with epigastric pain and had a history of dyslipidemia had a risk of (RR=5.23 (1.33-20.54) P=0.009).

Conclusion: The presenting symptoms should be taken in consideration by the ED physician to support the request for an Hs-TnI laboratory test. The yield and risk were both low in random screening.

ID: **701**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

THE UTILITY OF PLATELET/LYMPHOCYTE RATIO IN THE PREDICTION OF LONG-TERM MORTALITY IN PATIENTS PRESENTING WITH ACUTE CORONARY SYNDROME

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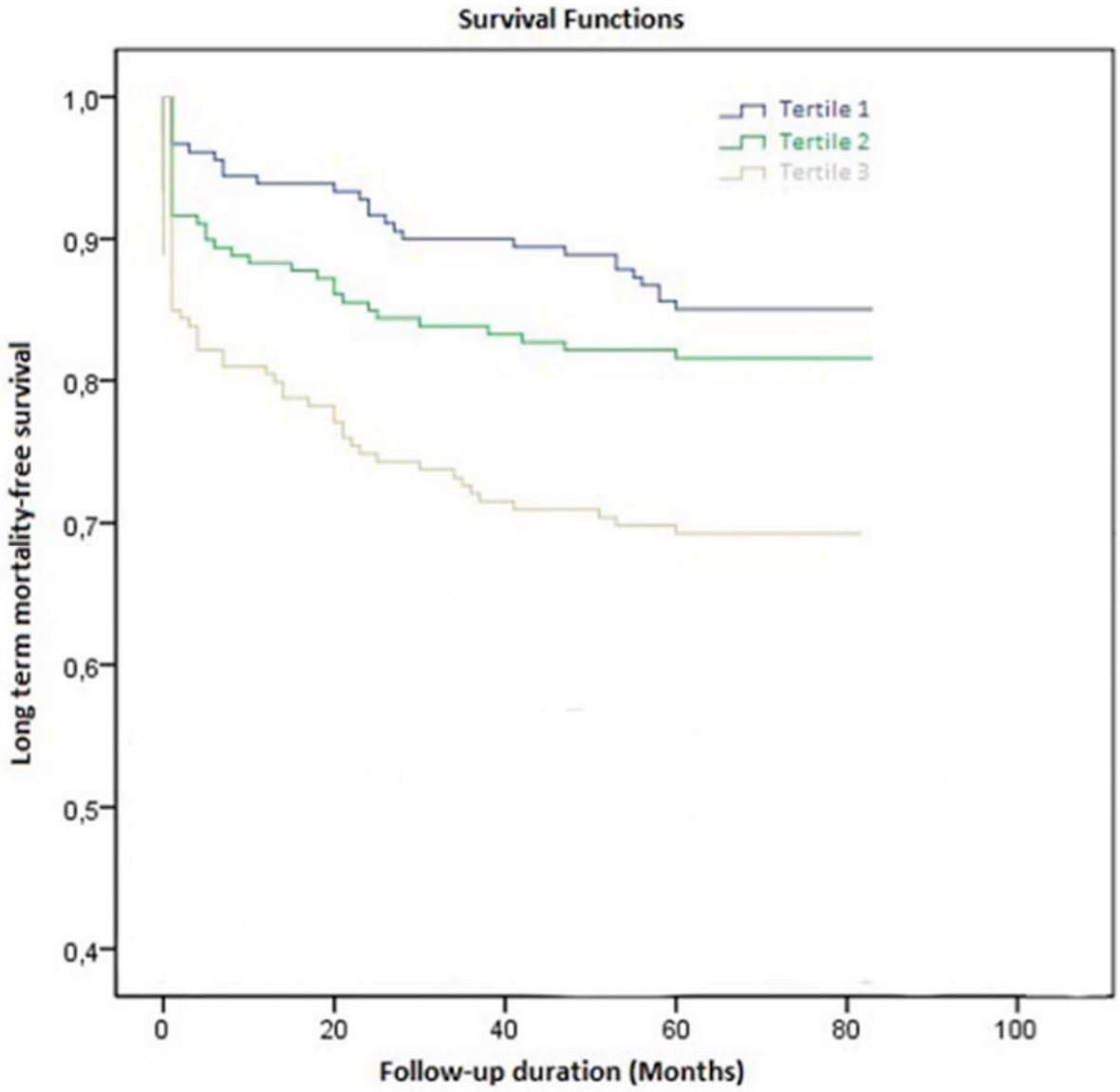
Objective: Atherosclerosis is a chronic inflammatory process and inflammation is an important component of acute coronary syndrome (ACS). Platelet-to-lymphocyte ratio (PLR) is a useful parameter showing the degree of the inflammatory response. We sought to investigate the relationship between PLR and long-term mortality in patients with ACS.

Methods: A total of 538 patients who were diagnosed as ACS between January 2012 and August 2013 were followed up to 60 months. Admission blood was used to calculate PLR.

Results: In total, 538 patients with a mean age of 61.5 ±13.1 years (69% male) were enrolled in the study. Median follow-up was 79 months (IQR: 74–83 months). Patients were divided into 3 tertiles based on PLR levels. Five-year mortality of the patients was significantly higher among patients in the upper PLR tertile when compared with the lower and middle PLR tertile groups (55 (30.7%) vs. 27 (15.0%) and 34 (19.0%); $p < 0.001$, $p = 0.010$ respectively). In the Cox regression analysis, a high level of PLR was an independent predictor of 5-year mortality (OR = 1.005, 95% CI: 1.001–1.008, $p = 0.004$). Kaplan-Meier analysis according to the long-term mortality-free survival revealed the higher occurrence of mortality in the upper PLR tertile group compared to the first ($p < 0.001$) and second tertiles ($p = 0.009$).

Conclusions: PLR, which is an easily calculated and universally available marker, may be useful in long-term risk stratification of patients presenting with ACS.

	Univariate analysis		Cox regression analysis	
	OR (95% CI)	P	OR (95% CI)	P
Age	1,083 (1,061-1,106)	**<0,001**	1,049 (1,029-1,069)	**<0,001**
Female gender	2,146 (1,402-3,283)	**<0,001**	1,679 (1,058-2,666)	**0,028**
Left ventricular EF	0,939 (0,918-0,960)	**<0,001**	0,963 (0,942-0,984)	**0,001**
PLR	1,008 (1,005-1,012)	**<0,001**	1,005 (1,001-1,008)	**0,004**
Hypertension	2,844 (1,851-4,370)	**<0,001**	1,171 (0,744-1,843)	0,496
LAD as the infarct-related artery	1,095 (0,725-1,653)	0,668		
STEMI as the cause of ACS	0,778 (0,513-1,180)	0,238	1,264 (0,578-2,764)	0,557
NON-STEMI as the cause of ACS	1,610 (1,040-2,491)	**0,033**	1,301 (0,622-2,721)	0,485
Multivessel disease	4,233 (2,543-7,048)	**<0,001**	1,993 (1,205-3,297)	**0,007**
Diabetes mellitus	1,652 (1,058-2,582)	**0,027**	1,219 (0,793-1,873)	0,367
Smoking	1,497 (0,976-2,298)	**0,065**	1,194 (0,757-1,884)	0,446
Previous MI history	4,784 (2,876-7,958)	**<0,001**	1,730 (1,012-2,955)	**0,045**
Hemoglobin	0,788 (0,691-0,899)	**<0,001**	1,120 (0,988-1,271)	0,076
White blood cell	1,048 (0,989-1,110)	0,111		
RDW	1,307 (1,114-1,534)	**0,001**	1,148 (1,005-1,312)	**0,043**
Creatinine	18,877 (7,854-45,367)	**<0,001**	1,827 (1,359-2,456)	**<0,001**
LDL	0,997 (0,990-1,003)	0,307		
HDL	0,984 (0,962-1,007)	0,174	0,975 (0,955-0,995)	**0,015**


Survival Functions
Tertile 1
Tertile 2
Tertile 3
Long term mortality-free survival
1,0
0,9
0,8
0,7
0,6
0,5
0,4
0
20
40
60
80
100
Follow-up duration (Months)

Oral Presentation Session

Carotid Endarterectomy: New Techniques and Outcomes

Date: 30.10.2020 Time: 16:15 – 17:00 Hall: 5

ID: **625**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Carotid Artery Disease**

Presentation Type: **Oral**

STAGED REVASCULARIZATION OF COMBINED ATHEROSCLEROTIC LESIONS OF CAROTID AND CORONARY ARTERIES

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Objective: to analyze the results of the staged treatment of patients with combined lesions of the carotid (CA) and coronary arteries (CO).

Material and methods: results of surgical treatment of 702 patients with combined atherosclerotic lesions in CA and CO were analyzed. The average age of patients was 63 ± 4.8 years. There were 526 men (75%), 176 women (25%). All patients underwent standard examination methods: duplex scanning (DS), echocardiography, multislice computed tomography angiography (MSCTA), as well as in 88 (12.5%) cases, simultaneous selective coronary angiography (SCA) and selective carotid angiography. Indications for carotid endarterectomy (CEA) were stenosis, asymptomatic CA stenosis of more than 70% and symptomatic CA stenosis of more than 55%. Indications for coronary angiography with stenting were myocardial infarction (MI) in the presence of a two-vessel or three-vessel disease in patients with a functional class of IHD III and IV.

Results: All patients were divided into two groups: 362 (51.7%) patients of the first group performed the first stage of myocardial revascularization, followed by CEA. The results of stenting of the spacecraft showed that in the postoperative period, according to echocardiography, the ejection fraction (EF) increased from 45.6 ± 4.2 to 56.2 ± 2.8%, the stroke volume from 45-65 ml per min. In patients who underwent myocardial infarction without a Q wave, a positive ECG change was noted. On the 7-10th day after myocardial revascularization by the second stage, these patients had CEA with a positive hemodynamic and clinical effect.

The second group consisted of 340 (48.3%) patients who underwent carotid reconstruction on the first stage. Before and after interventions, all patients underwent DS of CA and echocardiography, as well as ECG in dynamics. After reconstruction of CA, all patients underwent DS, in which hemodynamic improvement and stabilization on the operated side were revealed. The second stage of this group of patients was performed stenting of the CO after 10 days.

Conclusions: the priority of operations is determined by the degree of atherosclerotic lesion of the vessel and its hemodynamic significance, the number of affected arteries of the brain and heart. The use of a staged approach to the treatment of combined atherosclerosis leads to a significant reduction in the total number of cerebral and cardiac complications.

ID: **318**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Oral**

CAROTID ENDARTERECTOMY WITH PRIMARY CLOSURE: ONE CENTER EXPERIENCE UNDER REGIONAL ANESTHESIA

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Introduction: Carotid endarterectomy is well-established surgical intervention to prevent stroke in symptomatic and asymptomatic patients with carotid artery stenosis. But one of the ongoing debates for CEA is the type of arterial closure. The aim of this study is to assess our cases retrospectively who underwent CEA with primary closure under regional anesthesia.
Material method: This study was a retrospective analysis of the short-term results of patients who underwent CEA with primary closure between the years 2008 and 2018 under regional anesthesia (Deep cervical plexus block (C2-C3-C4) and superficial cervical plexus block by conventional technique)

Anesthetic management: No premedication was administered on the day of the surgery. In the operating room, a peripheral venous line was established and monitoring included peripheral pulse-oximetry, 3-lead electrocardiography and invasive blood pressure via contra-lateral radial artery catheter connected to a monitoring kit. First the anatomical landmarks were identified and marked as sternocleidomastoid (SCM) muscle, cricoid cartilage, mastoid process. After the skin of the lateral neck and puncture side were disinfected, deep cervical plexus blocks C2, C3, C4 were performed respectively. Then superficial cervical plexus block was applied at the level of the 6th cervical vertebra by conventional technique.

Surgical technique: After parallel incision to SCM, ECA and CCA were found and suspended with tape. Then patients received 5000 IU heparin intravenously before clamping the carotid artery. After clamping of the artery, consciousness and motor status of the patients were tested. If patients were well after 45-50 seconds later after clamping, the endarterectomy was completed classically. The incision was closed primary with 6-0 proline.

Follow up: Patients were followed up in the clinic every 6 months on average. Carotid duplex ultrasound was performed every follow-up visit on all patients. Carotid stenosis >50% accepted as restenosis after surgery.

Results: 553 patients were operated. The average age and preoperative stenosis were 67.26 ± 8.93 year (Min=41, Max91) and 76.21 ± 10.20 (Min= 50%, max: 100 %) respectively. In 282 patients left and in 272 patients right carotid artery stenosis was revealed. Demographic, preoperative, perioperative and postoperative data were on Table 1. There was no statistically significant difference between the groups. Five patients required shunt insertion intraoperatively and 3 patients developed hematoma after surgery that necessitate decompression surgery. No patient developed restenosis after surgery.

Table 1

Male
Female
p

Age

67.04 ± 8.76

67.88 ± 9.40

0.612

Preoperative stenosis (%)

76.32 ± 10.19

75.90 ± 10.25

0.957

Surgical time (min)
58.79 ± 12.26
60.99 ± 12.69

0.193

Preoperative hospital stay (day)
5.24 ± 2.33

5.19 ± 2.38

0.329

Post-operative hospital stay (day)
3.55 ± 1.57

3.45 ± 1.70

0.422

Conclusion: In our experience, CEA with primary closure under regional anesthesia is a safe and effective surgical treatment for carotid stenosis.

ID: **113**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Carotid Artery Disease**

Presentation Type: **Oral**

COMPARISON OF CONVENTIONAL SURGICAL METHODS AND EVERSION TECHNIQUES IN CAROTID ENDARTERECTOMY OPERATIONS

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BACKGROUND

Carotid endarterectomy is a highly effective and safe operation for preventing the risk of stroke in patients with symptomatic internal carotid artery stenosis. Conventional carotid endarterectomy (CCA) and eversion carotid endarterectomy (ECA) techniques are the two most commonly used surgical techniques. The superiority of these two techniques to each other has not yet been clearly demonstrated.

METHODS

Forty-three patients operated for symptomatic carotid stenosis were divided into two groups according to the preferred surgical method. (CCEA vs. ECEA). Postoperative hospital stays, use of shunts and antibiotics, early (30-day) complications, long-term restenosis, and mortality rates were compared between two groups.

RESULTS

Demographic data and preoperative stenosis rates are similar in two groups. In CCEA group subjects had a significantly longer clamping time (19.3±4.1 vs 15.4±3.4 min. respectively, p= 0.002) and significant difference was found between operative time (35.1 ± 3.2 vs 28.7 ± 4.3 min) and need for shunting (25.7% vs 2.1%, p<0.001), between CCEA and ECEA. In CCEA patients had a higher percentage of antibiotic use (49.8 % vs. 31.1% respectively; p=0.04). There was no other statistical difference in hematoma rates. Complications during follow up period, including stroke, heart attack, re-stenosis and mortality rate, showed no difference between the groups. Re-stenosis and survival rates were not different between the groups significantly (P=0.754, P=0.241, respectively) in Kaplan-Meier analysis.

CONCLUSIONS

Our results showed that ECEA was a convenient surgical technique and had some advantage compared to CCEA in the aspect of the early and long term follow up. ECEA can be performed in a significantly shorter operative time and may decrease the necessity for shunting although it may require specific experience with the technique.

Early Complications (in 30 days)	CCEA n=24	ECEA n=19	p value
Bleeding (re-explored)	4.1 %	0	0.865
Hematoma	8.2 %	5.2 %	0.724
Cranial nerve injury	4,1 %	5,2 %	0.812
Stroke	0	0	-

Postoperative MI	0	0	-

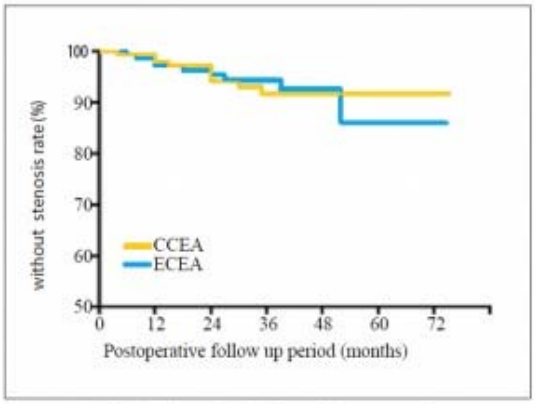

Figure 2. Kaplan-Meier analysis of the without restenosis rates. The log-rank test showed P=0.754.

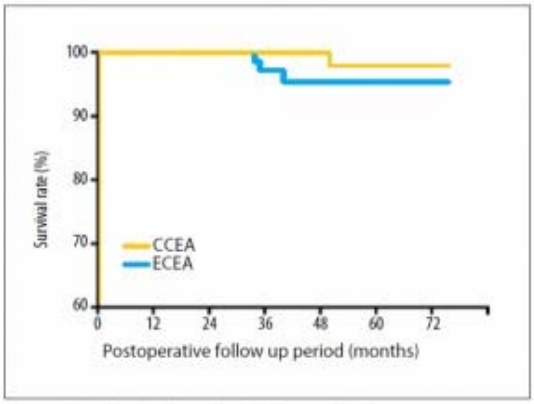

Figure 3. Kaplan-Meier analysis of the survival rates. The log-rank test showed P=0.241.

ID: **358**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Carotid Artery Disease**

Presentation Type: **Oral**

CAROTID BODY TUMORS AND SURGICAL COMPLICATIONS

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OBJECTIVE

Carotid body tumors are very slow-growing tumors, mostly benign, originating from neural crest. Carotid body tumors located in the cervical region show high vascularity and close anatomical relationship with the carotid arteries is one of the main reasons for the interest of vascular surgeons. Due to the difficulties experienced in surgical resection and serious complications that may develop, surgical experience is required. Paragangliomas are tumors arising from the chromaffin cells of the sympathetic ganglia. Carotid body tumors account for 3% of all paragangliomas and 0.6% of head and neck tumors. The carotid body tumors are divided into three groups according to the gross tumor-vessel relationship (Shamblin Classification): localized tumors (Shamblin I), those adherent and partially surrounding the carotid vessels (Shamblin II), and those intimately surrounding the carotid vessels (Shamblin III). The definite treatment for these tumors is surgical resection, often augmented with preoperative embolization due their highly vascular nature, especially for Shamblin II and III tumors.

METHODS

In our clinic, fewer carotid tumor operations are performed compared to carotid endarterectomy. However, when we examined the last 6 cases, one of these cases was excessive. A 32-year-old male patient had no complaints other than neck swelling. The tumor was approximately 6 cm in size, extending to the cranial. There was no intravenous invasion. We also consulted this case with otorhinolaryngology clinic. This case, which we accepted as inop on behalf of our clinic, showed us the size of the carotid body tumor. Interventional radiology clinic was interviewed for embolization. Since the tumor of this size was difficult to perform, he was referred to a head and neck surgery clinic.

The other five patients who were operated were all female. The mean age was 55.7 years. The largest diameter was 2.5 cm and the smallest was 1 cm. All patients were diagnosed with carotid doppler ultrasound first and then neck MRA was taken to support. The tumors were located only between the internal and external carotid artery (Shamblin I)(Image 1).None of the patients had intravenous invasion. All of the tumors were removed during the operation.

RESULTS

All carotid body tumors referred to pathology resulted in benign. Complications developed in 2 patients. After the operation, one of the patients had slippage at the rim, while the other patient had difficulty in slipping and swallowing the tongue due to twelfth nerve damage. Prednol treatment was given to both patients. After 2 months it almost completely recovered. There was no recurrence at 1-year follow-up.

CONCLUSIONS

Surgical resection will be more difficult as the carotid body tumors reach larger diameters. Carotid body tumors can be treated with appropriate preoperative imaging, careful surgical planning and adequate surgical experience with acceptable complication rates.

ID: **486**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Carotid Artery Disease**

Presentation Type: **Oral**

CAROTID BODY TUMOR RESECTION: IS PRE-OPERATIVE EMBOLIZATION NECESSARY?

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Background: Carotid body tumors (CBTs) are rare tumors in the neck. Surgical resection is the gold standard of treatment. Surgical resection may be complicated by bleeding. Pre-operative embolization has recently been introduced for the treatment to reduce the quantity of blood loss; however, the outcomes of this procedure are still under debate. In this article; we have presented the outcomes of patients, who underwent surgical resection for CBT without undergoing pre-operative embolization in our institution.

Patients and methods: This retrospective study reviewed 67 tumor resection cases that underwent surgical resection for CBT without undergoing pre-operative embolization. Tumor classification was performed according to the Shamblin classification. The demographic, clinical characteristics and the operative information about the patients were retrieved from the patient records. The obtained data were analyzed with descriptive statistics.

Results: The study included 12 male and 55 female patients. The mean age was 51.95±16.59 years. Of the surgically resected tumors; 11(16.4%) were Shamblin Type I, 30 (44.8%) were Shamblin Type II, and 26 (38.8%) were Shamblin Type III. The mean duration of operation was 109.10±32.36 minutes. The volume of intraoperative blood loss in the Shamblin Type I, Type II, and Type III groups were 98.64±23.46 cc, 215.33±75.74 cc, and 351.73±62.51 cc; respectively and they were significantly different among the groups ($p<0.001$). The volume of postoperative blood loss in the Shamblin Type I, Type II, and Type III groups were 34.09±10.44 cc, 53.00±20.02 cc, and 62.50±25.11cc, respectively and they were significantly different among the groups ($p=0.003$). Cranial nerve injury developed in 10 (15.0%) patients. Postoperative stroke developed in two (3%) patients. No mortality or persistent nerve injury was observed in association with the injury in the patients during the one-year follow-up period.

Conclusion: Carotid body tumors can be surgically resected safely and effectively without a need for pre-operative embolization.

ID: **627**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Carotid Artery Disease**

Presentation Type: **Oral**

SURGICAL TREATMENT OF CRITICAL LOWER LIMB ISCHEMIA IN MULTIFOCAL ATHEROSCLEROSIS

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Aim of study: Improving the results of treatment of patients with critical lower limb ischemia (CLLI) in multifocal atherosclerosis by improving the tactics of surgical treatment.

Material and methods: From 2016 to 2020, 180 patients (151 men, 29 women) were hospitalized in the vascular surgical department. All patients had combined atherosclerotic lesions of the carotid and / or coronary arteries. In 136 (75.6%) patients, hemodynamically significant stenosis of the carotid arteries (CA) was revealed. In 85 (47.7%) patients with CA and CLLI lesions, coronary heart disease (CHD) was detected. CHD was detected in 35 (19.4%) patients with CLLI without CA lesion. Of 180 (100%) patients with coronary heart disease, angina pectoris FC II was observed in 70 (38.9%), FC III - in 35 (19.4%). Unstable angina was observed in 28 (15.6%) patients. Coronary angiography was performed in 62 (34.4%) patients with coronary artery disease.

Results: In 48 (26.7%) patients with CA stenosis and CLLI, regression of lower limb ischemia was achieved with BMT, of which 29 (16.1%) underwent long-term intra-arterial catheter therapy, after which they underwent carotid endarterectomy. On the 7th day after interventions on CA in 25 (13.8%) of these patients, reconstruction of the aorta and arteries of the lower extremities was performed. Endovascular interventions on the arteries of the lower extremities (ALE) were performed in 9 (5%) patients after reconstruction of CA. 5 (2.8%) patients had a high amputation of the limb due to the progression of ischemia. In 2 (1.1%) patients developed acute myocardial infarction with a fatal outcome.
The choice of simultaneous tactics was based on the impossibility of stopping CLLI and conducting interventional interventions or their inefficiency. Simultaneous operations were performed in 12 (6.7%) patients with CA stenosis with CLLI. No complications were observed. In 35 (19.4%) patients with lesions of CA and CLLI, on the first stage was performed endovascular interventions on the ALE, 18 (10%) of them had hybrid interventions. 1 (0.5%) patient had a high amputation with a fatal outcome, another 2 (1.1%) - amputation.
Open interventions for CLLI on the first stage were performed in 33 (18.3%) patients. All operations on the lower extremities were performed under spinal anesthesia, with access below the pupart ligament. In 1 (0.5%) patient in the early postoperative period, a high amputation of the limb was performed.
For patients with coronary artery disease, coronary reserve was an important criterion. In 18 (10%) patients with coronary artery and lower limb lesions, the first stage was coronary stenting, the second stage was the reconstruction of the lower limb arteries. In 16 (8.8%) patients, an open intervention was performed on the lower limb arteries in connection with hemodynamically insignificant lesions of the coronary artery during coronarography. In 11 (6.1%) patients, palliative interventions were performed after stenting of the coronary arteries. When assessing regression of lower limb ischemia, ABI was taken into account: initially, this indicator was 0.35 ± 0.05; on the 3-4th day after interventions on lower limb arteries, it increased to 0.67 ± 0.03 ($p < 0.05$).

Conclusion: The use of hybrid surgical interventions in patients with CLLI at a high risk of complications is an effective method of surgical treatment of patients with multiple stenotic lesions, which leads to regression of ischemia and increases the salvage of the limb.

Oral Presentation Session

Controversial Issues in Carotid Endarterectomy

Date: 30.10.2020 Time: 17:15-18:15 Hall: 5

ID: **488**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Carotid Artery Disease**

Presentation Type: **Oral**

A CASE OF PAPILLARY CARCINOMA IN THYROGLOSSAL DUCT CYST MIMICKING CAROTID BODY TUMOR

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Background: Carotid body tumors (CDTs) are rare tumors of the neck also known as paragangliomas. Thyroglossal duct cyst (TDC) occurs as a result of an abnormality in the development of the thyroid gland, and accounts for approximately 70% of congenital neck masses. Sometimes differential diagnosis of neck masses can be difficult.

Methods: The patient presented with a painless, slowly growing lateral neck mass that had previously been operated in another hospital. The tumor which we considered as vascular tumor was operated. Sistrunk's procedure was performed after the identification of a papillary thyroid carcinoma.

Results: The surgical specimen was sent for histopathological examination after surgery, revealing a papillary carcinoma containing cystic structures. After Sistrunk's procedure microscopic examination of thyroid, revealed a papillary thyroid carcinoma with vessel and capsule invasion.

Conclusions: The thyroglossal duct cysts and malignancies should be kept in mind in the lateral masses of the neck.

ID: **112**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Carotid Artery Disease**

Presentation Type: **Oral**

SUCCESSFULLY MANAGED CAROTID ENDARTERECTOMY WITH SHUNTING UNDER ULTRASOUND GUIDED CAROTID SHEATH BLOCK COMBINED WITH SUPERFICIAL CERVICAL PLEXUS BLOCK

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Introduction: Carotid endarterectomy is the best treatment option in patients with high grade carotid artery stenosis but there is still no consensus on the optimal anesthetic management. Although so many methods have been used for cerebral function monitoring during general anesthesia; awake patient is still the gold standard. Both ultrasound guided carotid sheath block(U-CSB) and ultrasound guided superficial cervical plexus block(U-SCPB) are performed rapidly with lower complication rates. Hereby we report a CEA with shunt insertion successfully managed under U-CSB combined with U-SCPB.

Case report: A 73-year-old-man(100kg,175cm) with a history of hypertension, ischemic coronary artery disease, bening prostat hypertrophy and smoking was presented to Emergency Department with a left sided weakness 10 days ago. Cranial tomography was revealed ischemic stroke and medical therapy was started. Doppler ultrasound revealed bilateral carotid stenosis with a 90% stenosis on the right internal carotid artery and a 60 % stenosis on the left side. Semi-urgent CEA under regional anesthesia was planned.
In the operating room, after monitoring (pulse-oximetry,3-lead electrocardiography and invasive blood pressure via contralateral radial artery). Patient was placed in supine position. After disinfection of puncture side and sterile covers applied to the transducer; under ultrasound visualization, the needle was advanced into the carotid sheath from the posterior border of the SCM muscle at C6 level, close to the carotid artery and away from the nervus vagus. Then transducer was applied anterior border of the SCM muscle at C6 level. LA was administered to posterior border of SCM, superficial to the investing layer of deep cervical fascia under spread of LA was visually assessed on the ultrasound image. For both blocks 10mL LA solution (5ml,0.5%bupivacaine and 5ml,20%prilocaine) was administered. Clamping was performed three times but the patient's consciousness was deteriorated within 30,10 and 7 seconds respectively. So the surgeon was planned intraoperative shunting and carotid shunt was placed. Shunting, clamping and overall surgery time were 19,33 and 55 minutes respectively. It was not used any additional local anesthetic supplementation and systematic sedo-analgesic during the surgery.

Discussion: Carotid sheath surrounds the internal juguler vein, carotid artery and vagus nerve. Rössel, Casutt, Martusevicius and Madro et al reported that U-CSB is safe, simple, can be performed rapidly, sufficient for surgery, requires lower supplemental LA during surgery and an alternative approach with lower complication rate. We thought it should be combined with U-SCPB to block skin sensation. Further studies are needed to demonstrate the reliability and effectiveness of this new technique.
Figure 1. Ultrasonographic anatomic landmarks for superficial cervical plexus block and carotid sheat block

Picture 1. Shunting during CEA and dissected aterom plaque

ID: **420**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Carotid Artery Disease**

Presentation Type: **Oral**

A RARE CASE: EARLY SURGERY OF CAROTID STRING SIGN USING EXTERNAL CAROTID ARTERY SHUNT

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INTRODUCTION

In patients with severe stenosis of the carotid artery, string thinning, elongation, and narrowing of the artery due to decreased flow instead of poststenotic dilatation may result. Collapsed of the poststenotic lumen is dependent on low blood flow in cases with string sign findings.

CASE REPORT

A 60-year-old male patient presented with complaints of chest burning and tongue numbness. Coronary angiography revealed coronary artery disease and carotid artery stenosis. There was a string sign on the angiogram (Figure1). Right ophtalmic artery originating from only right external carotid artery (Figure 2). Doppler ultrasonography showed a fibrofaty stenosis in the right proximal ICA (%90) and left proximal ICA (%60-70). Right carotid endarterectomy + patch plasty (dacron patch) operation was performed by shunting the external carotid artery (for preserve the ophtalmic blood streem). There was no neurological complication after the operation. He was discharged on the third postoperative day. After 5 months, the right carotid artery was normal in the control tomography, but a string sign was detected in the left carotid artery (Figure 3). The left carotid artery was operated with the same technique. control ultrasonography showed improvement of string sign and normal diameter of carotid artery.

Carotid stenosis with string sign findings and patients with severe carotid artery stenosis should be evaluated and operated for the same indication. Patients with carotid stenosis with string sign findings should be intervened and should not be left alone.


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ID: **247**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

CAROTID ENDARTERECTOMY AND CORONARY ARTERY BYPASS GRAFTING PERFORMED IN SAME SESSION IN PATIENT WITH FAMILIAL HYPERCHOLESTEROLEMIA

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Objective: Familial hypercholesterolemia (FH) is a genetic disorder which is predominantly caused by mutations in low-density lipoprotein receptor gene, characterized by severely increased risk of atherosclerosis and associated vascular and coronary diseases. These patients also demonstrate characteristic findings like xanthomas in tendons]. We would like to present a case operated in the same session with a diagnosis of FH and with carotid artery stenosis and coronary artery disease

Method: Our patient was a 23 year-old male, followed by endocrinologist for seven years due to FH. His brother was diagnosed with FH. Patient received lipid apheresis every two months. Coronary angiography and digital subtraction angiography were performed to the patient who applied to the hospital with flushing, palpitation and sweating. Angiography demonstrated 80% stenosis on proximal LAD, 90% on middle LAD, 50% on D1, 98% on D2, 100% on middle Cx, and 90% stenosis on RCA. In digital subtraction angiography, irregularities due to atherosclerosis and findings of ulceration were clearly visible in both common carotid artery and in cervical segments of internal carotid artery respectively. Stenosis in middle segment of left common carotid artery was 90%. There was also a plaque which stenosed the flow on right renal artery by 60%. Patient was scheduled for left carotid endarterectomy and CABG. Creatinine and GFR was normal, no further intervention was required and routine follow ups were scheduled

Results: Endarterectomy was performed on CCA and proximal internal carotid artery. In the same session, following sternotomy, D1 - saphenous vein, RCA- saphenous vein and LAD - LIMA anastomosis were performed during CPB. Cx was too thin for bypass grafting. Plaques were diffuse in coronary arteries. 2 proximal anastomoses was performed to ascending aorta. Ascending aorta contained soft plaque

Conclusion: In familial hypercholesterolemia patients, coronary plaques are seen very often and might also be accompanied by carotid artery lesions. In general, CAD manifests itself in early phases of disease; but in patients with FH, the involvement of carotid arteries may easily be overlooked and this involvement might manifest itself in later phases of disease. Carotid Doppler USG is suggested for this patient group. Peripheral artery disease is also common in patients with CAD, and might not be symptomatic. These patients should also be checked for peripheral artery disease in a routine manner.

ID: **557**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Carotid Artery Disease**

Presentation Type: **Oral**

THE IMPORTANCE OF EVERSION PATCHPLASTY WITH LOCAL ANESTHESIA IN FAST TRACK DISCHARGE AFTER CAROTID ENDARTERECTOMY

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OBJECTIVE

The discharge time after carotid endarterectomy is generally known as 2 days. We wanted to show in our study that early discharge was possible with excellent surgical results.

METHODS

Patients with carotid endarterectomy who underwent eversion patch plasty in our clinic during the last year who were included in the study. 7 patients (2 female) underwent eversion patch plasty. The mean age of the male was 69.3 and the mean age of the female was 72.1. Hypertension was present in 43% of the patients. 29% had diabetes mellitus. One patient had had coronary bypass grafting. Two patients had coronary stents.

Two patients were operated within 15 days of the previous cerebrovascular event, and one patient was operated 3 months after the serobrovascular event. Four patients were diagnosed during preparations for preoperative aorta coronary bypass, while one patient was diagnosed for dizziness. One patient had severe lesion on the opposite side.

NIRS monitoring was performed in each patient. All patients who were discharged on day 1 were operated with lidocaine and 2% arithmal local anesthesia only. Some of the other patients underwent cervical block. Patients underwent routine carotid endarterectomy with eversion patch plasty. Radial artery was used as patch in one patient. During the operation, the blood pressure of the patients was kept above 160 mm-hg. Carotid block was performed because of bradycardia in one patient.

RESULTS

In our study, we found that bleeding and blood pressure irregularity were not observed within 4 hours postoperatively in patients operated with local anesthesia and in all cases where we performed eversion patch plasty. The duration of discharge was also significantly lower. The discharge time of the patients was 0 and 1 day, except for proep bypass patients. The mean duration of discharge from these patients was 0.66 days. Patients who were discharged early were reevaluated on the third postoperative day. No problems were observed.

CONCLUSIONS

Fast track discharge is possible in patients undergoing carotid endarterectomy with eversion patch plasty by local anesthesia.

ID: **542**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Carotid Artery Disease**

Presentation Type: **Oral**

PRIMARY CLOSURE OR PATCH GRAFTING FOR THE TREATMENT OF CAROTID STENOSIS AFTER CAROTID ARTERY ENDARTERECTOMY

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OBJECTIVE

The safety and durability of carotid endarterectomy (CEA) require attention to certain technical details that may evolve over time. The objective of this study was to compare the patch grafting and primary closure techniques for the treatment of carotid stenosis after carotid artery endarterectomy.

METHODS

A total of 64 consecutive patients underwent 70 CEAs (six bilateral) for severe carotid artery stenosis. 38 of 70 CEAs were performed with patch graft, 32 of 70 CEAs were performed by primary closure. There were 53 males and 11 females. All patients underwent Color Doppler ultrasonography and pulse Doppler ultrasonography, computed tomography angiography/ conventional angiography and a detailed cardiological evaluation. The procedure was done under general anesthesia or regional anesthesia and closure was done using 6-0 prolene. Patients were followed up for 1 years to 7 years. Clinical and radiological follow-up was done.

RESULTS

Although graft patching alone seemed to have less risk for perioperative or postoperative morbidity than primary closure, these differences did not attain statistical significance. There were also no significant differences in the perioperative stroke and ICA thrombosis rates. We adjusted for the various lengths (one year to seven years) of follow-up in the study groups. In this study redo CEA patients were excluded. 6 patients required intraoperative shunting. In the patients there was no mortality or stroke perioperatively during hospital stay. With CT angiographic imagining we obtained more non critical carotid artery restenosis (<50) in primary closure group than patch grafting group on the follow-up.

CONCLUSIONS

Carotid endarterectomy with patch graft exerted a high protective effect from restenosis up to 1 and 7 years in our institution. The number of carotid artery stenting is increasing all over the world but we speculated that the established surgical procedure of patched CEA prevented restenosis.

ID: **822**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Oral**

CAROTID ENDARTERECTOMY UNDER CAROTID SHEATH BLOCK COMBINED WITH SUPERFICIAL CERVICAL PLEXUS BLOCK BY ULTRASOUND GUIDANCE

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Introduction: Carotid endarterectomy (CEA) can be whether performed under general anesthesia and regional anesthesia; but "awake surgery" is the gold standard to evaluate cerebral functions during the period of cross clamping for CEA. Hereby, we report the efficacy and the safety of carotid sheath block combined with superficial cervical plexus block (S-CPB) technique under ultrasound (US) guidance for CEA.

Materials and Methods: Demographic data, surgical side, stenosis ratio, drugs used for blocks and additional agents used perioperatively in anesthesia management, carotid clamping time, total surgery timeof patients diagnosed with carotid stenosis who were underwent CEA under carotid sheath block (CSB) combined with S-CPB by ultrasound guidance by the same anesthetist and the surgeon were recorded prospectively and evaluated retrospectively.
Results: Ten patients (8 male, 2 female), age 69.70±11.52 year (Minimum: 48, Maximum: 85 year) underwent carotid endarterectomy under CSB combined with S-CPB by ultrasound guidance.Two patients required nitroglycerin infusion and one patient required a shunt insertion perioperatively. None of the patients necessitated any additional perioperative local anesthetic supplementation by the surgeon. All surgical procedures were completed without any surgical complication. One out of ten patients was discharged on the 1st postoperative day; and others were discharged on the second postoperative day uneventfully.
Conclusion: Even we successfully showed the use of combined US guided carotid sheath block with superficial cervical plexus block for CEA in our case series, further studies are necessary to evaluate the effectiveness of carotid sheath block for CEA with or without combinations of cervical plexus block and to determine the optimum dose of local anesthetic for successful carotid sheath block

ID: **823**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

WHICH TERM SHOULD BE USED FOR LOCAL INFILTRATION ANESTHESIA FOR CAROTID ENDARTERECTOMY? A NARRATIVE REVIEW

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[2]*Which term should be used for local infiltration anesthesia for carotid endarterectomy? A narrative review, Izmir, Turkey*

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Background: While similar techniques have been used for the same aim of applying local anesthetic (LA) around the carotid artery for carotid endarterectomy (CEA) for years there is still a lack of a "standard terminology" in the literature to identify this approach. The terms used for infiltration of LA around the carotid artery for CEA are discussed in this review with the techniques and the US images.
Methods: A search of relevant literature querying PubMed and Web of Science was performed using the following keywords: carotid endarterectomy, cervical plexus block, carotid sheath block, spread of local anesthetic, ultrasound, locoregional anaesthesia, paracarotid infiltration, carotid surgery, regional anesthesia.

Results: There were eight primary studies in the area of "infiltration of local anesthetic around the carotid artery for CEA"identified in our search. Even all of these studies used similar anesthetic approach each named it differently.

Discussion: Applying a regional anesthesia in the region of the carotid artery bifurcation and around the internal carotid artery is a serious challenge due to its complex innervation and anatomical proximity to other important and delicate structures of the neck. Cranial nerve supply from vagal nerve branches and the superior root of the ansacervicalis cannot be anesthetized by the classical Cervical Plexus Blocks (CPB), regardless of the type of CPB method. So,local infiltration of the carotid sheath during CEA is often needed. Although ultrasound guidance in daily clinical practice has been supplied many advantages applying regional blocks, insufficient anesthesia in the neurovascular sheath region could not been guaranteed by using US guidance for CEA. And, all authors who were interested in application of LA around carotid artery were used different names to call the technique.

Oral Presentation Session

Cardiovascular Prevention: An International Perspective

Date: 30.10.2020 Time: 17:30 - 18:45 Hall: 4

ID: **241**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

EPICARDIAL FAT THICKNESS IS ASSOCIATED WITH ABDOMINAL AORTIC INTIMA MEDIA THICKNESS

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Introduction: Epicardial fat thickness (EFT), as any visceral adipose tissue elsewhere in the body, is regarded as a risk factor for coronary artery disease. Intima-media thickness (IMT) reflects subclinical atherosclerosis and is associated with well-known risk factors for cardiovascular disease. In this study, we aimed to investigate the relationship between EFT and abdominal aortic IMT.

Method: We included 129 patients in this study. The patients were divided into two groups according to the median abdominal aortic IMT values (IMT normal group<1 mm and increased IMT group≥1 mm). EFT was obtained using transthoracic echocardiography on the right ventricular free wall during systole and diastole. Abdominal aortic IMT was evaluated by using transabdominal ultrasonography.

Results: EFT was higher increased aIMT group than normal aIMT group (increased aIMT group; 5.58 ± 1.64 mm vs normal aIMT group; 4.27 ± 1.67, p<0.001). Age (increased aIMT group; 54.7 ± 10.7 vs normal aIMT group; 46.8 ± 10.0, p<0.001), diabetes mellitus (increased aIMT group; 27 vs normal aIMT group; 13, p =0.032) and body mass index (increased aIMT group; 33.00 ± 5.97 vs normal aIMT group; 31.34 ± 4.80, p=0.009) were higher increased aIMT group than normal aIMT group (Table 1). Multivariate regression analysis revealed EFT [95% confidence interval (CI) 1.092 – 1.885, p=0.009], and age (95% CI: 1.034 – 1.125, p<0.001) as independent determinants of increased aIMT (Figure 1).

Conclusion: Epicardial fat thickness is associated with abdominal aortic IMT. Increased EFT may be a sign for subclinical atherosclerosis.

Key Words: Epicardial fat thickness, abdominal aortic intima media thickness, atherosclerosis.

Table 1: Clinical, demographic and biochemical characteristics of normal and increased aIMT groups.

Variables	Normal aIMT n: 60	Increased aIMT n:69	p
Age, year	46.8 ± 10.0	54.7 ± 10.7	<0.001
Gender, female,n	38	22	0.905
Diabetes mellitus, n	13	27	0.032
Hypertenson, n	23	38	0.058
Family history of CAD, n	1	4	0.219

Current Smoking, n	11	19	0.217
Dyslipidemia, n	26	28	0.752
BMI (kg/m2)	31.34 ± 4.80	33.00 ± 5.97	0.009
EFT (mm)	4.27 ± 1.67	5.58 ± 1.64	<0.001
Serum glucose (mg/dL)	107.35 ± 17.92 107 (83- 180)	130.12 ± 54.98 130 (80 – 330)	0.143
Serum urea (mg/dL)	28.49 ± 10.25	30.84 ± 10.95	0.301
Serum creatinine (mg/dl)	0.78 ± 0.18 0.78 (0.50-1.24)	0.70 ± 0.18 0.79 (0.50-1.20)	0.714
LDL-c (mg/dl)	154.54 ± 39.04	148.80 ± 36.31	0.480
Triglyceride (mg/dl)	164.38 ± 74.85	181.76 ± 95.52	0.360
WBC (x109/L)	7.08 ± 1.53	7.05 ± 1.76	0.908
Hemoglobin (g/dL)	13.61 ± 1.78	13.67 ± 1.71	0.874
Platelet (x109/L)	262. 95 ± 53.59	240.56 ± 54.53	0.051
MPV (fl)	8.42 ± 0.70	8.62 ± 0.83	0.215

Figure 1: Multivariate regression analysis for increased aIMT.

Variables	Odds ratios (% 95 CI)	p
Age	1.079 (1.034 – 1.125)	< 0.001
EFT	1.435 (1.092 – 1.885)	0.009
BMI	1.052 (0.974 – 1.137)	0.200
DM	1.788 (0.708 – 4.515)	0.219

Abbreviations: aIMT, aortic intima media thickness; CAD, coronary artery disease; BMI, body mass index; LDL-c, low density lipoprotein cholesterol; MPV, mean platelet volume; WBC, white blood cell; EFT, epicardial fat thickness; DM, diabetes mellitus

ID: **202**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

IMPACT OF CIGARETTE SMOKING ON PULMONARY ARTERY STIFFNESS IN YOUNG MEN

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OBJECTIVE: Cigarette smoking alters many systemic functions resulting in cardiovascular, pulmonary or metabolic diseases. Pulmonary vascular remodeling is one of the complications of smoking induced chronic lung diseases and it has even been reported that pulmonary endothelial dysfunction may occur in otherwise healthy young smokers. Pulmonary arterial stiffness is a relatively new and noninvasive echocardiographic parameter reflecting the state of pulmonary vascular bed and right ventricular function. It may act as an early indicator of pulmonary vascular remodeling or subclinical right ventricular dysfunction. Herein, we aimed to investigate whether active smoking has any effect on pulmonary arterial stiffness in healthy young men.

METHODS: 45 healthy men who were active and current smokers between the ages of 18 and 40 years were involved as the case group and 45 healthy men who were nonsmokers were selected as the control group. Controls were matched to cases on age, sex and body mass index. Exclusion criteria included the presence of pulmonary hypertension, any systemic, pulmonary or cardiovascular disease, previous cardiothoracic operation and chronic drug use. All participants underwent standard echocardiographic examination. Pulmonary arterial stiffness was assessed using the pulsed wave Doppler trace placed 1 cm distal to the pulmonary valve on parasternal short axis view and was calculated by the division of maximal frequency shift of pulmonary systolic flow to pulmonary acceleration time.

RESULTS: Mean age was 31,29 ± 4,63 in the case group and 30,80 ± 3,78 in the control group (p=0.585). Demographic, clinical and laboratory characteristics of both groups were similar (p>0.05). There were no significant differences in means of left or right atrial and ventricular dimensions, left ventricular systolic and diastolic functions, mean pulmonary artery pressures, inferior vena cava widths and tricuspid annular plane systolic excursion values between two groups (p>0.05). Pulmonary arterial stiffness and right ventricular myocardial performance index were found to be significantly higher in the case group than the control group (23.82±3.06 vs.21.18±2.76, p<0.001 and 0.33±0.03 vs 0.31±0.02, p<0.05 respectively). Pulmonary arterial stiffness was positively correlated with right ventricular myocardial performance index (p<0.001). In linear regression analysis, pulmonary arterial stiffness was independently associated with right ventricular myocardial performance index. (β=0.605, p<0.001)

CONCLUSIONS: Pulmonary arterial stiffness and right ventricular myocardial performance index worsened in young men who are active smokers. Without development of overt pulmonary hypertension, cigarette smoking may impair the elastic properties of pulmonary artery resulting in subclinical right ventricular dysfunction in healthy young men.

ID: **363**

Topic: **Cardiology » Coronary Artery Disease - CABG Surgery**

Presentation Type: **Oral**

RELATION BETWEEN THE TRIGLYCERIDE LEVELS AND THE SEVERITY OF CORONARY ARTERY DISEASE

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OBJECTIVE: Hypertriglyceridemia is one of the well-known risk factors for coronary artery disease. We aimed to investigate the relationship between the fasting triglyceride levels and the severity of coronary artery disease, which was objectively determined by the SYNTHAX Score.

METHODS: We retrospectively included 180 patients with coronary artery disease who underwent coronary angiogram. Coronary angiogram images were evaluated by two experienced invasive cardiologists to calculate the SYNTHAX score. Fasting venous blood samples were obtained from all study patients to analyze for triglyceride, total cholesterol and HDL cholesterol.

RESULTS: There was a weak but statistically significant direct relationship between the plasma triglyceride levels and the SYNTHAX Score in patients with coronary artery disease ($r = 0.33$, $p < 0.05$). On the other hand, there was a very strong significant positive correlation between the plasma levels of total cholesterol and the SYNTHAX score ($r = 0.96$, $p < 0.05$). Moreover, we observed a strong and statistically significant inverse relationship between the SYNTHAX score and plasma HDL cholesterol levels ($r = - 0.70$, $p < 0.05$).

CONCLUSIONS: As expected in our study, we found a strong positive correlation between the Syntax Score and total cholesterol and a strong negative correlation with HDL cholesterol. However, although high triglyceride levels are a known risk factor for coronary artery disease, we found a weak correlation between triglyceride plasma levels and severity and extent of coronary artery disease assessed by the SYNTHAX Score in our study.

ID: **72**

Topic: **Cardiovascular Surgery » Risk Management in Cardiovascular Diseases**

Presentation Type: **Oral**

COMPARISON BETWEEN THE CARDIOVASCULAR RISK ASSESSMENT TOOLS AMONG SAUDI PATIENTS

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BACKGROUND: Many cardiovascular risk calculators are available online to measure the probability of developing cardiovascular disease (CVD) without defining which calculator is appropriate for a particular population. In the current study, four risk assessment tools were investigated with Saudi Arabian patients with CVD to identify the tool with the best predictability. The chosen tools were the Framingham Risk Score, Systematic Coronary Risk Evaluation (SCORE), American College of Cardiology/American Heart Association (ACC/AHA) Atherosclerotic Cardiovascular Disease Risk Estimator, and QRISK.

METHODS: Saudi patients, older than 40 years, with acute coronary syndrome were recruited. Data related to age, gender, ethnicity, height, weight, systolic blood pressure, total cholesterol, HDL, smoking status, diabetes mellitus, rheumatoid arthritis, chronic kidney disease, atrial fibrillation, heart attack in a first degree relative, and use of anti-hypertensive treatment were recorded.

RESULTS: Of 129 patients, the ACC/AHA had a higher predictability with low risk (26.3%) and high risk (66.7%) groups. The QRISK was highly applicable (95.3%) while the SCORE was not considered applicable (22.5%).

CONCLUSION: The QRISK is easy to implement and applicable in a population-based study but the ACC/AHA is superior in predicting individuals with a high risk of CVD.

ID: **289**

Topic: **Cardiology » Preventive cardiology**

Presentation Type: **Oral**

ASSOCIATION BETWEEN PHYSICAL ACTIVITY AND BODY MASS INDEX IN ADOLESCENTS AND YOUNG ADULTS IN GERMANY: RESULTS OF THE BEMIND STUDY

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Background
Lower physical activity (PA) and higher body mass index (BMI) are well established modifiable cardiovascular risk factors. This contribution aims to describe the cross-sectional association of both lifestyle risk factors in a community sample of adolescents and young adults in Germany with objectively measured data.

Methods
Baseline data of 1072 participants (age 14-21 years) from an epidemiologic cohort study ("BeMIND" - Behavior and Mind Health Study) in Dresden, Germany is used. The study aims to examine mental health and illness conditions as well as psychological, developmental, cognitive-affective and biological risk factors. Objective measures of PA were derived from a heart rate monitor (Firstbeat Bodyguard 2) attached to the skin with two chest electrodes and worn during a four day ecological momentary assessment period. Duration of moderate to vigorous PA was calculated in minutes (MVPA minutes) in participants with at least 16 hours of measurement per day. MVPA minutes were defined with > 3 MET as cut-off. Bodyweight and height were measured in a standardized way in the laboratory. Statistical analyses were performed with Stata 15.0. Preprocessing of the HRV data was performed with Firstbeat analysis software. Regression analyses were used to reveal associations.

Results
Mean BMI was 22.1 kg/m² (sd: 3.6 kg/m²) and increased with age (0.4 kg/m² per year, CI95%: 0.3, 0.5). Mean MVPA minutes per day were 150.9 minutes (sd: 91.6) and decreased with age (-10.2 minutes per day (CI95%: -12.5, -7.9) from 196 min/day (in 14 year olds) to 122 min/day (in 21 year olds)) and BMI categories (203 min/day (underweight) to 30 min/day (obese class III)). MVPA minutes per day and BMI categories were negatively associated (-39.3, CI95%: -48.7, -29.9; adjusted for age and sex). Decrease of MVPA minutes per day by higher BMI categories was slightly stronger in females (-41.2 minutes/day) compared to males (-36.6 minutes/day).

Conclusions
The inverse associations between objectively measured PA and BMI observed in this general population sample of adolescents and young adults stresses the importance of interventions to support exercise and physical activity to optimize weight and thus contribute to the prevention of cardiovascular disease.

ID: **553**

Topic: **Cardiology » Treatment of Hyperlipidemia**

Presentation Type: **Oral**

DO HIGH DOSES OF PROTEIN SUPPLEMENTS AFFECT SERUM LIPID PROFILES?

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Background: Protein supplements (PS) are widely used among athletes going to gym. But there is no consensus on their effects on blood biochemical, hematological, inflammatory parameters and lipid profile. This study aims to put more information to the literature about this issue.

Methods: Sixty-nine subjects going to the gym for at least three months without any kind of acute or chronic illness were included in the study. Their height, weight, waist circumference and body mass indexes were recorded. Daily energy intake and its distribution for fat, carbohydrate and protein were assessed by a dietician in 65 subjects. The subjects were divided into two groups: the first group consisted of subjects who used PS for at least three preceding months, the second group included subjects who never used PS. The subjects in the first group were using whey protein as PS. Blood test results were compared between the two groups.

Results: The mean age of the subjects included in the study was 31.4±7.3 years. Among 69 subjects, 30(43%) were using PS, so were included in group 1, and 39 (57%) never used PS, therefore they consisted group 2. Most of the clinical characteristics were similar between the two groups, but subjects in group 1 had higher protein consumption per weight. The blood biochemical, hematological, inflammatory, glucose metabolism markers and lipid profiles were not different between the two groups. Serum creatinine and sodium values were associated with daily PS dosage. The subjects who used > 55 g PS/day had significantly higher serum creatinine values than subjects who never used PS (1.16 ± 0.19 mg/dl vs. 0.98 ± 0.14 mg/dl, p=0.046). Similarly, the subjects who used ≥ 30 g PS/day had significantly higher serum sodium levels than subjects who never used PS (139.35 ± 1.65 mmol/l vs. 138.08 ± 2.86, mmol/l p=0.027). Moreover, the subjects using PS for more than 10 months had significantly higher serum sodium levels when compared with subjects who did not use PS (139.29 ±1.59 mEq/l vs. 138.08±2.86 mEq/l, p=0.04).

Conclusions: Blood hematological, inflammatory, glucose metabolism markers and lipid profiles are not different in subjects using PS and in subjects who never used PS. Higher doses of PS usage is associated with higher serum creatinine and sodium levels. Longer duration of PS usage is also associated with higher serum sodium levels.

ID: **545**

Topic: **Cardiology » Chronic stable angına pectoris**

Presentation Type: **Oral**

THE IMPACT OF ISCHEMIC HEART DISEASE TO WORSE OUTCOME IN ISCHEMIC STROKE PATIENTS

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Background: Ischemic Heart Disease (IHD) and ischemic stroke (IS) are the leading cause of morbidity and mortality worldwide. IS and IHD have similar pathophysiological mechanisms and risk factors. IHD patients are associated with increased morbidity and mortality, but the studies describing outcomes of IHD in IS patients are lack. This study aims to compare the clinical outcome of IS patients with IHD and IHD.

Methods: This retrospective cohort study of 200 patients was first incident acute IS recorded in the Bethesda Hospital Yogyakarta Stroke Registry (2012-2017). These patients were divided into IS patients with IHD and without IHD. The primary outcomes of the study were in-hospital mortality, disability measured by the modified Rankin Scale (mRS), and length of stay. The data were analyzed bivariate followed by the Chi-square test and Mann-Whitney.

Results: Data of 200 patients with 100 IS patients with IHD consist of fifty-eight males (58.0%) and eighty-six (86.0%) were more than 50 years old. The mortality of IS patients with IHD group is eighteen patients (18.0%), sixty patients (60%) have a poor functional outcome (mRS >2) and have a length of stay 7.50 (0-40) days. Bivariate analysis showed IS patients with IHD group is significantly associated with higher in-hospital mortality (RR:2.9, 95%CI:1.1–7.3, p<0.019), worse disability (RR:2.6, 95%CI:1.3 –5.1, p<0.005) and prolonged hospital stay (7.50 (0-40) vs 4 (0-14), p<0.001) than in IS patients without IHD group

Conclusion: IS patients with IHD are statistically significantly associated with higher in-hospital mortality, worse disability, prolonged hospitalization than in IS patients without IHD.

ID: **728**

Topic: **Cardiology » Chronic stable angına pectoris**

Presentation Type: **Oral**

THE RELATIONSHIP BETWEEN ENDOTHELIAL FUNCTIONS AND HDL / LDL RATIOS IN PATIENTS WITH CORONARY ARTERY DISEASE

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Objective: Endothelial dysfunction plays an important role in the initial stage of atherosclerosis, the growth of atherosclerotic plaque and the development of thrombogenic events. Low-density lipoprotein (LDL) cholesterol levels are associated with the risk of cardiovascular disease. It also inhibits endothelium-dependent vasodilation by disrupting the activity of nitric oxide (NO) synthase and causes endothelial dysfunction. It has been shown that high density lipoprotein (HDL) increases the production of NO and endothelial NO synthase that causes vascular dilatation directly or indirectly, and also supports endothelial cell migration and proliferation through different mechanisms. In our study, we aimed to investigate the relationship between HDL / LDL ratios and endothelial functions in patients with coronary artery disease documented by coronary angiography.

Methods: Fifty-seven patients with coronary artery disease documented by coronary angiography were included in the study. Endothelial functions were evaluated with the flow mediated vasodilation (FMD) test, which is the most commonly used non-invasive method for endothelial function assessment. In statistical analysis, the change in arterial diameter was examined by the Paired Sample T test. Ethics committee approval of our study was obtained from EGE University Faculty of Medicine Clinical Research Ethics Committee on 26.12.2017 with the decision number 17-12.1 / 22.

Results: The average age of 57 patients included in the study was 61.1 ± 10.1 years and 70% of these patients were male and 30% were female. The mean body mass index (BMI) was 27.8 ± 5.7 kg / m2 and 57.9% of the patients were NYHA class I. In the FMD test, the avarege radial artery percentage diameter change was found to be 12.61% (± 3.62). The average HDL / LDL ratio of the patients included in the study is 0.53 (± 0.26), and the median value is 0.42 (minimum 0.27 - maximum 1.50). There is a weak positive correlation between HDL / LDL ratios and FMD percentage change (r = +0.379, p = 0.04).

Conclusion: As HDL / LDL ratios increase in patients with coronary artery disease, the flow-mediated vasodilatation percentage change which is an indicator of endothelial functions also increases.

Key Words: Coronary artery disease; endothelial dysfunction; HDL cholesterol; LDL cholesterol

Table 1. Demographic characteristics, laboratory, clinical and imaging findings of the study population

Age, year	61.1±10.1	Creatinine, mg/dl	1.06 (± 0.84)
Male sex, n (%)	40 (70.1)	Total cholesterol, mg/dl	169.68 (± 41.03)
BMI (kg/m2)	27.8±5.7	HDL, mg/dl	44.88 (± 10.86)
Systolic BP, mmHg	143.0±19.7	LDL, mg/dl	96.86 (±35.90)
Heart rate, /min	76.4±13.6	HDL/LDL ratio	0.53 (±0.26)
NYHA class I, n (%)	33 (57.9)	Hemoglobin, g/dl	13.52 (±2.25)
NYHA class II, n (%)	24 (42.1)	TSH, mU / l	2.05 (±1.49)

Chest pain, n (%)	29 (50.9)	LVEF, %	53.5 (±9.3)
Dyspnea, n (%)	20 (35.1)	LVEDD, cm	4.87 (± 0.56)
Hypertension, n (%)	45 (78.9)	LA, cm	3.9 (±0.6)
Diabetus mellitus, n (%)	22 (38.6)	Ivsd, cm	1.1 (±0.2)

* BMI: basal metobolic index, BP: blood pressure, HDL: high density lipoprotein, LDL: low density lipoprotein, NYHA: New York Heart Association, TSH: thyroid stimulating hormone, LVEF: left ventricular ejection fraction, LA: left atrium, Ivsd: interventricular septum diastole

Figure 1. Relationship between HDL / LDL ratios and FMD percentage diameter change

ID: **751**

Topic: **Cardiology » Treatment of Hyperlipidemia**

Presentation Type: **Oral**

ASSESSMENT OF THE RELATIONSHIP BETWEEN ATHEROGENIC INDEX OF PLASMA AND NEUTROPHIL LYMPHOCYTE RATIO IN PATIENTS WITH ISCHEMIC STROKE

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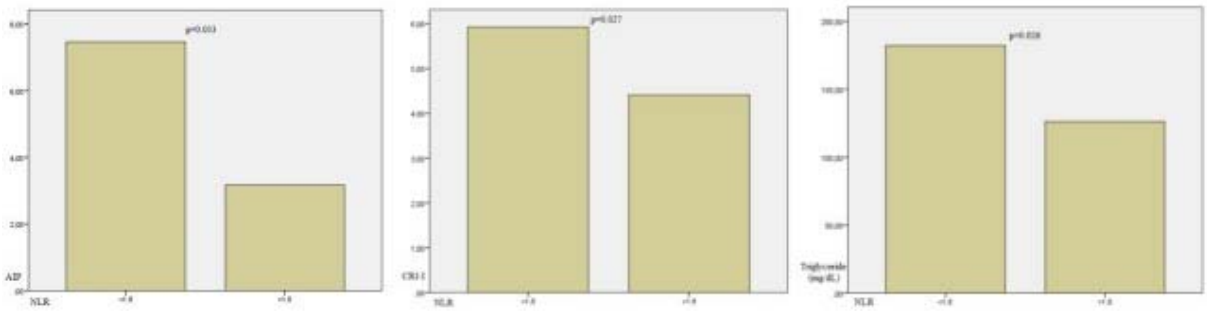
BACKGROUND: Determination of risk factors is essential to prevent stroke. Atherogenic indexes were identified to increase the predictive capacity of the lipid profile. Neutrophil-lymphocyte ratio(NLR) was reported as an inflammatory biomarker and a predictor of risk and prognosis in cardiovascular disease. The aim of the study was assessment of the relationship between atherogenic index of plasma and neutrophil lymphocyte ratio in patients with ischemic stroke.

METHODS: Fiftyseven patients who were treated with the diagnosis of stroke and 53 healthy individuals as control group were included in this study. . Neutrophil-lymphocyte ratio cut-off value was taken as 1.8, and 2 groups were created.
RESULTS: The age- and sex-matched controls were included in the study. Statistically significant difference was found in HT between the patient group and the control group(p=0.008). The lipid indexes including PAI, CRI-II, AC, NHC values were found to be statistically significantly higher in the patient group compared to the control group(p<0.05). Triglyceride(mg/dL), LDLc(mg/dL) and total cholesterol(mg/dL) were found to be statistically significantly higher in the patient group compared to the control group(p<0.05). Neutrophil count and NLR were found to be statistically significantly higher, and lymphocyte count was found to be statistically significantly lower in the patient group compared to the control group(p<0.05). The comparison of other parameters by NLR groups is shown in Figure 1. A statistically significant difference was found in AIP, CRI-I, triglyceride, neutrophil count and lymphocyte count by NLR groups(Figure 1)(p<0.05). A statistically significant correlation was observed between the NLR and CRI-I, CRI-II, AC(r and p values, respectively: -0.317, 0.016; -0.290, 0.028; -0.304, 0.022).

CONCLUSIONS: The lipid profiles (triglyceride, LDLc, total cholesterol), lipid indexes(AIP, CRI-II, AC, NHC) and NLR value were found higher in hospitalized patients with ischemic stroke than the control group. AIP and NLR, which are the two cheap and easy-to-use parameters to evaluate lipid-related inflammation, are seemed to be higher in patients with ischemic stroke. AIP, CRI-I and triglyceride were found lower in the high NLR group(>1.8), and they were found higher in the low NLR group. The reason is that the number of lymphocytes with antiatherosclerotic effect is increased as defense mechanism of the body against the high risk of atherosclerosis, and hence NLR is reduced.



ID: **764**

Topic: **Cardiology » Preventive cardiology**

Presentation Type: **Oral**

COMPARATIVE PERFORMANCE OF CHA2DS2-VASC AND ATRIA RISK SCORES FOR PREDICTING MORTALITY IN PATIENTS WITH COVID-19

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Objectives:The AnTicoagulation and Risk factors In Atrial fibrillation (ATRIA) and CHA2DS2VASc risk scores used to detect the thromboembolic and hemorrhagic risk in atrial fibrillation patients has been shown recently to predict poor clinical outcomes varies clinical settings, regardless of having atrial fibrillation (AF) .We aimed to examine the potential utility of admission CHA2DS2VASc and ATRIA scores for predicting in-hospital mortality in patients with COVID-19.

Methods:In this retrospective study hospitalized 134 COVID-19 patients who diagnosed with a positive PCR test, between 28 March 2020 and 25 Apr 2020 were included.Patients were divided into two groups who were died and survivors, both groups were compared according to clinical, laboratory, and demographic features, including the CHA2DS2VASc and ATRIA risk score. Predictors of mortality were determined by logistic regression analysis.

Results:ATRIA and CHA2DS2VASc risk scores were predicting mortality in COVID-19 patients .Logistic regression analysis showed that ATRIA risk score, atrial fibrillation and chronic obstructive pulmonary disease were an independent predictor of mortality. For an ATRIA score cut-off value of 3, the sensitivity was 77.78%, specificity 57.94%, positive predictive value 31.80, and negative predictive value 91.20. For a CHA2DS2VASc score cut-off value of 4, the sensitivity was 44.44%, specificity 83.18%, positive predictive value 40, and negative predictive value 85.60.
Conclusions :CHA2DS2-VASc and ATRIA scores can be used as a novel, simple tool for predicting mortality in COVID-19 patients

Keywords: CHA2DS2-VASc, mortality, ATRIA, COVID-19

ID: **179**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Oral**

THE SAFETY AND THE EFFICACY OF PHARMACO-MECHANICAL THROMBOLYSIS IN LOWER EXTREMITY DEEP VENOUS THROMBOSIS

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Objective: To investigate the impact of accelerated pharmaco-mechanical thrombosis (PMT) with low-dose second-generation urokinase for the management of cases with lower extremity deep venous thrombosis (DVT), and to compare its efficacy in subjects with acute and subacute DVT.

Methods: Thirty-five patients with acute (< 15 days) or subacute (15-30 days) DVT who underwent PMT in a tertiary center were enrolled in this single-arm prospective study. Following the placement of a temporary vena cava filter, urokinase (200,000 IU) was administered into the occlusion through a multi-hole catheter for 15 to 20 minutes duration. Control venography was performed to assess venous flow and the rate of acute recanalization. Percutaneous balloon dilatation and stent placement were carried out in case of a residual iliac vein stenosis of > 50%. Any residue thrombi were suctioned with an aspiration catheter. The percentage of vessel patency and PTS at the 3rd month after PMT were the primary outcome measures of the present study.

Results: Complete recanalization was noted in 23 (66%), while 2 (6%) patients had poor recanalization. The rate of minor complications was 14%. None of the subjects experienced major complications, such as intracranial hemorrhage or pulmonary embolism. No mortality was recorded during the three months of follow-up. Control duplex ultrasonography at the 3rd month revealed that the target vein was patent in all of the subjects. None of the subjects experienced PTS during follow-up. In addition, the percentage of acute complete recanalization was significantly higher in subjects with acute DVT compared to those with subacute DVT (95% vs. 27%, $p < 0.001$).

Conclusion: PMT with an accelerated regimen of low-dose urokinase provides excellent efficacy in the resolution of thrombus and prevents the development of PTS in the mid-term, when used for the management of lower extremity DVT.

ID: **621**

Topic: **Cardiology » Interventions for peripheral arterial diseases**

Presentation Type: **Oral**

RETROGRAD APPROACH VERSUS ANTEGRAD APPROACH FOR TREATMENT OF FEMOROPOPLITEAL DISEASES USING DCB: OUTCOME AT SHORT AND MILD TERM FOLLOW UP

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Abstract:

Pre-procedural CT angiography (CTA) assists in evaluating vascular morphology, disease distribution and treatment planning in patients with lower extremity peripheral artery disease (PAD). The aim of the study was to determine the target lesion technical success (retrograde or antegrade) of endovascular revascularization of occlusions in the superficial femoral-popliteal (SFA-pop) region.

MATERIAL AND METHOD:

We studied 158 consecutive EVTs performed at multicenter centers between 2017 and 2019. Radiologists reviewed pre-operative CTAs of patients with occlusions in the SFA-pop region. included and divided into two groups; “with popliteal approach” (WPA) and “without popliteal approach” (WOPA). : with popliteal approach” (WPA)118 patients and “without popliteal approach” (WOPA) 40 patients.

Based upon clinical data 89 patients had severe claudication 78% - Rutherford class 3);89 patients suffered from ischemic rest pain 61% - Rutherford class 4); and five presented minor tissue loss (10% - Rutherford class 5). 97 % of patients showed femoro-popliteal lesion TASC-II B, and 45 % presented lesions pertaining to TASC-II C.

RESULT:

CTO length > 10mm (28.68% vs.6.89 %,), the primary success rate was better in the WPA group (% 31.vs.68.89 %, respectively;);.The procedure was performed after CTA images and was successful in 118patients (%) under antegrade approach and 40patients (%) under retrograde approach. however, both total complication rate and major complication rate were not significantly different. The primary patency rate at 12 months was 88.2% and secondary patency 100%. Immediate technical success was 94.85% without perioperative complications. Primary patency rate was 84.44% at twelve months. 4patients underwent major lower limb amputation 2 patients died during follow-up and 4 patients were lost at follow-up.

CONCLUSION:

Based in our experience the antegrade approach is successful for SFA lesions not total occlusion on the other hand the popliteal approach improved the primary success rate of EVT for SFA CTO.

Keyword: Superior femoral artery, endovascular treatment, peripheral arterial disease

ID: **399**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Oral**

TWO-YEAR FOLLOW-UP AFTER ENDOVASCULAR THERAPY OF SUPERFICIAL FEMORAL ARTERIES WITH RETROGRADE POPLITEAL APPROACH: SINGLE-CENTER EXPERIENCE

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Objective: Popliteal artery puncture, which makes possible the use of lower profile sheaths and devices, has gained popularity as an alternative to the antegrade approach due to the reduction in vascular complications at the access site. The present study aimed to analyze the safety of the procedure and long-term patency of the superficial femoral artery (SFA) in subjects undergoing recanalization with the popliteal retrograde approach.

Methods: Forty-three subjects who underwent endovascular therapy (EVT) of the SFA with retrograde popliteal approach were enrolled in this retrospective study. The decision for retrograde approach was made according to pre-intervention CT angiography results (severe calcification and/or relatively long CTO segment) in 20 of the subjects. The remaining 23 subjects underwent SFA recanalization with the retrograde approach due to failed antegrade recanalization attempt. All subjects underwent color duplex ultrasound at the first, sixth, 12th, and 24th months to determine patency. The rate of the procedural complications, including hematoma, bleeding and distal embolism, were recorded for all subjects.

Results: Technical success was achieved in all cases. Access site complications, including hematoma and bleeding, were observed in 2 subjects (4.66%). Transfusion or surgical treatments were not required in any cases with access site complications. Acute success rate was defined as the recovery of good blood flow evaluated by angiography after EVT was 100%. Distal embolization, which did not cause any limitations in distal flow, occurred in 1 subject (2.33%). Ankle-brachial index (ABI) calculated at 1 month post-intervention was significantly higher than pre-intervention ABI [0.9 (0.59 - 1.3) vs. 0.7 (0.4 - 1.1), $p < 0.001$]. Patency rates, as determined by ultrasonographic assessment, at post-interventional first, sixth, 12th, and 24th months were 100.00%, 97.67%, 97.67%, and 95.35%, respectively.

Conclusion: Our findings demonstrate that retrograde popliteal artery puncture can be used as a safe and effective technique for recanalization of SFA stenosis and occlusions. The retrograde popliteal approach provides excellent long-term primary patency rates.
Keywords: Endovascular treatment, retrograde popliteal access, superficial femoral artery, long term patency

ID: **276**

Topic: **Cardiovascular Surgery » Heart Valve Repair**

Presentation Type: **Oral**

SURGICAL OUTCOMES AND MORTALITY FACTORS OF ACTIVE INFECTIVE ENDOCARDITIS

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Background: We analysed the early and long-term outcomes of patients who had active infective endocarditis (AIE).

Patients and methods: We operated totally 113 patients (89 male) upon between 2006 and 2019. Valve repair or replacement were performed. The primary endpoint was postoperative survival at the early period. Secondary endpoints were postoperative recurrence and complication rate. Results: 14 patients died in the early after procedures (12.3%). The main reasons of mortality were intractable heart failure, low out put syndrome, and septic shock. The mean age of patients was 51,8 years. The mean follow-up was 57.8 months. Postoperative survival was 83.6 % at 30 days. 78.4 % at 1 year, 69.6 % at 3 years, and 63.3% at 5 years. Older age (p=0.01), higher logystic euroscore and NYHA Class (p=0.002), preoperative right heart failure (p=0.001), postoperative acute renal failure (p=0.022) were independent risk factors of mortality. Preoperative liver disease, diabetes, and urgent surgery were not mortality risk factors. Non-survivors had longer duration of CPB, and aortic cross-clamping times (p<0.001, p<0.002). Multivariate logistic regression analysis showed real impairment (OR 4.128, 95-CI: 1..074–19.227, p=0.0020) and longer CPB time (OR 1.011, 95-CI 1.001-1.042, p=0.0034) as independent predictors of 30-day mortality. Conclusion: Timely surgical treatment provides good early, midterm, and long-term results in patients with infective endocarditis. Valvular repair may be the choice in appropriate patients using biologyc materials in the procedure. Multivariate logistic regression analysis revealed acute renal failure, longer CPB and aortic cross clamp time were independent predictors of 30-day mortality.

Oral Presentation Session

Mastering in Coronary Surgery

Date: 30.10.2020 Time: 18:30 - 20:00 Hall: 5

ID: **34**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

CORONARY FLOW RESERVE ASSESSMENT VIA ECHOCARDIOGRAPHY IN PATIENTS WITH CORONARY BYPASS SURGERY UNDERGOING LONG ONLAY-PATCH ANASTOMOSIS WITHOUT ENDARTERECTOMY

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Abstract:

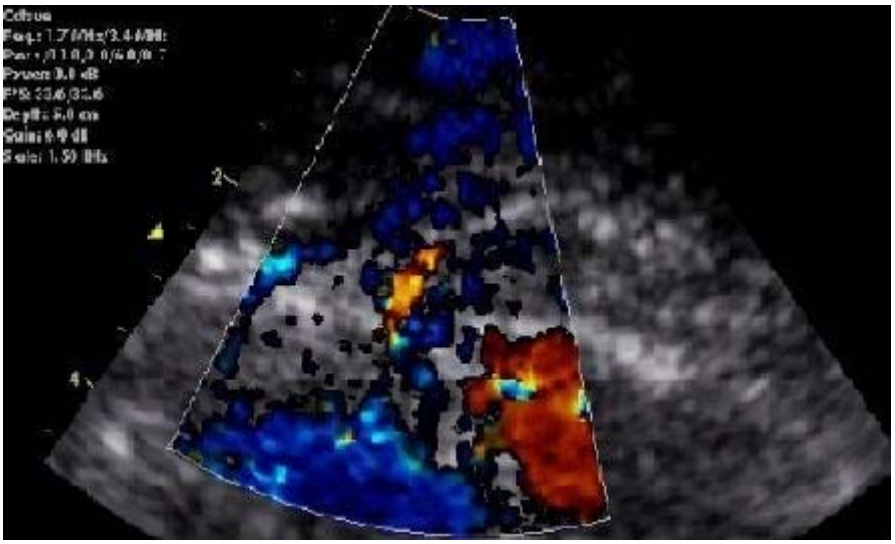
Objectives: In severe calcified and diffuse coronary lesions, long onlay-patch anastomosis without endarterectomy is another technique to promote augmented blood flow especially to septal perforator branches of left anterior descending artery (LAD). In this study we aimed to demonstrate the efficacy of the long segment onlay-patch anastomosis without endarterectomy via using coronary flow reserve (CFR) measured by doppler echocardiography.

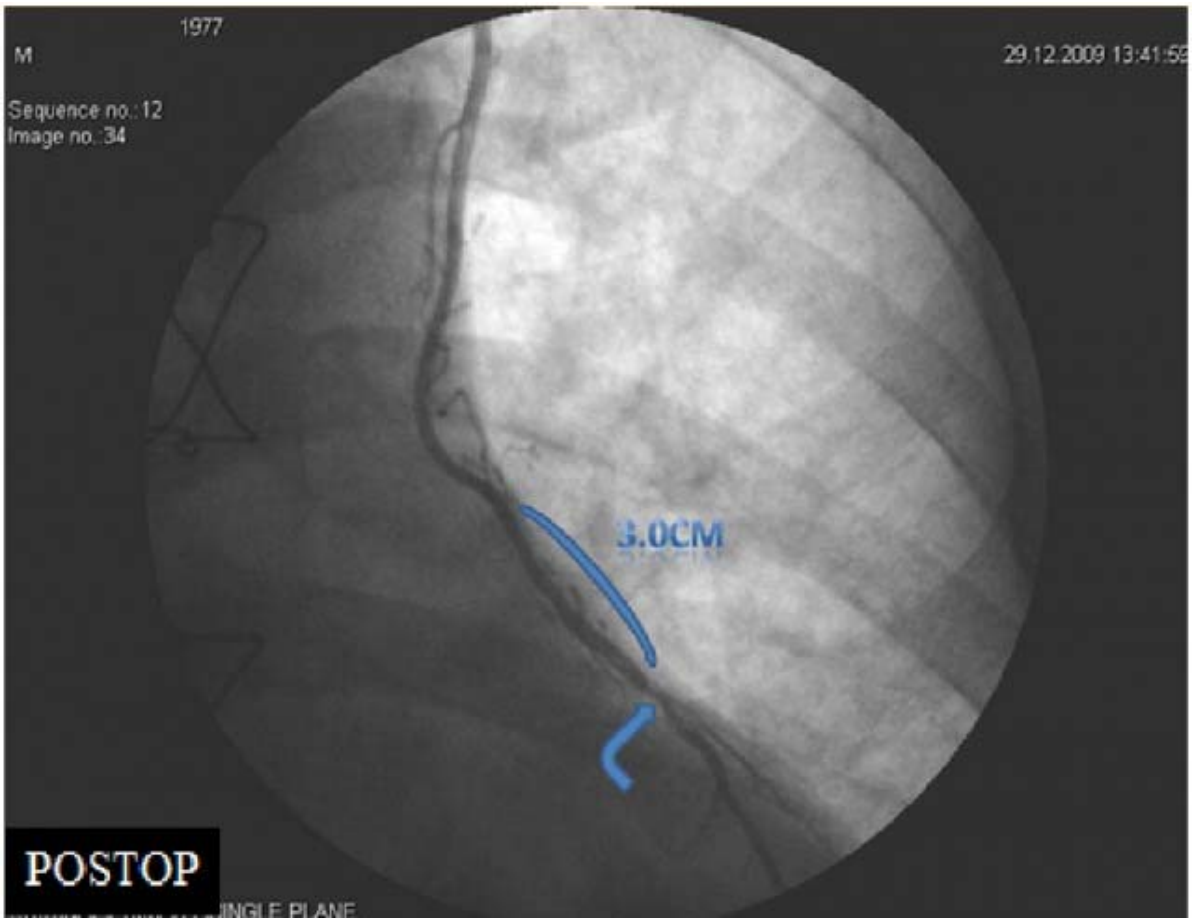
Methods: Fifty-six patients who underwent CABG onlay-patch anastomosis technique without endarterectomy were evaluated by transthoracic echocardiography for CFR which represents the rates of blood flow both during resting and maximal hyperemia provided by dipyridamole. LAD - LIMA along the long anastomosis line mid and distal flow patterns were examined, peak systolic and diastolic flow velocities and diastolic velocity time integral were registered.

Results: The mean onlay-patch length was 2.97 ± 0.72 cm. When correlation of changes in coronary flow reserve and other echocardiographic findings were evaluated, there was a statistically significant however, for all patients (normal values: CFR>2, n:49 and low values: CFR<2, n:6) inverse correlation between onlay-patch anastomosis length and CFR (2.97 ± 0.72 cm; 2.35 ± 0.56 m/sec; p value: 0,008, respectively). Coronary angiography was performed for 4 patients with CFR<2. Angiography showed post anastomosis segment 80% stenosis in one patient.

Conclusion: We explained the reliability of the onlay-patch anastomosis technique without endarterectomy and the usability of CFR measurement with transthoracic echocardiography in the postoperative follow-up of patients who underwent coronary bypass.

Key words: Long onlay-patch anastomosis, endarterectomy, coronary flow reserve, coronary bypass, multi-vessel coronary artery disease

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ID: **66**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

THE EFFECTS OF PREOPERATIVE AMINOPHYLLINE ON MYOCARDIUM AT THE BEATING HEART CORONARY BYPASS SURGERY

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Objective: Coronary artery bypass surgery on the beating heart and its advances have taken their place in modern surgery. We planned a prospective, randomised, controlled, clinical study to determine the effects of preoperative aminophylline usage on myocardial ischemia-reperfusion injury during the beating heart coronary artery bypass surgery.

Methods: We randomized 30 patients into two groups who were planned coronary artery bypass grafting electively. Daily dose of 200 mg aminophylline was applied to 15 patients at preoperative three consecutive days in the aminophylline group (AG). 15 patients in the control group (CG) had taken no extra medication. Measurements of serum creatine kinase (CK), creatine kinase MB (CK-MB), troponin I (Tn-I) concentrations were obtained before surgery, 5 minutes after the end of surgery, and at the 1st, 124th, 48th hours postoperatively. Mean pulmonary artery pressure, cardiac index, ejection fraction, operative data, and morbidity were recorded in all patients preoperatively and postoperatively.

Results: Preoperative risk profiles and operative variables were statistically similar in the comparison of two groups. Serum concentrations of CK, CK- MB, Tn-I were increased after off-pump coronary artery bypass surgery without any statistically significant intergroup differences. Preoperative and postoperative cardiac index (CI) measurements via echocardiography were statistically significant between groups ($p<0.05$). Preoperatively we calculated 3.2±0.7 L/m2/min in AG and 3.2±0.6 L/m2/min in CG. Postoperative values were 4±0.9 L/m2/min in AG and 3.6±0.8 L/m2/minin CG ($p<0.05$).

Conclusions: In this study, we suggested that the usage of preoperative aminophylline decreases the injury of the ischemia-reperfusion and myocardial protection during the off-pump coronary artery bypass surgery.

Key words: Aminophylline, cardiac index, off-pump coronary artery bypass surgery, ischemia reperfusion injury, myocardial protection.

ID: **285**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

EARLY RESULTS OF ORTHOLOX POLYMER STERNOTOMY CLOSURE SYSTEM IN OPEN HEART SURGERY

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Aim: To present the early results of ortholox polymer sternotomy closure system in open heart surgery

Materials and Methods: Between 2018-1019, 210 patients with BMI above 30 who underwent open heart surgery were included in the study. 105 patients were group1 and 105 patients were group 2. In Group 1, the sternum was closed with standard steel wire. In Group 2, polymer sternum closure system was used.

Result: There was no difference between the two groups in terms of age, gender, BMI, and operative methods. In Group 2, only one patient had infection at the sternal incision site, and no patient had sternal dissociation. In Group 1, 5 patients had infection at the sternum incision site and 8 patients had sternal dissociation. The mean duration of ICU stay was 1.4 days in Group 2 and 2.1 days in Group 1. Postoperative pain scoring was 3.4 in Group 1, 2.1 in Group 2, and was statistically significant.

Conclusions: Polymer sternal closure system increases patient and surgeon satisfaction with less sternal dissociation, less pain and less intensive care time than standard steel wire closure. However, more patient-numbered and multicenter studies are needed.

ID: **140**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

A RETROSPECTIVE COHORT STUDY ON CORONARY ENDARTERECTOMY OUTCOMES IN CORONARY ARTERY BYPASS GRAFT PATIENTS

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Introduction:
The aim of this study is to determine the outcomes following coronary endarterectomy (CE) in patients who underwent coronary artery bypass grafting (CABG) for revascularization in our hospital.

Methods:
We retrospectively reviewed patients who underwent CABG over a six-month period, from November 1, 2016 to May 31, 2017 and examined their outcomes in regards to CE.

Results:
A total of (n=361) CABG procedures were performed in our study period, though complete records were available for only (n=254) patients. Amongst these, (n=37) patients (14.5%) required CE. Ages ranged from 43 to 75 years for these patients, (n=7) were females and (n=30) males. Comorbidities included hypertension in (n=19) patients, diabetes in (n=12) patients and hepatitis B in (n=11) patients. The right coronary artery (RCA) was the most common artery endarterectomized (n= 15), followed by the left anterior descending (LAD) (n= 10), obtuse marginal (n= 6 patients), diagonals (n=5) and ramus (n=2). Two vessels were endarterectomized in (n=4) patients. A total of (n=9) patients had two-vessel CABG, (n=16) had three-vessel CABG and (n=8) had four-vessel CABG. The left internal mammary artery (LIMA) was used in (n=25) patients. Two patients required intra-aortic balloon pump postoperatively. All the patients had received inotropic support postoperatively in the intensive care unit (ICU). There were no reports of postoperative mortality. One patient remained in the ICU for four days postoperatively, the rest of the patients were stepped down to the ward in less than four days.

Conclusions:
Coronary endarterectomy is a safe and viable option as an adjunct to CABG in long segment totally occluded vessels needing revascularization and reconstruction.

Keywords: revascularization, coronary endarterectomy, coronary artery bypass graft (CABG)

ID: **477**

Topic: **Cardiology » Coronary Artery Disease - CABG Surgery**

Presentation Type: **Oral**

RESULTS OF CORONARY ARTERY BYPASS GRAFTING IN MYOCARDIAL BRIDGING OF LEFT ANTERIOR DESCENDING ARTERY

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BACKGROUND: We aimed to evaluate the graft patency rate following coronary artery bypass grafting (CABG) to the left anterior descending artery (LAD) with proximal myocardial bridging (MB). While MB is generally a benign coronary abnormality, ischemia, stunning, and sudden death have been reported. In symptomatic patients with proximal LAD systolic compression of >50%, positive for ischemic noninvasive testing and noneffective optimal medical therapy, coronary intervention could be indicated. Few studies of CABG in myocardial bridging have been reported. The influence of high flow in coronaries with MB on graft patency is cause for concern.

METHODS: We retrospectively studied 19 patients operated on for isolated MB of proximal LAD with >50% systolic compression. All patients were severely symptomatic despite optimal medical therapy and positive noninvasive tests for myocardial ischemia. CABG was performed through the thoracotomy without cardiopulmonary bypass. In all cases LIMA was used as a graft for LAD bypass. All patients underwent follow-up coronary angiography.

RESULTS: There was no mortality or major morbidity. Freedom from angina was 98% at 18 months postoperatively.

CONCLUSIONS: LIMA could be the “graft of choice” for LAD bypass in patients with myocardial bridging of the proximal LAD, following by zero mortality and morbidity.

ID: **234**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

IS IT POSSIBLE TO PREDICT ADDITIONAL CAROTID ARTERY DISEASE WITH PLATELETCRIT IN PATIENTS WITH CORONARY ARTERY DISEASE?

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OBJECTIVE: The incidence of atherosclerotic cardiovascular diseases, which constitute an important disease group, is expected to rise with increasing life expectancy. Plateletcrit (PCT) is a parameter that shows total platelet mass in blood and it has been shown in several studies that it may be effective in the pathogenesis of vascular diseases. In this study we aimed to investigate the role of PCT in showing additional carotid artery disease in patients scheduled to undergo coronary artery bypass graft (CABG) surgery.

METHODS: The patients scheduled for CABG between January 2015 and September 2018 were included in the study retrospectively. According to the tests and physical examination datas, patients with carotid arterial disease were included in Group 2. Patients in whom carotid arterial disease were not detected in carotid Doppler ultrasonography were included in Group 1.

RESULTS: A total number of 176 patients in the Group 1 (65.3% male, mean age: 61.4± 9.1 years) and 92 patients in the Group 2 (68.4% male, mean age: 67.8 ± 11.9 years) were included in the study. There were statistically difference between two groups in terms of age ($p< 0.001$), PCT ($p< 0.001$), triglyceride ($p= 0.038$), previous percutaneous coronary intervention (PCI) ($p= 0.018$) and presence of Diabetes mellitus ($p = 0.029$). In multivariate analysis; advanced age, history of PCI and PCT were identified as independent predictors of concomitant carotid artery disease.(OR: 1.018, 95% CI: 1.007-1.210, $p = 0.012$; OR: 1.300, 95% CI: 1.136-2.470, $p = 0.026$, OR: 2.154, 95% CI: 1.780-4.570, $p < 0.001$, respectively) In Receiver Operating Characteristic analysis, for PCT it was determined a cut-off level of 0.211 for predicting concomitant carotid artery disease (72.7% sensitivity and 64.7% specificity) (Figure 1).

CONCLUSION: In this study, we found that it is possible to predict additional carotid artery disease with PCT in patients scheduled to undergo CABG surgery.

Key Words: Coronary artery disease, Coronary artery bypass graft, Carotid artery disease, Plateletcrit

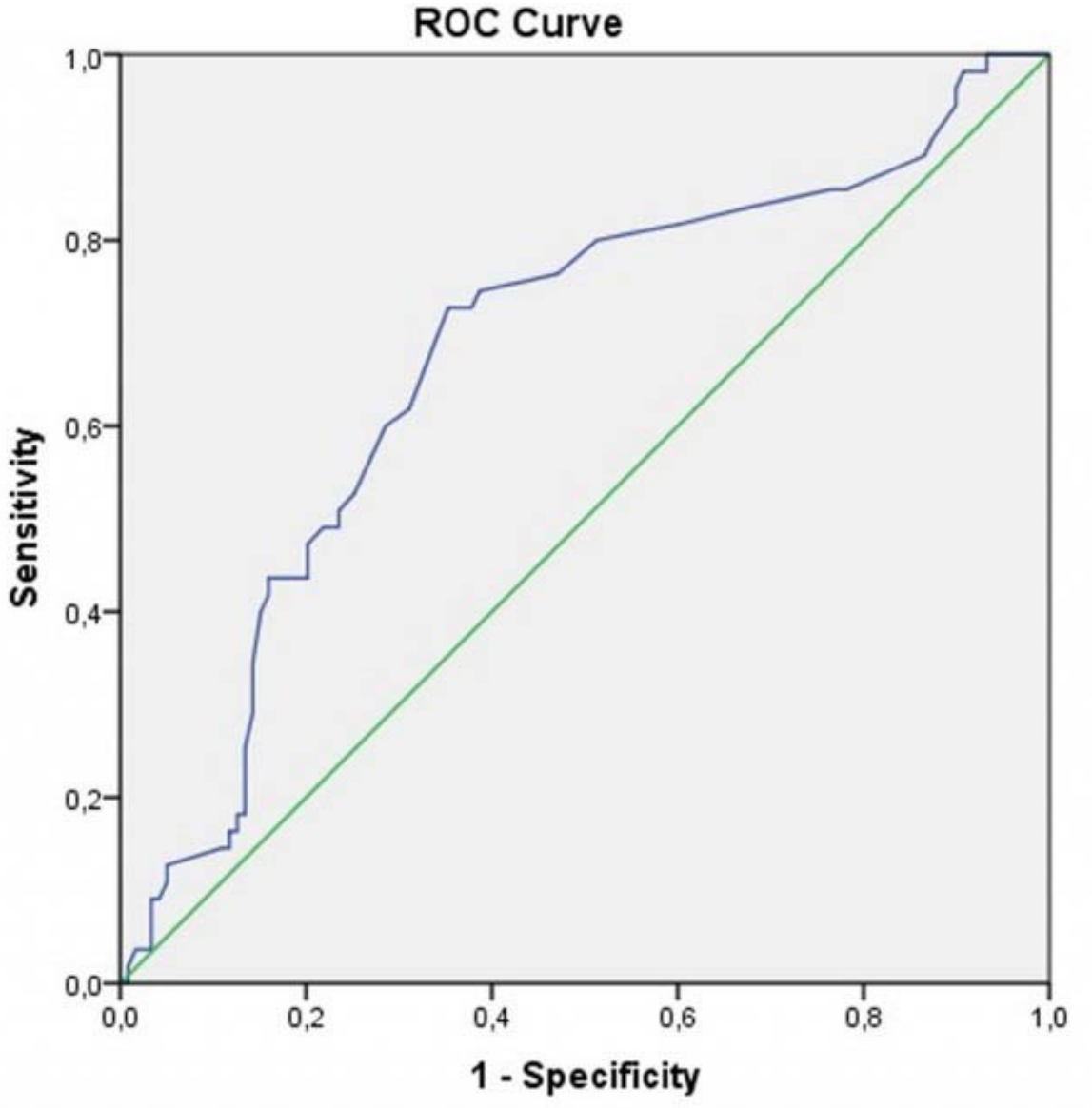

Figure 1. Receiver operation characteristic (ROC) curve and area under the curve (AUC) for Plateletcrit to identify concomitant carotid artery disease (AUC=0.677, cut-off= 0.211, 95% CI= 0.590- 0.765, 72.7% sensitivity and 64.7% specificity)

ID: **839**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

OUR REOPERATIVE CARDIAC SURGERY AND OUTCOMES

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Introduction and aim: The survival has increased with the developing technology and surgical techniques in open heart surgery. Accordingly, reoperative open heart surgery operations are increasing. We examined our cases and results of open-heart surgery undergoing reoperation.

Method: We retrospectively evaluated open heart surgery patients who were re-operated in our clinic in 2018-2019.

Findings: Preoperative thoracic computed tomography was routinely performed to evaluate possible adhesions and neighborhoods of cardiac structures. The femoral artery and vein were routinely explored for possible emergency cannulation. Median sternotomy was performed to all of them and dissection was started from the right side of the heart and above the aorta. Antegrade blood cardioplegia was applied every 15 minutes for myocardial protection in all patients.

Of the 350 cardiac surgery operations, 15 underwent reoperative cardiac surgery. 14% were operated secondary to congenital heart surgery. Mean age was 55 and mean ejection fraction was %45. 2 patients were operated for the third time. One of them, the patient who underwent redo ventricular septal defect operation was re-operated due to right ventricular outflow tract stenosis and was discharged without any problem. Except for right atrial laceration and right ventricular laceration, no intraoperative adverse events were observed. Postoperative intraaortic balloon pump was not required any patients. No cerebrovascular events were observed in any of the patients. Sternal dehiscence developed in 1 patient who has treated with rectus muscle flap in the postoperative first month. The patient, who developed mediastinitis, died of sepsis at the end of the second postoperative month.

Conclusion: Reoperative cardiac surgery can be performed with low morbidity and mortality after a detailed preoperative evaluation. Reoperative cardiac surgery is an inevitable surgery of today's cardiac surgery

ID: **780**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

OUR PREOPERATIVE EVALUATION OF COVID-19 IN PATIENTS UNDERGOING CABG

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OBJECTIVE: COVID-19 is a life threatening contagious disease. Its course is fatal especially in elderly patients with chronic disease comorbidity. Like other countries in our country too, patients undergoing CABG is elderly patients with chronic diseases. It is a necessity to evaluate these patients for COVID-19 prior to operation. In our article we discuss the results of COVID-19 tests and their results in our undergoing CABG.

METHODS: 82 patients who have undergone CABG operation in our clinic were evaluated though May 2020 to September retrospectively. We eliminated patients who have undergone emergency operation and additional surgical operations. We took nasopharyngeal and oropharyngeal swab assay (PCR) from all the patients the day before the operation. And low dose computed tomography (CT) chest were done without contrast dye for all the patients. In addition to routine tests D-Dimer, CRP, Ferritin, TpI, CK , CKMB, lymphocyte and neutrophil count and range were seen in the blood samples.

RESULTS: Mean age of our patients was 64,25± 9,25. 46% of our patients had hypertension, where as 39% had diabetes, 29% had obesity and last %18 chronic obstructive lung disease, %12 had none of these comorbidity. We had 1 patient whose PCR test result came positive and this patient's CT chest scan showed the symptoms of COVID-19 disease. Laboratory tests showed no signal of the disease. Another patient with a negative PCR test result, showed the CT chest scan symptoms of COVID-19 disease. Laboratory tests showed an increased D-Dimer result also an increased range of neutrophil-leukocyte ratio. This two patients' surgery were cancelled. The other 80 patients PCR test results and CT chest scan results came negative. Laboratory tests showed a neutrophil-leukocyte ratio of 2,25±0,76, D-Dimer value of 1,22±0,34mg/l, ferritin value of 85,35±25,14ng/ml, CRP value of 1,86±0,74mg/dl, Tp I value of 1,08±0,89 ng/ml, CK value of 9,21±4,32ng/ml, CK-MB value of 2,84±1.56 ng/ml.

CONCLUSIONS: PCR test is accepted to be gold standard in the diagnosis of COVID-19 disease. This test is highly specific but its sensitivity is low. So this leads to an increase in value of CT chest scan usage as a diagnostic tool. In recent studies, in patients with COVID-19 disease, there is an increase especially in D-Dimer, Ferritin, CRP and cardiac enzymes. And these increases are accepted to be valuable markers for the course and prognosis at COVID-19 disease. In our study, though our numbers of the cases are limited, we both use PCR test and CT chest scan as diagnostic tool. In our patients, we observed a significant increase in D-Dimer and CRP levels, but otherwise PCR and CT chest scans were normal, so the patients had undergone surgery as scheduled. We think that especially the patients with a negative but positive CT chest scan, there is increased risk of preoperative mortality and morbidity. As a conclusion we think that it is important to perform a PCR test and a CT chest scan for the patients scheduled for CABG surgery.

Oral Presentation Session

Precision Cardiovascular Medicine

Date: 30.10.2020 Time: 19:00 - 20:00 Hall: 4

ID: **269**

Topic: **Cardiology » Arrhythmias and antiarrhythmic therapy**

Presentation Type: **Oral**

MEAN WARFARIN DAILY DOSE REQUIREMENT IS HIGHLY ASSOCIATED WITH CYP2C9 VARIATIONS

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Objective: Warfarin is a drug commonly used for treatment of venous thromboembolism (VTE), prevention of thromboembolic complications in atrial fibrillation (AF), and after mechanical heart valve (MHV) replacement. Warfarin required to achieve a desired therapeutic effect varies greatly among individuals. Some patients need more than 15 mg/day warfarin to get their international normalized ratio (INR) into the therapeutic range. This condition is known as warfarin resistance (WS). WS may be related with the enzyme deficiencies which play role in warfarin metabolism. One of the most important enzymes related with this pathway is CYP2C9. Therefore, in this study, it was aimed to investigate the relationship between CYP2C9 variations with WS.

Methods: Sixty patients who received warfarin at least 6 months were enrolled into the study. The patients were divided into 2 groups according to their INR levels; 30 patients who received 15 mg/day warfarin however the INR level did not come to therapeutic range (<2), and 30 patients who received low dose warfarin and the INR levels came to therapeutic range (2-3) were assigned as nonresponders and responders group, respectively. After extracting total genomic DNA from peripheral blood leukocytes of each subject, DNA isolation was performed. Presence of CYP2C9*2 and CYP2C9*3 variations were determined using real time polymerase chain reaction (RT-PCR). The results were evaluated by using statistical methods.

Results: When groups were compared according to the genotypes, CYP2C9*3 (33.3 %) variation was found statistically high in responders, wild type genotype was detected statistically high in nonresponders (90%) ($p<0.05$). When allel frequencies were compared between each other, T allele of CYP2C9*2 (18.3%) and C allele of CYP2C9*3 (16,7%) were found statistically high in responders ($p<0.05$).

Conclusion: In this study, it was demonstrated that the mean warfarin daily dose requirement was highest in CYP2C9 homozygous wild-type patients compared with the variant *2 and *3 alleles. Our findings are also consistent with other similar studies. In conclusion, when the patient has genetic polymorphisms that result in reduced CYP2C9 activity, they are referred to as poor metabolizers (PMs) for CYP2C9. Patients who are PMs for warfarin, metabolize the drug more slowly and often require smaller doses of warfarin to achieve therapeutic INR values.

ID: **424**

Topic: **Cardiology » Acute heart failure**

Presentation Type: **Oral**

RELATIONSHIP BETWEEN ANGIOTENSIN CONVERTING ENZYME GENE POLYMORPHISMS AND LEFT VENTRICULAR REMODELING INDEX IN PATIENTS WITH A FIRST ACUTE ANTERIOR MYOCARDIAL INFARCTION

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Objectives: Left ventricular (LV) remodeling may be defined as a modification in shape, size, and function of the left ventricle due to physiological or pathological conditions. The development of left ventricular remodeling after acute myocardial infarction is a predictor of heart failure and mortality. The genetic influence on cardiac remodeling in the early period after acute myocardial infarction is unclear. Carriers of the D-allele of ACE insertion/deletion (I/D) polymorphism display elevated serum and cardiac ACE activity and thus may be exposed to higher angiotensin II levels than those with the I-allele. A large body of literature suggests that this genetic variation, which includes associations of the D allele with myocardial infarction, hypertension, and left ventricular hypertrophy is of clinical relevance. Furthermore, the DD-genotype was associated with augmented neurohumoral activation and cardiac dilatation, as well as poor prognosis after an acute myocardial infarction. Patients with acute anterior myocardial infarction who have ACE DD genotype are high risk of heart failure and death.

We aimed to investigate relationship between Angiotensin Converting Enzyme gene polymorphisms and left ventricular remodeling index (LVRI) in patients with a first acute anterior myocardial infarction.

Methods: Overall 140 patients with a first acute anterior myocardial infarction (MI) were included in this cross-sectional study. DNA was isolated from peripheral leukocytes. The ID status was determined by polymerase chain reaction by a laboratory staff member who was unaware of the clinical details. Based on the polymorphism of the ACE gene, they were classified into 2 groups: Deletion/Deletion (DD) genotype (Group 1, n=57), Insertion/Deletion (ID), Insertion/Insertion (II) genotypes (Group 2, n=83) (Figure 1). Echocardiographic examinations were performed using the parasternal longitudinal axis and apical 4-chamber windows in accordance with the recommendations of the American Echocardiography Committee. The LVRI was calculated from the ratio between left ventricular mass (LVM) and left ventricular end diastolic volume (LVEDV). One-way analysis of variance (ANOVA) and Chi-square analyses were used to compare differences among subjects with different genotypes. The study was approved by the local Ethics Committee, and each patient gave a written consent.

Results: There were no significant differences among clinical parameters of patients (Table 1). LVRI was significantly lower in patients who have ACE DD genotypes than in patients who have ACE ID/II genotype (0.76 ± 0.13 g/ml and, 1.37 ± 0.24 g/ml , $p < 0.05$).
Conclusion: Our results suggested that, ACE Gene I/D polymorphism D allele may affect LVRI in patients with a first acute AMI.

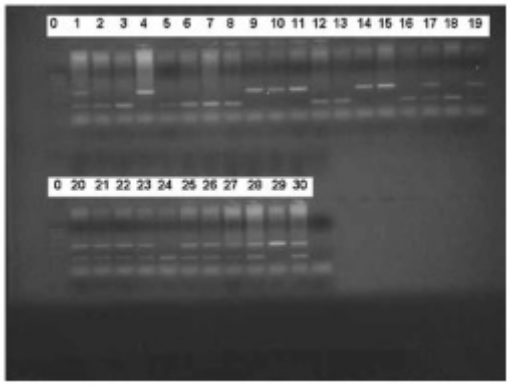

Table 1. Clinical characteristics of patients according to ACE I/D Genotype.

Parameters	ACE DD (n=57)	ACE ID /II (n=83)	p Value
Age, years	58±11	59±13	NS
Gender, F/M	8/49	18/65	NS
BMI, kg/m2	22±3	23±3	NS
Hypertension, n(%)	20(35%)	16(19%)	NS
Diabetes Mellitus,n(%)	6 (10 %)	6 (7 %)	NS
Current Smoking,n(%)	34 (59 %)	50 (60 %)	NS
Hypercholesterolemia, n(%)	12 (21 %)	26 (31 %)	NS
MI localisation, n(%)			
1) Anteroseptal	8 (14 %)	13 (16 %)	NS
2) Anterior	17 (30 %)	21 (25 %)	
3) Large Anterior	30 (52 %)	46 (55 %)	
4) Anterolateral	2 (4 %)	3 (4 %)	

ID: **430**

Topic: **Cardiology » Gene Therapy in Cardiovascular Disease**

Presentation Type: **Oral**

RELATIONSHIP BETWEEN ANGIOTENSIN-II TYPE 1 RECEPTOR GENE POLYMORPHISMS AND LEFT VENTRICULAR REMODELING INDEX IN PATIENTS WITH A FIRST ACUTE ANTERIOR MYOCARDIAL INFARCTION

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Objectives: Left ventricular (LV) remodeling may be defined as a modification in shape, size, and function of the left ventricle due to physiological or pathological conditions. The development of left ventricular remodeling after acute myocardial infarction is a predictor of heart failure and mortality. The genetic influence on cardiac remodeling in the early period after acute myocardial infarction is unclear.

Most of the effects of an-giotensin II are mainly mediated by the angiotensin II type 1 receptor (AGTR1), including vascular contraction, pressor responses, renal tubular sodium transport, and aldosterone se-cretion. A polymorphism in the 39 untranslated regions of AGTR1 gene leads to the transversion of adenine (A) to cytosine (C) base at the 1166 position. Angiotensin-II Type-1 Receptor gene C allele was associated with augmented neurohumoral activation and cardiac dilatation, as well as poor prognosis after an acute myocardial infarction. Patients with acute anterior myocardial infarction who have AGTR1 C allele is high risk of heart failure and death.

We aimed to investigate relationship between AGTR1 gene polymorphisms and left ventricular remodeling index (LVRI) in patients with a first acute anterior myocardial infarction.

Methods: Overall 132 patients with a first acute anterior myocardial infarction (MI) were included in this cross-sectional study. DNA was isolated from peripheral leukocytes. The AC status was determined by polymerase chain reaction by a laboratory staff member who was unaware of the clinical details (Figure 1). Based on the polymorphism of the AGTR1 gene, they were classified into 2 groups: AA genotype (Group 1, n=91), AC / CC genotype (Group 2, n=41). Echocardiographic examinations were performed using the parasternal longitudinal axis and apical 4-chamber windows in accordance with the recommendations of the American Echocardiography Committee. The LVRI was calculated from the ratio between left ventricular mass (LVM) and left ventricular end diastolic volume (LVEDV). One-way analysis of variance (ANOVA) and Chi-square analyses were used to compare differences among subjects with different genotypes. The study was approved by the local Ethics Committee, and each patient gave a written consent.

Results: There were no significant differences among clinical parameters of patients (Table 1). LVRI was significantly lower in patients who have AGTR1 AC/CC genotypes than in patients who have AGTR1 AA genotype (0.71 ± 0.14 g/ml and, 1.45 ± 0.29 g/ml, $p < 0.05$).
Conclusion: Our results suggested that, AGTR1 Gene A/C polymorphism C allele may affect LVRI in patients with a first acute AMI.

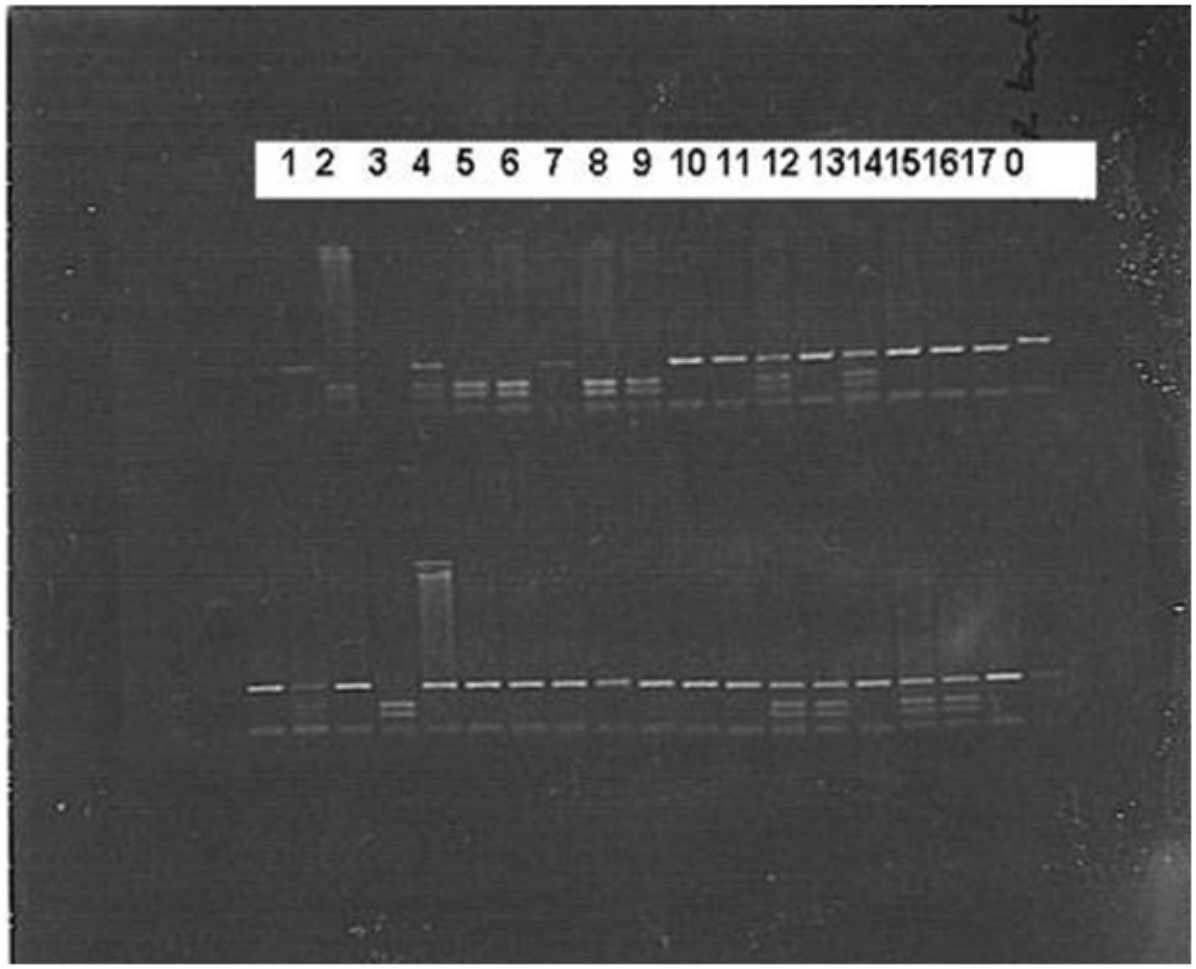

Table 1. General Characteristics of the Patient Groups According to AGTR1 Genotype

Variables	AGTR1 AA Genotype (n=91)	AGTR1 AC/CC Genotype (n=41)	p value
Age (years)	57±13	59.4±15	0.545
Sex (F/M)	16/75	10/31	0.478
Heart rate (beats/min)	87.6±13.7	86.9±15.1	0.644
Hypertension	34 (38%)	10 (24%)	0.032
Diabetes	18 (20%)	10 (24%)	0.728
Smoking	57 (63%)	24 (58)	0.338
BMI (kg/m2)	23.9±3.4	25±2.9	0.779
Hypercholesterolemia	29 (32%)	12(29%)	0.714
Troponin I (ng/mL)	16.1±5.9	18.3±4.7	0.760
Thrombolytic therapy	74 (81%)	33 (80%)	0.479
MI Localisation, n(%)			
-Anteroseptal	15 (17%)	7 (16%)	0.473
-Anterior	25 (28%)	10 (26%)	0.519
-Large Anterior	43 (47%)	21 (51%)	0.348
-Anterolateral	7 (8%)	3 (7%)	0.613

ID: **499**

Topic: **Cardiology » Gene Therapy in Cardiovascular Disease**

Presentation Type: **Oral**

EVALUATION OF LYSYL OXIDASE FUNCTIONAL GENE VARIATIONS WITH INFLAMATORY CYTOKIN PANEL IN ATEROSCLEROTIC CORONARY ARTERY ECTASIA PATIENTS

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Inroduction:

Coronary artery ectasia diagnosis is made with coronary angiography and defined as a dilatation with a diameter of 1.5 times the adjacent normal coronary artery. Incidence ranges between 1,2% and 4,9%. Most common etiological factors are congenital, atherosclerosis, and inflammation. Lysyl oxidases (LOX) are copper-dependent amine oxidases which have a critical role in extracellular matrix (ECM) organisation. These enzymes stabilize the vessel wall by cross-linking ECM proteins and increase resistance to mechanical stress. It is thought that atherosclerosis which is an inflammatory process disrupts ECM structure and causes coronary artery ectasia.

Aim:

In this study, we aimed to investigate the effects of LOX gene mutation and systemic inflammation markers on coronary artery ectasia.

Method:

The study included 88 patients with coronary artery ectasia and 75 healthy controls. LOX gene variations were analyzed by real time PCR in DNA samples and serum levels were determined by Lumineks Method.

Results:

In our study, the incidence of male sex, hypertension and dyslipidemia were found to be higher in CEA group. Additionally, the levels of TNF-ALPHA and sE-SELECTIN were found to be higher in CAE group. According to LOX rs18000449 genotype and allele distribution, there were no significant difference between CAE and healthy control groups (IMAGE-1). Whereas in CAE group patients with LOX rs18000449 polymorphism, TNF-ALPHA (p=0.05), and sP SELECTİN (p=0.018) levels were found to be higher.

Conclusion:

In our study revealed that frequency of hypertension, dyslipidemia and male sex and levels of TNF-ALPHA and sE SELECTIN were higher in CAE patients than healthy controls. In CAE group patients with LOX gene polymorphism, TNF-ALPHA, and sP SELECTİN levels were found to be higher. In line with the developments in the field of genetics, extensive studies are needed on this subject. Our study will be the basis for other studies on this subject.

IMAGE-1: Evaluation of groups in terms of LOX genotype and allele distribution and Evaluation of groups in terms of inflammation parameters

	NORMAL CORONARY ARTERY (n=75)	CORONER ARTERY ECTASİA (n=88)	P value
LOX (rs1800449) Genotip			
CC, % 70	46 (% 61,3)	59 (% 67)	0,9
CT ,% 27	27 (% 36)	26 (% 29,5)	0,8
TT,% 3	2 (% 2,7)	3 (% 3,4)	0,9
LOX (rs1800449) Allel			
C,% 70	119 (%79,33)	144 (%81.81)	0,8
T,% 30	31 (%20,66)	32 (%18,18)	0,9
	NORMAL CORONARY ARTERY (n=75)	CORONER ARTERY ECTASİA (n=88)	P value
IL-6 (pg/ml)	10,07±2,01	10,52±2,67	0,906
IL-1 BETA (pg/ml)	8,6±2,18	11,96±1,64	0,219
TNF-ALFA (pg/ml)	157,25±13,08	200,81±14,64	0,03
PECAM (pg/ml)	6652±1872,06	11468,26±1740,73	0,075
GMCSF (pg/ml)	6,6±5,4	10,9±5,35	0,598
sE-SELECTIN (pg/ml)	31164±4117,7	57159±10496,9	0,025
Sp-SELECTIN (pg/ml)	17033±1787,5	22868±3471,63	0,14

İL: interlökin TNF: tumor necrosis factor PECAM: platelet endothelial cell adhesion molecule

GMCSF: granulocyte macrophage colony stimulan factor

LOX: lysyl oxsidase C: c allel T: t allel

ID: **381**

Topic: **Cardiology » Cardiac Resynchronization Therapy**

Presentation Type: **Oral**

PERFORMANCE OF NT-PROBNP, MR-PROANP, AND ADIPONECTIN IN PREDICTING SUCCESS OF CARDIAC RESYNCHRONIZATION THERAPY

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OBJECTIVE: Cardiac resynchronization therapy (CRT), is a treatment option for patients with refractory heart failure. A significant portion of the patients undergoing CRT do not respond to CRT. We aimed to evaluate the performance of the N-terminal pro-brain-type natriuretic peptide (NT-proBNP), mid-regional pro-atrial natriuretic peptide (MR-proANP), and adiponectin in predicting and monitoring CRT-induced left ventricular (LV) reverse remodeling, reverse electrical remodeling, and clinical response.

METHODS: We prospectively enrolled 46 heart failure patients who underwent clinical, electrocardiographic, echocardiographic evaluation and blood sampling for measurements of NT-proBNP, MR-proANP, and adiponectin before and 12-months after CRT implantation. LV reverse remodeling (LVRR), reverse electrical remodeling (RER) and clinical response were described respectively as a decrease in LV end-systolic volume (LVESV) 15 % or an absolute increase in LV ejection fraction (LVEF) 5%, a decrease in intrinsic QRS (iQRS) duration by 20 ms, and an improvement of NYHA 1 class.

RESULTS: At 12 months, LV function and size, severity of mitral regurgitation, clinical status, and QRS duration were significantly improved by CRT. Serum NT-proBNP (from 2666.87±1672.44 pg/mL to 1182.76±535.31 pg/mL, p=0.001), MR-proANP (from 162.08±44.74 pg/mL to 109.06±31.75 pg/mL, p=0.001), and adiponectin (from 35.23±5.11 µg/mL to 15.80±8.02 µg/mL, p=0.001) levels were significantly decreased after CRT. We detected LVRR, RER, and clinical response in 72 %, 54 %, and 76 % of patients, respectively. According to the ROC curve analysis, the baseline NT-proBNP was able to predict CRT-induced LVRR and a decrease in adiponectin level after CRT may reflect clinical response to CRT.

CONCLUSIONS: NT-proBNP, and adiponectin can be useful biomarkers in predicting, and monitoring the CRT response, respectively.

Oral Presentation Session

Hypertension in Perspectives: New Ideas, New Approaches

Date: 30.10.2020 Time: 20:15 – 21:15 Hall: 5

ID: **470**

Topic: **Cardiology » Hypertension and antihypertensive therapy**

Presentation Type: **Oral**

COMPRASION OF LEFT VENTRICULAR DIASTOLIC FUNCTION IN DIPPER VERSUS NON-DIPPER HYPERTENSIVES

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Objective

Systemic arterial hypertension is a serious public health problem. The progression of the disease is strongly associated with functional and structural cardiac alterations, which can be diagnosed by transthoracic echocardiography. Echocardiography is an extremely useful technique for the evaluation of hypertension and its complications, especially ventricular remodeling.

The purpose of this study was to evaluate the effect of dipper and non-dipper blood pressure patterns on left ventricular diastolic filling parameters in hypertensive patients.

Methods

This is a descriptive, observational study performed at the Department of Cardiology of Celal Bayar University. For this purpose, information on demographic data, echocardiographic parameters and 24-hour-ambulatory blood pressure measurement (ABPM) parameters was collected. All patients underwent both echocardiographic study and 24-hour-ambulatory blood pressure measurement. Dipper pattern is considered when there is a decrease in the nocturnal BP in relation to the daytime BP greater than 10%; if this decrease is not observed either in the systolic blood pressure or in the diastolic blood pressure, the patients are considered non-dippers.

Results

We enrolled 47 patients to the study. According to data from the 24-hour ABPM registry, 23 patients were classified as dippers and 24 patients as non-dippers. The demographic variables, ABPM parameters and echocardiographic doppler study parameters are illustrated in Table 1. The distribution by age and gender was similar between the two groups. As expected, night-time systolic pressures were significantly higher in non-dippers than those in dippers (135,9±7,8 mmHg vs. 122,3±6,7 mmHg, p:0.001). The remaining ABPM parameters were similar in both groups. Both groups were similar in terms of mitral E and A waves, E/A ratio, E-wave deceleration time, isovolumetric relaxation time, and E/E' ratio. These data suggest that there are no differences in the left ventricular diastolic function between dipper and non-dipper hypertensive patients.

Conclusions

In our study, left ventricular diastolic function were similar in patients with non-dipper and dipper hypertension but E/A ratio in non-dipper group was tended to be lower than in dipper group, although it was not statistically significant. Non-dipping blood pressure pattern may be responsible for the development of left ventricular diastolic dysfunction.

Table 1. Demographic, Ambulatory Blood Pressure Measurement (ABPM) and Echocardiographic parameters of studied population			
	Dipper (n: 23)	*Non-dipper (n: 24)*	*p value*
Age (years)	50,9±15,1	53,2±10,6	0,54
Gender			
Male (n, %)	9 (%44)	12 (%50)	
Female (n, %)	14 (%56)	12 (%50)	
ABPM			
Daytime SBP [mmHg]	140,4±6,0	140,5±7,1	0,97
Daytime DBP [mmHg]	81,3±12,4	79,5±7,6	0,56
Nighttime SBP [mmHg]	122,3±6,7	135,9±7,8	**0,001***
Nighttime DBP [mmHg]	74,1±9,3	74,9±6,7	0,72
Echocardiographic findings			
Mitral E maximal velocity (E) (m/sec)	0,80±0,22	0,74±0,17	0,30
Mitral A maximal velocity (A) (m/sec)	0,82±0,19	0,87±0,20	0,40
E/A	0,96±0,29	0,83±0,18	0,08
E-wave deceleration time (msec)	204,8±57,5	204,5±42,3	0,98
Isovolumetric relaxation time (msec)	94,1±18,2	95,5±17,2	0,79
Tissue doppler			
Left ventricular early diastolic velocity (E') (m/sec)	0,12±0,06	0,08±0,02	0,28
E/E'	10,0±4,8	9,9±4,0	0,98

SBP: Systolic Blood Pressure, DBP: Diastolic Blood Pressure

ID: **175**

Topic: **Cardiology » Hypertension and antihypertensive therapy**

Presentation Type: **Oral**

SYMPATHETIC PREDOMINANCE IN PATIENTS WITH HYPERTENSION

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Purpose: Autonomic functions play an exclusive role in development of hypertension (HT). However, the relationship between the anti-hypertensive treatments/anti-hypertensive medication count and cardiac autonomic balance is not clearly demonstrated. We are intended to evaluate autonomic dysfunction, namely heart rate variability (HRV) in patients with hypertension.

Method: We included HRV parameters derived from 24-h holter ECG in consecutive patients in two years. Holter recordings of the patients were obtained by Biomedical Instruments Holter system (BI9800TL + 3) which is a three channel digital recorder. Of 1832, 762 patients were hypertensive (HT+) and also 755 cases from our cohort were selected as control group (HT-) by propensity matched scoring using age and sex. Concomitant diseases, antihypertensive medicines and HRV parameters inline with task force recommendations analysed.

Results: The RMSSD and pNN50 are associated with high–frequency power (HF) and hence parasympathetic activity and no differences between groups. Whereas, SDNN, SDNN index, LF, VLF and LF/HF ratio were significantly lower in the HT (+) group. These results reflect clear sympathetic predominance in HT compared to control group (Table). It was revealed that the HRV parameters correlated with anti-hypertensive medication count (p<0,005).

Conclusion: Our study showed that sympathetic overactivity exists in patients with HT. There is also a distinct correlation between sympathetic overactivity and antihypertensive medicine count. These findings may reflect the effect of sympathetic predominance in resistant HT.

.	**HT (-) n=755**	**HT (+) n=762**	**p value**
SDNN	123,0 (98-153)	118,0 (93-143)	0,003
SDNN index	47,0 (37-61)	45,0 (34-60)	0,008
rMSSD	25,0 (18-35)	24,0 (18-36)	0,623
pNN50	4,0 (2-10)	4,0 (1-11)	0,463
HF	129,8 (66,2-241,2)	108,8 (58,4-257,6)	0,156

		284,8 (149,6-460,0)	
LF	323,6 (172,9-512,9)		0,02
VLF	761,8 (482,2-1057,9)	677,9 (430,2-999,9)	0,009
		2,17 (1,24-3,52)	
LF/HF	2,38 (1,41-3,72)		0,03

ID: **213**

Topic: **Cardiology » Pregnancy and Heart diseases**

Presentation Type: **Oral**

PECULIARITY OF HYPERTENSION AND PREGNANCY ABOUT 544 CASES

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Hypertension and pregnancy is a clinical diagnosis defined by the new onset of hypertension (systolic blood pressure ≥ 140 mm Hg and / or diastolic blood pressure ≥ 90 mm Hg. There are several types:

Gravidity arterial hypertension: (systolic blood pressure ≥140 mmHg and / or diastolic blood pressure ≥90 mmHg) occurred from the twentieth week of gestation in the absence of proteinuria.

Gravidity hypertension is severe when systolic blood pressure is ≥ 160 mm Hg and / or diastolic blood pressure is ≥ 110 mm Hg.

Preeclampsia: Associated with high blood pressure to higher proteinuria or equal to 300 mg /day (greater than or equal to 20 weeks). High blood pressure (hypertension) and pregnancy is common and remains a leading cause of maternal and fetal mortality and morbidity. Essential arterial hypertension and superadded forms. The aim of this work is to study the peculiarities of this high-risk pregnancy.

This is a retrospective study of 544 cases of hypertension and pregnancy collected at the Lalla Meryem maternity hospital Ibn Rochd hospital in Casablanca for a period of 2 years. The incidence is 9.2%. The average age of onset was 30 years with an age range of 15 to 45 years. The primiparous were the most exposed 261 cases (48%).310cases (57%) have an unsupported pregnancy. 290 cases (53.3%) had a systolic blood pressure greater than or equal to 160 mm Hg, and 160 cases (29.4%) had a diastolic blood pressure ≥ 110 mmHg. The most used medical conduct was the combination of rest and antihypertensives. Obstetrical behavior was marked by the frequency of vaginal deliveries (63.4%). Maternal complications represent (14.7%) dominated by retro-placental hematoma (5.1%) and eclampsia (3.7%). Perinatal mortality represents 57 cases (9.9%). The factors of bad fœto-maternal prognosis are for the fetus: the low gestational age, the low parity, the non monitoring of the pregnancy, the massive proteinuria and the hyperuricemia. For the mother, young maternal age, primiparity, non-pregnancy monitoring, diastolic blood pressure ≥ 110 mm Hg, systolic blood pressure ≥ 160 mm Hg, and massive proteinuria.

•This study concludes that high blood pressure and pregnancy is a major cause of maternal mortality and morbidity.
•These complications can be reduced by a better physiopathological understanding and a better knowledge of fetal and maternal prognostic factors.
•This condition mobilizes obstetricians and researchers looking for effective treatment.
•The only really effective treatment is the termination of pregnancy, all other therapies are intended only to prolong the pregnancy to the fetus.
•The prevention of placental insufficiency by the early management of risky parturients (rigorous clinical, biological, ultrasound and velocimetric monitoring, low platelet antiaggregant treatment) and the rapid and adapted treatment of arterial hypertension and reported

pregnancy, in particular thanks to the progress of neonatal resuscitation , contribute to the improvement of the results already recorded.
•Finally, any doctor should be aware of the presence of a pregnant woman.

ID: **252**

Topic: **Cardiology » Hypertension and antihypertensive therapy**

Presentation Type: **Oral**

EFFECTS OF ANTIHYPERTENSIVE DRUG CLASSES ON CENTRAL AORTIC PRESSURE

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Objective: Central aortic pressure is the more important indicator of cardiovascular risks when compared with peripheral blood pressure (BP). We aimed to evaluate the effects of beta-blockers and other antihypertensive drugs on central aortic pressure which was measured by invasive direct method.

Methods: We included 201 patients using antihypertensive treatment from the patients referred for diagnostic coronary angiographic evaluation. Brachial BP was measured synchronously with the central aortic BP at the beginning of coronary angiographic examination before the contrast agent injections to the coronary arteries.

Results: Systolic BP and pulse pressure (PP) were significantly higher in central measurements (150±26 vs 148±20.8, p=0.006; 72±18.5 vs 66±15.1, p<0.001; respectively), diastolic BP was significantly higher in peripheral measurements (81±11.4 vs 78±15, p<0.001) however, mean BP was similar between central and peripheral measurements (104±13.4 vs 102±17.3, p=0.141). There was no statistically significant difference in central and peripheral BP measurements regarding systolic BP, diastolic BP, PP, mean BP between beta blockers group and non-beta blocker group. Also, there was no statistically significant difference with augmentation pressure and augmentation index between two groups (20.2 ± 12.3 vs 18.8 ± 11.2, p=0.56; 27.7 ± 15.1 vs 25.4 ± 13.3, p=0.39; respectively).

Conclusions: In this study we evaluated the effects of different antihypertensive drugs on central BP with an invasive method and showed that there was no difference between drug classes.

Table 1. Comparison of central and peripheral blood pressure between beta-blockers and non-beta blockers

	BB group (n=67)	Non-BB group (n=134)	P value
Brachial BP			
SBP (mmHg)	146.4±24.7	149.2±18.5	0.42
DBP (mmHg)	82.5±13.3	81.5±10.4	0.60
MBP (mmHg)	103.8±16	104.1±12	0.89
PP (mmHg)	63.9±17.1	67.7±13.9	0.11
Central BP			
SBP (mmHg)	147.5±31.3	152.7±22.8	0.23
DBP (mmHg)	76.3±16.6	80.2±14	0.07
MBP (mmHg)	100±20	104.4±15.6	0.12
PP (mmHg)	71.2±22.2	72.4±16.4	0.70
AP	20.2±12.3	18.8±11.2	0.56
AIx	27.7±15.1	25.4±13.3	039

BP, blood pressure, SBP, systolic bloodpresure; DBP, diastolic bloodpressure; MBP, meanblood pressure; BB, beta-blocker; AP, augmentation pressure; AIx, augmentation index

ID: **571**

Topic: **Cardiology » Hypertension and antihypertensive therapy**

Presentation Type: **Oral**

IS EXERCISE HEART RATE RECOVERY ASSOCIATE WITH CIRCADIAN BLOOD PRESSURE?

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Objective: According to the World Health Organization data, there are 1.13 billion hypertension patients in the world. And only a few of these patients have blood pressure under control. Too many risk factors play a role in the etiopathogenesis of this clinical condition which has become a major public health problem. Changes in sympathetic adrenergic activity are considered to be one of these risk factors associated with hypertension. Therefore, in this study, we aimed to investigate the relationship between heart rate recovery (HRR), which is an indicator of cardiac sympathetic adrenargic system, and circadian blood pressure.

Methods: Three hundred thirty patients were enrolled and divided into 6 groups according to the presence of hypertension, pre-hypertension and circadian BP pattern as follows: (1) normotensive dipper, n=55; (2) normotensive nondipper, n=55; (3) pre-hypertension dipper, n=55; (4) pre-hypertension nondipper, n=55; (5) hypertensive dipper, n=55; and (6) hypertensive nondipper, n=55. 24 - h ambulatory blood pressure (ABPM) was measured with Mobil - OGraph PWA (IEM, Stolberg, Germany). HRR data were collected using treadmill exercise testing (TM-PRO 2200, Tepa, Ankara, Turkey). Twelve lead electrocardiography (Mason-Likar modification) was recorded at 25 mm s paper speed. HRR indices were calculated by subtracting first, second, and third minute heart rates from the maximal heart rate obtained during stress testing and designated as HRR1, HRR2, and HRR3.

Results: Normotensive, pre-hypertensive and hypertensive dipper patients had higher HRV levels than non-dipper patients (Normotensive = 28.8 ± 3.3 vs 26.2 ± 3.8; p <0.001; Pre-hypertensive = 28.7 ± 4.9 vs 25.8 ± 3.8; p <0.001; Hypertensive = 28.3 ± 3.6 vs 25.2 ± 4.1; p <0.001). There was a positive correlation between HRR1 level and decline in nightime BP levels (r = 0.560; p <0.001). The effects of age, 24-hour / day / night systolic and diastolic ABPM and decline in nighttime BP levels on HRR1 were evaluated by linear regression analysis. Decline in nighttime BP levels (β ± SE = 0.435 ± 0.04; p <0.001) was determined as independent predictors of HRR1. In this model, decline in nighttime BP levels were found to have more effect on HRR1 than other risk factors.

Conclusions: As a result, there was a significant relationship between the decrease in blood pressure in the night and HRR which is an indicator of sympathetic adrenargic activity. This suggests that the increase in sympathetic activity may be effective in the etiopathogenesis of non-dipper pattern.

ID: **726**

Topic: **Cardiology » Metabolic Syndrome**

Presentation Type: **Oral**

ELASTIC CHARACTERISTICS OF AORTA IN PATIENTS WITH A NEW DIAGNOSIS OF METABOLIC SYNDROME

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Objective: Metabolic syndrome (MS) is known to be a risk factor for cardiovascular diseases. However, it is not known whether MS made changes in the elastic properties of the aorta in the early period before significant atherosclerosis occurred.

Method: The study was performed with 100 patients (49 males; mean age 46 ± 9 years) in normal sinus rhythm with newly diagnosed MS, and 55 cases matched by age and without MS (29 males; mean age 45 ± 9 years). All patients underwent detailed physical and cardiological examination, biochemical examination, anthropological measurement and echocardiography.

Results: Aortic diameter change was significantly lower in patients with MS compared to the control group (0.014 ± 0.04 and 0.25 ± 0.1, p <0.01), aortic stiffness was found to be significantly higher in the group with MS (MS: 10.65 ± 4.52, Control: 5.7 ± 2.42) compared to the age-matched control group. Multiple regression analysis shows that there is an independent relationship with each of the age, BMI, HDL and systolic blood pressure.

Conclusions: Even in patients with newly diagnosed MS without coronary artery disease, aortic stiffness can be seen. In patients with MS, the vascular system may be affected even before evident coronary artery disease, diabetes mellitus, hypertension, or dyslipidemia develops.

Metabolic SyndromeGroup (n = 100)	Control Group(n = 55)	p value	
Age (mean ± years)	46.29 ± 9.07	45.54 ± 9.08	0.62
Male (%)	49 (49)	29 (52)	0.65
BMI (kg / m2)	31.78 ± 4.44	27.81 ± 4.60	<0.001
Waist circumference (cm)	102.61 ± 8.51	92.43 ± 13.37	<0.001
Glucose (mg / dl)	Glucose (mg / dl)	92.61 ± 6.57	<0.001
HDL cholesterol (mg / dl)	43.01 ± 11.61	54.32 ± 10.26	<0.001
Triglyceride (mg / dl)	200.58 ± 87.26	128.01 ± 36.65	<0.001
Systolic bloodPressure (mmhg)	139.16 ± 12.91	127.20 ± 11.57	<0.001
Diastolic bloodPressure (mmhg)	83.51 ± 9.22	78.41 ± 8.61	<0.001
LVEDD(cm)	4.52 ± 0.23	4.43 ± 0.25	0.71
IVS (cm)	0.93 ± 0.13	0.76 ± 0.06	<0.001
E/A<1 (%)	85 (85)	3 (1,5)	<0.001
Aortic Diameter Change	0.14 ± 0.04	0.25 ± 0.1	<0.001
Aortic Strain	5.32 ± 1.56	9.34 ± 2.34	<0.001
Aortic Compliance	0.0028 ± 0.001	0.0055 ± 0.0014	<0.001

Aortic Stiffness	10.65 ± 4.52	5.7 ± 2.42	<0.001

ID: **826**

Topic: **Cardiology » Hypertension and antihypertensive therapy**

Presentation Type: **Oral**

AORTIC ARCH CALCIFICATION: A NOVEL PARAMETER FOR PREDICTION OF MASKED HYPERTENSION

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OBJECTİVE: Masked hypertension (MH) is directly related to increased cardiovascular morbidity and mortality but remains underdiagnosed in clinical practice. Aim of the study was to search the role of aortic arch calcification (AAC) in diagnosis of masked hypertension.

METHODS: Healthy volunteers with an office blood pressure (BP)<140/90mmHg were involved in the study population and divided into two groups as normal (<130/85mmHg) and high normal (130-139/85-89mmHg) office BP groups. Subjects were also investigated for the presence of MH with ambulatory BP monitoring and searched in MH and control groups. MH was defined as in the latest ACC/AHA guidelines for the prevention, detection, evaluation and management of high blood pressure in adults which was published in 2017. Depending on reference levels in this guideline, MH was diagnosed as the daytime BP≥135/85mmHg and nighttime BP≥120/70mmHg. AAC was evaluated on direct X-ray telecardiography. Diagnosis of MH was searched depending on the presence of AAC and also Office BP measurements.

RESULTS: A total of 216 volunteers were involved in the study (mean age 45.2±12.2 years; female gender 120(55.5%). One hundred ten volunteers (50.9%) had MH according to the ambulatory BP monitoring. AAC was significantly more common in MH group (44.5% vs. 26.4%) (p=0.005). AAC had a positive predictive value of 79% in those with high normal office BP in the diagnosis of MH, and also AAC had a negative predictive value of 74% in those with normal office BP.

CONCLUSİONS: AAC can be used as a reliable diagnostic tool to exclude and predict MH in people with normal and high normal office BP.

Keywords: masked hypertension; aortic arch calcification; ambulatory blood pressure monitoring

Oral Presentation Session

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Date: 30.10.2020 Time: 20:15 - 21:15 Hall: 5

ID: **153**

Topic: **Cardiology » Diseases of aorta**

Presentation Type: **Oral**

SUCCESSFUL RETRIEVAL OF A BROKEN CATHETER FRAGMENT USING A SNARE SYSTEM

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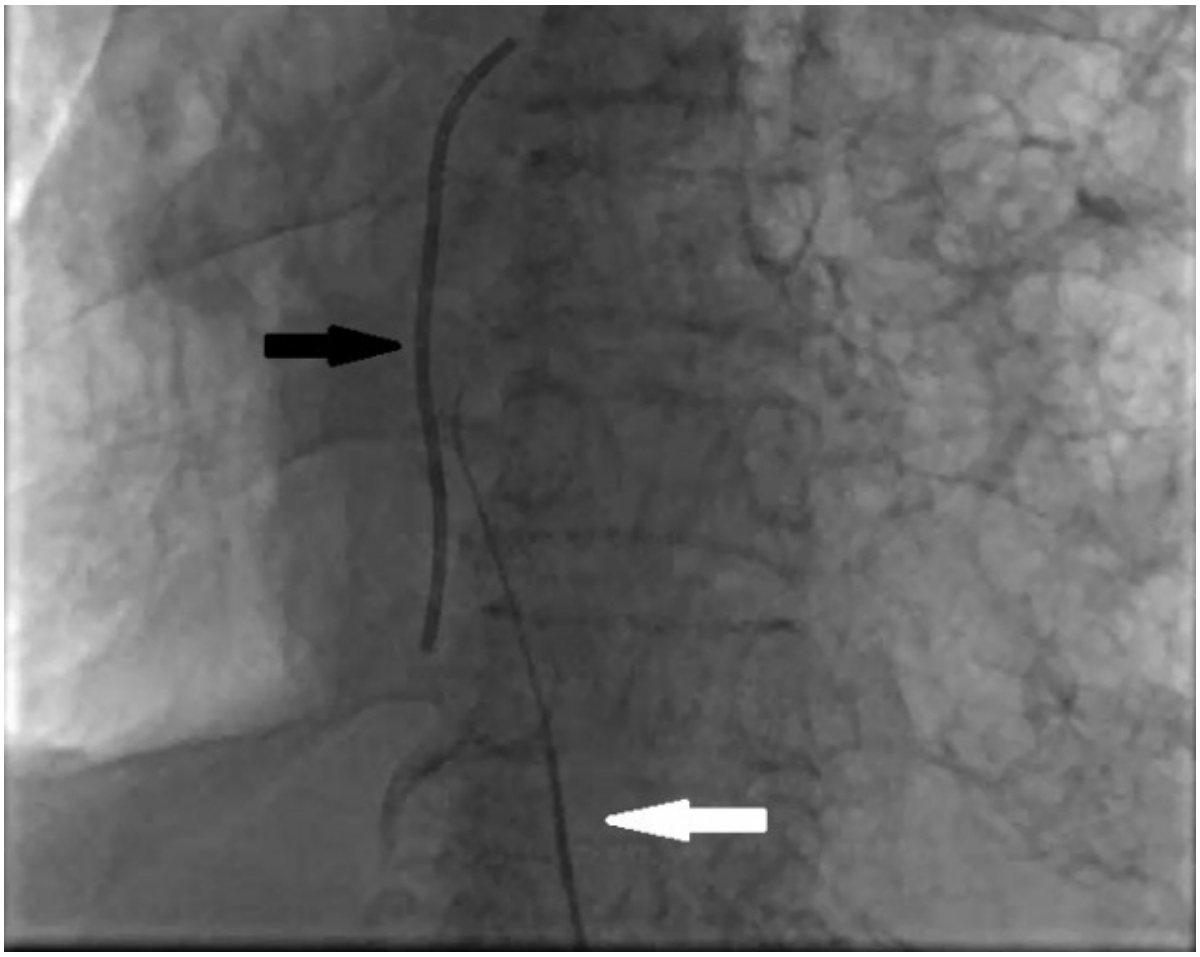
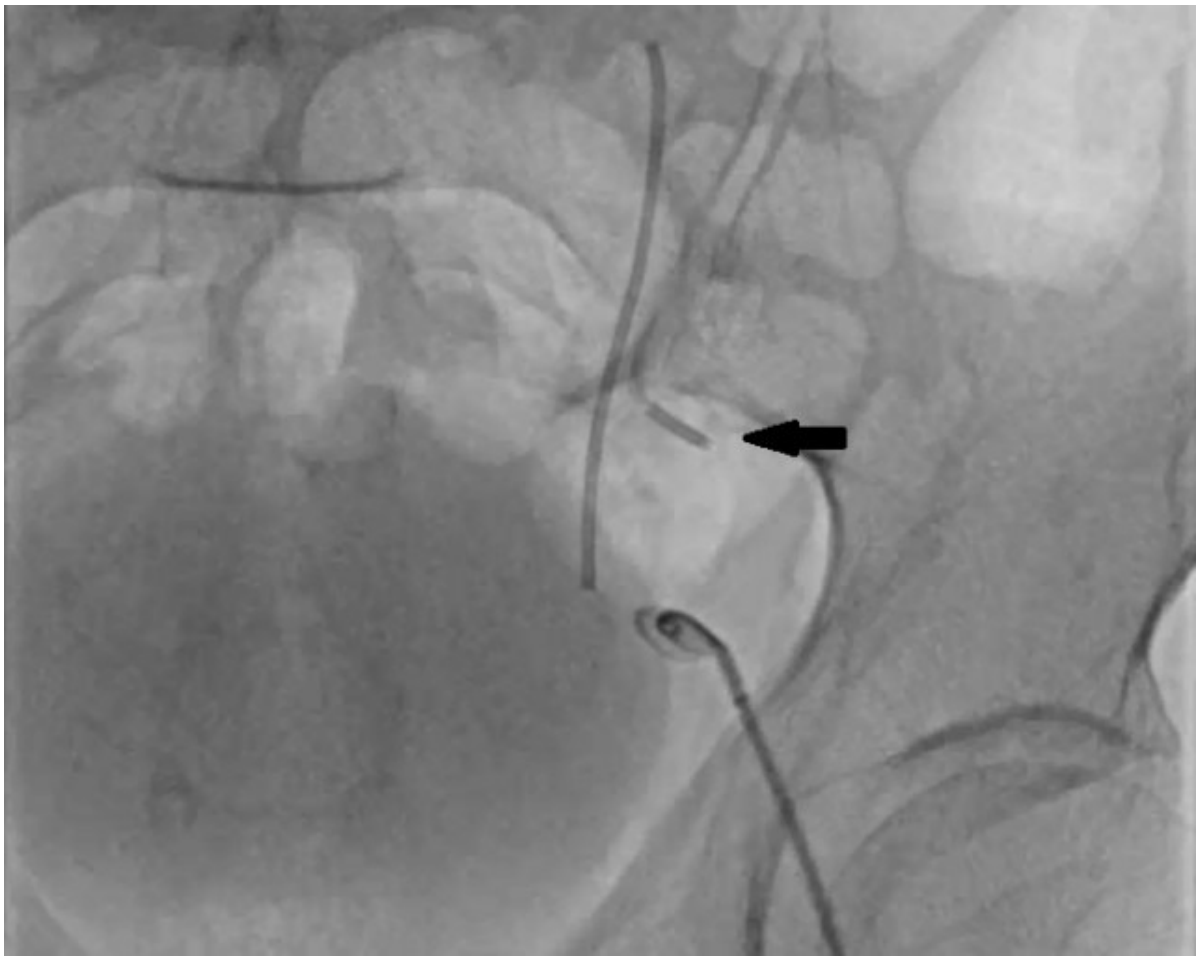
A 74-year-old man with the complaint of angina admitted to our cardiology out-patient clinic. His past medical history revealed a stoke attack with a complete recovery 4 months ago. A subsequent carotid Doppler ultrasound imaging depicted a 90% luminal stenosis in the left internal carotid artery. Considering the anginal complaints and the carotid stenosis together, a decision was made to perform an invasive coronary and carotid angiography.

In the catheterization laboratory, an arterial access was achieved using a 6F introducer sheath in the right femoral artery and the coronary angiography revealed non-critical stenosis in the left and right coronary systems. We passed then to the procedure of carotid angiography using a Judkins Right-4 diagnostic catheter. Despite multiple trials, however, selective angiography of the left carotid artery could not be achieved at the ostium. After this point, we made our decision to continue the procedure by using a 5F Headhunter hydrophilic catheter (Merit Medical Systems, Inc, USA). The headhunter catheter, on the other hand, was a re-used catheter, which had been sterilized by gaseous hydrogen peroxide formerly. During the attempts to advance the headhunter catheter through the aorta, the catheter was suddenly broken into two fragments in the thoracic part of descending aorta (Figure 1, Video 1). At this point, we pulled the proximal part of the catheter taken out and decided to use a snare system (SeQureTM Snare System, the Netherlands). The broken fragment of the catheter further embolized into the left common iliac artery. Then, the broken fragment of the catheter was broken one more. The smaller piece was floating in the left internal pudendal artery. Since trials to hold the bigger fragment failed through the right femoral access, we achieved a new access using a 6F introducer sheath through the left femoral route. The bigger fragment was hold with the snare, and then the whole assembly was taken out of the 6F sheath (Figure 2, Video 2). The smaller fragment, however, was left in place and observation with periodic follow-ups was advised to the patient.

Catheter fragmentation during an invasive cardiovascular procedure is a quite rare complication, which may however lead to serious embolic complications. And also, re-use of the invasive catheters may also be hazardous due to potential disruption in the catheter architecture, and serious complications may result as in our case.

Figure Legends:
Figure 1: Two fragments of the broken catheter in the thoracic part of descending aorta. Black arrow, broken fragment of the catheter; white arrow, the headhunter catheter with hydrophilic wire inside.
Figure 2: The bigger and the smaller pieces of the broken catheter. Black arrow, the smaller piece of the broken catheter in the left internal pudendal artery.





ID: **583**

Topic: **Cardiovascular Surgery » Minimally Invasive and Robotic Cardiac Surgery**

Presentation Type: **Oral**

EXPERIENCES WITH ROBOTIC CARDIAC SURGERY: FIVE-YEAR RESULTS FROM A SINGLE CENTER

Cengiz Bolcal[1], Murat Kadan[1], Gökhan Erol[1], Emre Kubat[1], Mehmet Emin Ince[1], Suat Doğancı[1], Vedat Yıldırım[1], Kubilay Karabacak[1], Ufuk Demirkılıç[2]

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OBJECTIVE

Robotic cardiac surgery has become more popular in last decade. Our institution is one of the initial centers for robotic surgery in our country. In this paper, we aimed to share our experiences with various types of robotic cardiac surgical interventions.

METHODS

Between November 2014 and January 2020, 245 patients with varied diagnoses were operated. 111 of them were female. The mean age of the patients was 44,49 ± 17,68 (16–80) years. All the operations were performed with the da Vinci Si model. The types and numbers of patients are given in Table.

RESULTS

Mean cross-clamp time was 114,9 ± 52,02 minutes. The mean perfusion time was 188,04 ± 78,27 minutes. There were 4 re-explorations secondary to bleeding. All re-explorations were performed at the same thoracotomy incision, without additional sternotomy. In 8 patients, robotic surgery was converted to conventional surgery. In 3 patients, internal mammary artery flow was not satisfactory, in 2 patients posterior wall rupture and in one re-operated patient, aortic wall rupture was occurred, therefore we converted to conventional surgery. In one patient, right lung and thoracic cavity had too many adhesions; in the remaining one patient, dissection of the internal mammary artery could not be performed secondary to the pacemaker generator, which prevents movements of the right arm. In 1 patient, the periaortic region had many adhesions, and the aorta was clamped from the J sternotomy incision. Surgical mortality was 0,4 % (1 patient with posterior wall rupture), whereas hospital mortality was 4 %. 10 patients died during the postoperative period: 1 had mental retardation and could not adapt to conditions of postoperative period. The remaining 9 patients had lung disorders (infections, restrictive or obstructive disorders etc.) and could not be weaned from the ventilator.

CONCLUSION

Robotic heart surgery is growing so fast for almost every type of cardiac surgical fields. Except aortic surgery and aortic valve surgery, almost all-cardiac pathology including re-operations can now easily performed by robotic interventions. However, patient selection is still initial key point followed by learning curve period. Centers starting a new robotic program should have a proctor initially, at least for their first 20 cases. Additionally, robotic heart team should be permanent at least first 50 cases.

Types of Surgery	Number of patients (n=245)
Atrial Septal Defect Repair	95
Secundum Type ASD	70
Primary Suture	45
Pericardial Patch	25
Complex ASD	23
Partial Pulmonary Venous Return Anomaly	18
Ostium Primum Type ASD	4

Unroofed Coronary Sinus Type ASD	1
Disfunctional Amplatzer Resection	2
Mitral Valve Surgery	110
Mitral Repair	31
Mitral Replacement	67
Beating Mitral	12
Repair	2
Replacement	10
Coronary Artery Disease	20
MIDCAB	18
TECAB	2
Cardiac Mass Resection	14
Myxoma	9
HOCM	2
Subaortic Membrane	1
Pericardial Cyst	1
LV Mass	1
Ventricular Septal Defect	5
Isolated Tricuspid Valve Surgery	1
Additional Cryoablation Procedures	35

ID: **576**

Topic: **Cardiovascular Surgery » Minimally Invasive and Robotic Cardiac Surgery**

Presentation Type: **Oral**

OFF-PUMP TRANSAPICAL MITRAL VALVE REPAIR WITH ARTIFICIAL NEOCHORDA IMPLANTATION TECHNIQUE; 5-YEAR RESULTS OF A SINGLE CENTER

Gökhan Erol[1], Murat Kadan[1], Emre Kubat[1], Kubilay Karabacak[1], Mehmet Emin Ince[1], Vedat Yıldırım[1], **Cengiz Bolcal**[1], Ufuk Demirkılıç[2]

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OBJECTIVE

Transapical artificial neochorda implantation technique has been used as an alternative treatment model to conventional mitral valve repair surgery, especially in last decade. Although it could be useful specifically for patients with isolated P2 prolapsus, today, over 1000 patients have been treated with this method worldwide. In this report we aimed to present our 5-year experiences with this technique.

METHODS

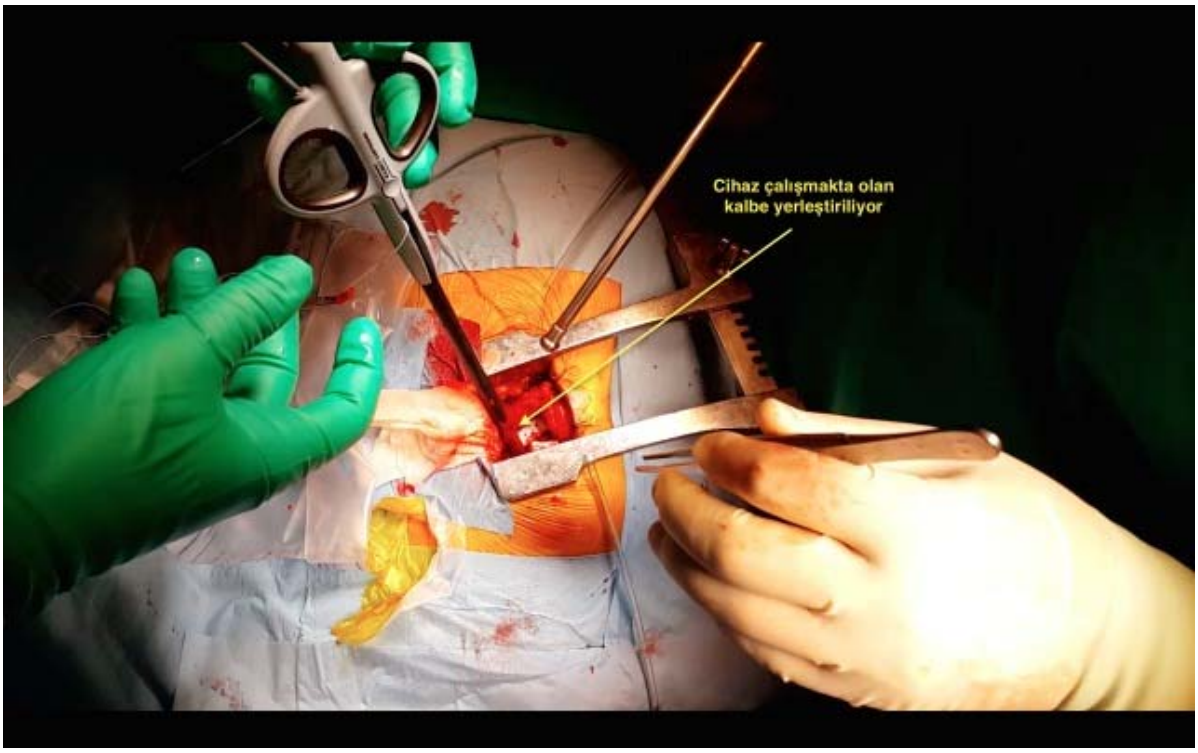
32 patients were presented to our department for surgical intervention with severe mitral insufficiency. 6 patients were female. Mean age of patients was 56,5 ± 13,7 (31-83). All patients had leaflet prolapse without annular dilatation. 25 patients had P2 prolapse, 4 patients had P2+P3 prolapse, 2 patients had additional anterior prolapse and remaining 1 patient had P1+P2 prolapse. Left anterior mini-thoracotomy incision was used to reach cardiac apex. NeoChord DS 1000 system was introduced into the heart (Figure), prolapsed leaflet was grasped and polytetrafluoroethylene sutures were deployed.

RESULTS

Mean operation time was 142.9 ± 1.8 minutes. In one patient, all the artificial chordas were ruptured intraoperatively, possibly secondary to degenerative leaflet tissue. In this patient, the operation was terminated without any success. On the remaining patients, there was not any further mitral regurgitation more than 1 degree at early time of postoperative course. Mean follow up time was 31,4 ± 17,6 (12-62) months. On post-operative follow up, there was 4th degree insufficiency in one patient at postoperative 6th month. This patient was re-operated, and on re-operation, interestingly we found that, all the artificial chordas were ruptured from apex without any rupture from leaflet. There was 2nd degree regurgitation on 2 patients, which had prolapsed on both anterior and posterior leaflets. Nevertheless, these patients are still under control without any additional surgical intervention.

CONCLUSION

Off-pump transapical mitral valve repair is feasible and safe surgical technique as an alternative to conventional surgery. However, it is useful for limited patients with leaflet prolapse secondary to chordal elongation or rupture, without any additional deformities of mitral apparatus such as calcification or annular dilatation.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ID: **575**

Topic: **Cardiology » Coronary Artery Disease - CABG Surgery**

Presentation Type: **Oral**

MINIMALLY INVASIVE CORONARY ARTERY BYPASS ON THE WORKING HEART (MICSCAB) IN PATIENTS WITH MULTIVESSEL CORONARY DISEASE

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BACKGROUND: Today, the classical operation of coronary artery bypass is undergoing changes. New sparing methods of myocardial protection, method of auxiliary cardiopulmonary bypass, off-pump technology have appeared. Reducing surgery injuries shortens the rehabilitation process of these patients, which is economically beneficial. Minimally invasive access allows faster improvement of quality of life and will return to normal lifestyle after coronary artery bypass.

METHODS: Since autumn 2018 – to January 2020 in the department of cardiac surgery of Republican Specialized Scientific and Practical Medical Center of Cardiology we have performed 38 MICSCAB operations. Patients had two-vessel (22 patients) and multivessel (16 patients) coronary lesions. Mini-access to the heart - left anterior-lateral thoracotomy in the 5th intercostal space. The length of the cutaneous incision was 10-12cm. The first step was to create proximal anastomoses with ascending aorta, then to create an anastomosis of LIMA-LAD, and then create an anastomosis of the right coronary artery and the system of circumflex artery with venous conduits were shunned. The duration of the operation time from the minimally invasive access ranged from 2 h 30 min (150min) to 3 h (180min) min (on average ± 2 h 35 min (155 min).

RESULTS: In postoperative period there were no cases of postoperative pneumonia, severe respiratory failure. In one case, there was a transition to a complete longitudinal sternotomy, due to the pronounced adhesion process in the left pleural cavity and the inability to adequately mobilize the LIMA. Patient 's spend in ICU is 1 day. Duration of hospitalization after surgery - 4-5 days. Upon discharge, all patients noted an improvement in the condition and quality of life. Functional and laboratory indicators improved after operation. Earlier complaints about heart pain, shortness of breath, feeling of air shortage, weakness decreased.

CONCLUSIONS: That's why, multivessel coronary artery bypass using minimally invasive access technique (MICSCAB) is a modern and safe approach in treating patients with CAD. Mini-access allows to reduce injuries of operation, improve early postoperative period, reduce frequency of complications and is economical treatment. MICSCAB is the high efficiency and safety of for patients with CAD, high surgical risk, it is necessary to further develop minimally invasive operations in cardiosurgical practice in the Republic of Uzbekistan.

ID: **490**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

CONCOMITANT CORONARY BYPASS SURGERY AND LIVER TRANSPLANTATION IN HOMOZYGOUS FAMILIAL HYPERCHOLESTEROLEMIA IN CHILDREN

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Background
Homozygous Familial Hypercholesterolemia (FH) is a common, severe form of elevated plasma, low-density lipoprotein (LDL), cholesterol, tendinous xanthoma and premature symptoms of coronary heart disease (CHD). It is estimated to affect as 1/160000 people all over the world. The defect lies in the LDL receptors located in the liver and the other organs owing to possible mutation occurring in the LDL receptor gene located in the chromosome 19. FH was the first genetic disorder recognized to cause myocardial infarction (MI). These patients are at a high risk of developing CHD and sudden death. Early detection and aggressive treatment are the keys.

Methods
Here we present the case of homozygous FH. Mother has detected differently sized yellow nodules in an elbow and knee of her 5- years 'old boy and admitted to dermatology. In anamnesis there is one sudden baby death. The biochemical investigation of the patient showed that the lipid profile was as total cholesterol 761mg/dl, LDL 660mg/dl. The mutation in LDLR gene has been found in blood analysis. Therapy has been started with atorvastatin and ezetimibe. There was not any progression in biochemical analyses despite of therapy. Next treatment was lipid apheresis which showed temporary improvement. Several months later an increasing level of lipids was observed. Next decision was liver transplantation. Considering sudden death in family anamnesis and the level of lipids pediatric cardiologist decided coronary angiography. Result was lesion of Left main 70 % (ulcer plaque), RCA 90%. Simultaneous surgery has been performed involving coronary artery bypass grafting (beating heart 2 grafts) and liver transplantation. Postoperative period was without any significant complications. Biochemical analyses after 2 weeks were LDL 90 mg/dl.

Conclusion
Coronary angiography is recommended in patient with homozygous FH before liver transplantation to prevent cardiac sudden death

ID: **619**

Topic: **Cardiovascular Surgery » Abdominal Aortic Aneurism**

Presentation Type: **Oral**

A COMPLICATED ATHEROSCLEROTIC CASE

Mustafa Barış Kemahlı[1], Şahin Karakılıç[1], Tuğra Gençpınar[2], Mehmet Birhan Yılmaz[1], Aytaç Gülcü[1], Öztekin Oto[1]

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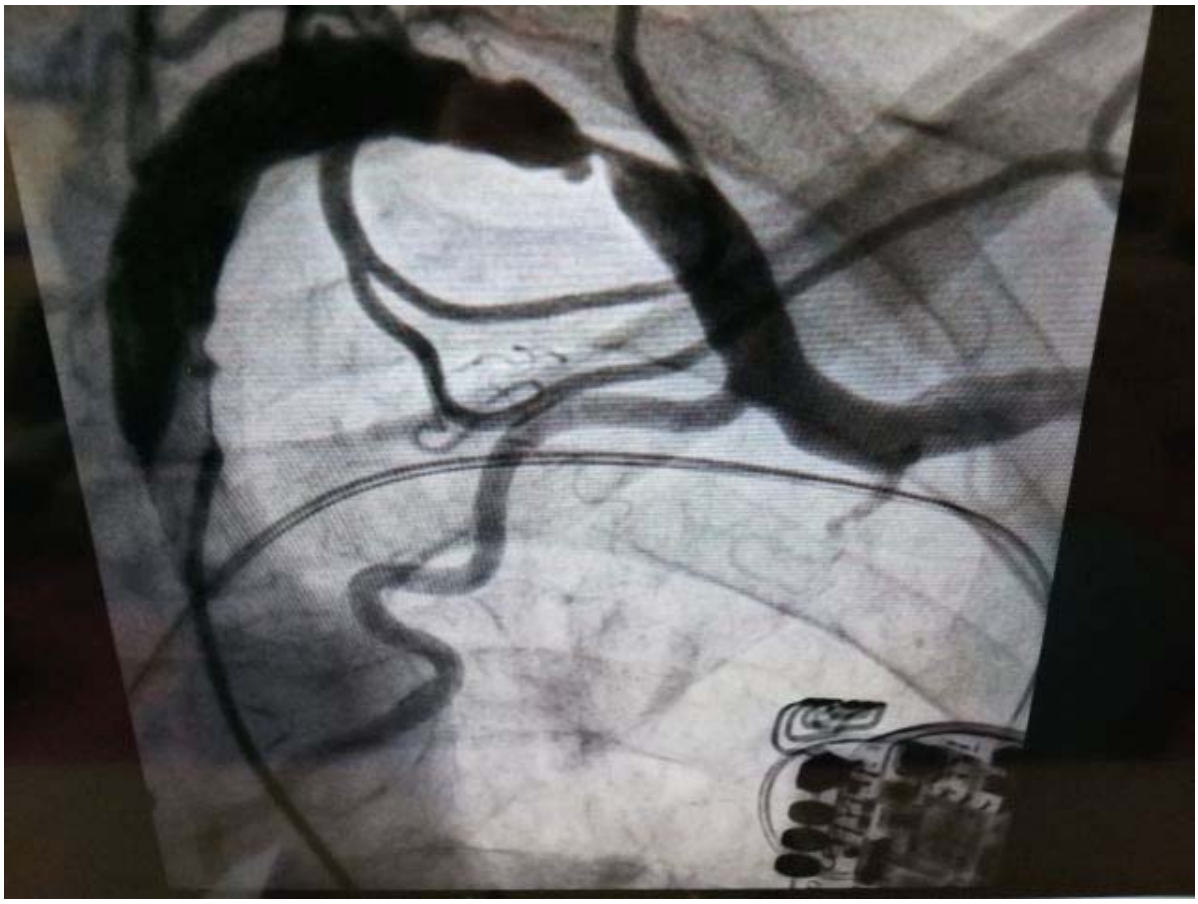
Case Presentation: The patient who underwent CABG five years ago was admitted to the hospital due to syncope. It was revealed that bilateral carotid artery disease with %95 stenosis on the right and total occlusion on the left side. Additionally, he had huge hemoglobin lowering abdominal aortic aneurysm (AAA) with %25 ejection fraction due to previous coronary artery disease and CABG. Firstly; we started with the right CEA under general anesthesia. Coronary angiography revealed on the left subclavian % 95 stenoses prior to LITA which supplying blood to total occluded LAD. Subclavian artery stenosis was treated with balloon angioplasty intervention. Ejection fraction jumped to % 35. Under that circumstance, we performed AAA surgery safely with a 20-10-10 dacron graph. The neck of the AAA was short and extremely large which was unsuitable for EVAR.

Conclusion: Evaluation carefully, step by step approach are essential for complicated atherosclerotic cases that can be a life-saving procedure in many situations.



Oral Presentation Session

Special Cases in Cardiology

Date: 31.10.2020 Time: 07:00 – 07:45 Hall: 4

ID: **779**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

INVESTIGATION OF THE RELATIONSHIP BETWEEN GLOMERULAR FILTRATION RATE AND AORTIC PROPAGATION VELOCITY, EPICARDIAL FAT THICKNESS, AND CAROTID-INTIMA MEDIA THICKNESS IN CHRONIC KIDNEY DISEASE PATIENTS

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BACKGROUND: Cardiovascular disease (CVD) is the primary cause of mortality and morbidity in chronic kidney disease (CKD) patients. Aortic velocity propagation (APV), epicardial fat thickness (EFT), carotid-intima media thickness (CIMT) measurements could provide additional information on assessing renal function decline in CKD patients and then investigate the association among these parameters.

MATERİALS AND METHODS: The study was designed as a cross-sectional and prospective design. A total of 170 CKD consecutive subjects were enrolled in study. Patients were divided into five groups according to their GFR values (stage-1=76(GFR>90),stage-2=39(GFR=60-89),stage-3=25(GFR=30-59),stage-4=15(GFR=15-29),stage-5=15(GFR<15)). Each patient underwent complete transthoracic echocardiography examination. APV, EFT and CIMT were measured for analyses. A multivariate linear regression model was used for analysis to determine the independent predictors of GFR.

RESULTS: The lowest APV was observed in stage IV-V, and the highest APV was observed in stage I-II ($p<0.001$). Stage IV-V patients the highest EFT, and stage I-II patients had the lowest EFT ($p<0.001$). Moreover, the lowest CIMT was observed in stage III, and the highest APV was observed in stage V ($p<0.001$). GFR was significantly and positively correlated with EFT and CIMT. In multivariate analyses, APV (OR:0.289, $p<0.001$), EFT (OR:-0.135, $p<0.001$) and CIMT (OR:-0.388, $p<0.001$) were indepentent predictors of GFR.

CONCLUSION: In summary, we found that APV decreased, and EFT nd CIMT increased as CKD progress. APV, EFT, and CIMT might be used for risk assessment in various stages of CKD. The present study suggests that APV, EFT, and CIMT might be incorporated with the examination of CKD patients in daily practice.

ID: **790**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

THE RELATIONSHIP BETWEEN COVID 19 AND MEAN PLATELET VOLUM

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Objective

The role of mean platelet volume (MPV) in cardiovascular events of thrombogenic origin has been proven in previous studies. Thrombogenic clinical conditions such as acute myocardial infarction, pulmonary embolism and cerebrovascular embolic events related to coronavirus disease 2019 (COVID 19) infection have been reported.

In this study, we aimed to examine the relationship between MPV and COVID 19.

Methods

This is a descriptive, observational study performed at the Department of Cardiology of Akhisar State Hospital. 242 COVID 19 patients and 80 sex and age matched control group patients included in our study. For this purpose, information on demographic data and labarotory parameters was collected.

Results

242 COVID 19 patients and 80 healthy patients included. COVID 19 patients mean age was 52,61 ± 15,29 years, in control group mean age was 53,67 ± 8,61 years. %55,4 of patients in COVID group and %52,5 in control group were male. The distribution by age and gender was similar between the two groups. MPV values in COVID 19 patients (10,40 ± 1,17) were significantly higher when compare with control group (7,92 ± 0,64) ($p< 0,001$) (Table 1).

Conclusion

In our study, we found that MPV levels were significantly higher in COVID 19 patients. MPV is a sensitive indicator that circulating platelets are activated. This indicates that it may be a predictor of thrombogenic events such as acute myocardial infarction due to COVID 19 infection.

Table 1. Patient Characteristics of COVID 19 and Control Groups

Variable	Covid 19 (n:242)	Control (n:80)	p value
Age	52,61 ± 15,29	53,67 ± 8,61	0,44
Gender (male)	134 (55,4%)	42 (52,5%)	0,65
BMI	26,94 ± 4,27	25,22 ± 3,17	**<0,001**
HT	38 (15,7%)	24 (30%)	0,005
DM	39 (16,1%)	8 (10%)	0,17
Smoking	46 (19%)	17 (21,3%)	0,66
Hg (× 10^3/µL)	13,25 ± 1,98	14,32 ± 1,26	**<0,001**
WBC (× 10^3/µL)	7,16 ± 3,68	7,73 ± 1,77	0,07
PLT (× 10^3/µL)	223,15 ± 76,23	230,97 ± 36,62	0,22
RDW(%)	13,84 ± 2,84	13,75 ± 0,61	0,62
MPV (fL)	10,40 ± 1,17	7,92 ± 0,64	**<0,001**
PCT(%)	0,2280 ± 0,07	0,20 ± 0,16	0,29
PDW(%)	16,14 ± 0,38	16,63 ± 0,57	**<0,001**
Neu (× 10^3/µL)	4,51 ± 2,96	4,38 ± 1,37	0,58
Lym (× 10^3/µL)	1,90 ± 0,90	1,96 ± 0,48	0,46

BMI: Body Mass Index, HT: Hypertension, DM: Diabetes Mellitus, Hg: Hemoglobin, WBC: White Blood Cell Count, PLT: Platelet, RDW: Red Blood Cell Distribution Width, MPV: Mean Platelet Volum, PCT: Plateletcrit; PDW: Platelet Distribution Width, Neu: Neutrophil, Lym: Lymphocyte

ID: **834**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

EVALUATION OF EPICARDIIAL FAT TISSUE THICKNESS IN PATIENTS WITH CARDIAC SYNDROME X

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INTRODUCTION: Cardiac Syndrome X is a condition in which normal coronary arteries are detected by coronary angiography (CAG) in patients with chest pain that is exacerbated by exercise and ischemia demonstrated by exercise testing or myocardial perfusion scintigraphy (MPS) and is usually underlying microvascular disease, abnormal coronary vascular resistance, or subendocardial ischemia. has been associated with. Epicardial adipose tissue is a visceral adipose tissue located around the heart and coronary arteries and has paracrine, vasocrine and inflammatory effects. It has been shown to be associated with coronary artery disease (CAD), metabolic syndrome, insulin resistance, and hypertension.In this study, it was aimed to evaluate epicardial adipose tissue thickness in patients diagnosed with Cardiac Syndrome X disease.

MATERIAL and METHOD: Between January 2017 and January 2019, 100 patients who underwent an MPS or effort test with CAD pre-diagnosis and had normal coronary arteries in CAD and 100 patients with no known CAD history and no ischemia detected in MPS or effort test (normal) control was included as a group.In all patients, epicardial adipose tissue thickness was measured by transthoracic echocardiography from the right ventricular free wall neighborhood from the parasternal long axis view (Figure 1A).Demographic data, laboratory parameters, transthoracic echocardiography results of the patients were evaluated. Patients with normal coronary arteries in CAG despite having ischemia in MPS or effort test were accepted as Cardiac Syndrome X. Data of Cardiac Syndrome X patients and control group patients were compared. Significant difference between 100 Cardiac Syndrome X patients (mean age: 57.3 ± 8.3, male: 61) and 100 control group patients (mean age: 58.7 ± 8.4, male: 62) in terms of demographic data, laboratory parameters, transthoracic echocardiography results was not observed (Table 1).

RESULTS: Significant difference between 100 Cardiac Syndrome X patients (mean age: 57.3 ± 8.3, male: 61) and 100 control group patients (mean age: 58.7 ± 8.4, male: 62) in terms of demographic data, laboratory parameters, transthoracic echocardiography results was not observed (Table 1). The mean epicardial adipose tissue thickness measured in Cardiac Syndrome X patients was significantly higher than the values measured in the control group (4.9 ± 1.1 vs. 3.2 ± 0.8 mm; p <0.001). As a result of ROC analysis, it was observed that epicardial adipose tissue thickness of 5.5 mm and above could predict cardiac Syndrome X disease with 79% sensitivity and 74% specificity (AUC: 0.755; OR: 0.752 0.992; p <0.001) (Figure 1B). The mean epicardial adipose tissue thickness measured in Cardiac Syndrome X patients was significantly higher than the values measured in the control group (4.9 ± 1.1 vs. 3.2 ± 0.8 mm; p <0.001). As a result of ROC analysis, it was observed that epicardial adipose tissue thickness of 5.5 mm and above could predict cardiac Syndrome X disease with 79% sensitivity and 74% specificity (AUC: 0.755; OR: 0.752 0.992; p <0.001) (Figure 1B).

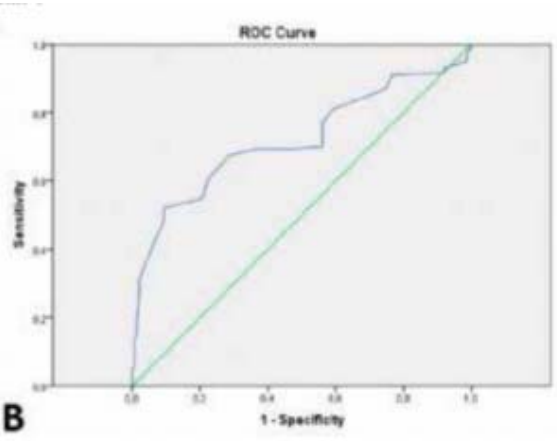
Conclusion: It was determined that epicardial adipose tissue thickness measured by echocardiography increased in Cardiac Syndrome X patients, independent of other factors, compared to healthy individuals. Increased epicardial adipose tissue may play a role in the pathophysiology of Cardiac Syndrome X disease.

Keywords: Echocardiography, Epicardial adipose tissue, Cardiac Syndrome X

Table 3. Demographic, procedural and clinical data for the study group.

Variables	SYNDROME X (n=100)	CONTROL (n=100)	p-value
Age, years	69.1 ± 10.9	71.7± 11.1	0.070
Hypertension n,(%)	92 (74.1)	95 (81.8)	0.102
Diabetes Mellitus n,(%)	44 (35.4)	46 (39.7)	0.073
Hyperlipidemia n,(%)	46 (37.1)	42 (36.2)	0.880
Smoking n,(%)	49 (39.5)	61 (52.6)	0.062
eGFR, ml/min/1.73 m^2	14.5 ± 0.2	15 ± 0.3	0.850
LVEF, %	53.6 ± 8.0	53.2 ± 8.7	0.740
Hemoglobin, g/Dl	13.3 ± 1.2	13.9 ± 1.0	0.060
Hematocrit, %	41.0 ± 3.6	42.3 ± 3.5	0.102
White Blood Cell, 10^3/µl	10.2 ± 2.8	10.3 ± 2.9	0.690
Platelet, 10^3/µl	241 ± 73	244 ± 71	0.570
Total Protein, g/L	68.8 ± 2.5	73.4 ± 2.7	0.062
Albumin, g/Dl	3.6 ± 0.3	3.9 ± 0.4	0.071
Glucose, mg/dl	105 ± 17	107 ± 14	0.120
Total cholesterol, mg/dL	172 ± 35	169 ± 37	0.770
LDL cholesterol, mg/dl	97.9 ± 23	112.8 ± 24	0.065
HDL cholesterol, mg/dl	39 ± 10	36 ± 11	0.880
Triglycerides, mg/dl	118 ± 51	123 ± 56	0.470
Antidiabetic n,(%)	44 (35.4)	46 (39.6)	0.262
Statin n,(%)	50 (40.3)	54 (46.5)	0.183
ACEi/ARB, n (%)	75 (60.4)	78 (67.2)	0.691
CCB n,(%)	23 (18.5)	20 (17.2)	0.380
Beta blocker n,(%)	50 (81)	47 (78)	0.320
Epicardial fatty tissue, mm	4.9 ± 1.1	3.2 ± 0.8	**<0.001**

Quantitative variables with a normal distribution were specified as the mean ± standard deviation. Categorical variables were shown as number and percentage values. LVEF, Left ventricular ejection fraction; eGFR, estimated Glomerular filtration rate; LDL, Low-density lipoprotein; HDL, High-density lipoprotein; ACE-i/ARB, Angiotensin converting enzyme inhibitor/angiotensin receptor blocker; CCB, Calcium channel blocker;



ID: **774**

Topic: **Cardiology » Preventive cardiology**

Presentation Type: **Oral**

THE ROLE OF CHA2DS2-VASC SCORE IN PREDICTING INTENSIVE CARE UNIT ADMISSION IN PATIENTS WITH COVID-19

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Objectives

The CHA2DS2-VASc is a risk score that is used to determine the embolic risk in patients with atrial fibrillation. In addition , its efficacy for prognosis has also been demonstrated in other clinical situations . The COVID-19 disease is characterized by pneumonia , respiratory failure ,venous and arterial thrombosis leading to multiorgan failure and mortality. Therefore, in this study, we aimed to show the predictive value of the CHA2DS2-VASc score to determine the need for intensive care unite (ICU) admission in COVID-19 patients and its correlation with serum D-dimer levels

Methods

Patients admitted to the hospital due to COVID-19 disease confirmed with a PCR test were evaluated, and those over 18 years of age were included in the study retrospectively. Each patients' CHA2DS2-VASc score was calculated as well as D-dimer and other laboratory parameters. Factors related to intensive care unit admission were evaluated.

Results

Overall, 110 patients were included in the study. Among these, 16 patients needed ICU admission. The CHA2DS2-VASc score was found to be an independent predictor of intensive care unite admission (odds ratio: 1.94 [1.32-2.85 95% confidence interval], p =0.001). ROC analysis revealed that the 1.5 cut-off value predicted ICU admission with a 75% sensitivity and specificity. There was also a significant correlation between the CHA2DS2-VASc risk score and serum D-dimer levels (p <0.001 r = 0,34)

Conclusion

The CHA2DS2-VASc risk score can be used to predict ICU admission in COVID-19 patients, and it is correlated with serum D-dimer levels.

Keywords

COVID-19; CHA2DS2-VASc; D-dimer; thromboembolism

ID: **821**

Topic: **Cardiology » Arrhythmias and antiarrhythmic therapy**

Presentation Type: **Oral**

RELATIONSHIP BETWEEN INDEX OF CARDIO-ELECTROPHYSIOLOGICAL BALANCE AND HYDROXYCHLOROQUINE IN PATIENTS WITH COVID-19

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Background: Hydroxychloroquine therapy is often prescribed for coronavirus disease 2019 (COVID-19). Electrocardiographic (ECG) monitoring is warranted because Hydroxychloroquine causes QT interval prolongation. The index of cardioelectrophysiological balance (iCEB), measured as QT interval divided by QRS duration, has recently been defined as a new risk marker for arrhythmias. Increased or decreased iCEB is associated with malignant ventricular arrhythmias. In this study, we aimed to investigate the relationship between iCEB and Hydroxychloroquine treatment in patients with COVID-19.

Methods: A total of 200 patients (males, 84 ; females, 116 ; 60.4±13.8 years) with PCR positive and chest tomography findings compatible with COVID-19 pneumonia were enrolled in the study. Demographic, clinical, and laboratory data for all patients were collected. ECG was recorded from all patients on admission to our medical unit for COVID-19, in oral therapy with hydroxychloroquine (200 mg, twice daily) for at least 5 days. iCEB (QT/QRS) was calculated from the 12-lead electrocardiogram.

Results: The mean age of the patients was 60.4 ± 13.8 years (Table 1). Compared to admission ECG, ECG on day 5 showed significant increases in heart rate, QT interval, corrected QT (QTc) interval, and iCEB (Table 2).

Conclusion: Our results suggested that iCEB is associated with Hydroxychloroquine treatment in patients with COVID-19. It is known that high iCEB is associated with torsade de Pointes (TdP), ventricular tachycardia.

Table 1. Demographic Features of Patients on Admission

Baseline characteristics N (%)
Sex
Female 116 (58%)
Male 84 (42%)
Age (years) 60.4 ± 13.8
Smoking 46 (23%)
Heart failure 36 (18%)
Hypertension 24 (12%)
Coronary artery disease 24 (12%)
Cerebrovascular disease 12 (6%)
Diabetes mellitus 40 (20%)
Chronic lung diseasea 38 (19%)
Chronic kidney disease 20 (10%)

Table 2: Electrocardiographic Parameters of the Patients

Variables	1. day	5. day	p Value
Heart rate (beats/min)	83 (76-91)	96 (81-106)	< 0.001
QT interval (ms)	363.6 ± 35	379 ± 30	< 0.001
QTc interval (ms)	418 ± 36.5	455.6 ± 29.4	0.005
QRS (ms)	84.8 ± 6.8	89.3 ± 11.8	0.899
iCEB	4.57 ± 0.27	5.11 ± 0.51	< 0.001

ID: **746**

Topic: **Cardiology » Preventive cardiology**

Presentation Type: **Oral**

LONG-TERM EXERCISE IN ELITE SOCCER PLAYERS DECREASES SYSTEMIC INFLAMMATION AND DYSLIPIDEMIA

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Objectives: Considering that chronic dyslipidemia and inflammation play a major role in the etiopathogenesis of atherosclerotic plaque, we aimed to investigate the effect of a seven-week exercise program on the serum lipid profile, plasma atherogenic index (PAI), and inflammatory biomarkers, namely interleukin (IL), tumor necrosis factor (TNF-a), and monocyte chemoattractant protein-1 (MCP-1) in male soccer players.

Methods: The participants in this study were 22 healthy male professional soccer players aged 19–25 years. IL-1β, IL-6, IL-10, TNF-a and serum lipid profile were recorded before and after exercise. PAI was defined as the base 10 logarithm of the ratio of the concentration of triglyceride (TG) to high-density lipoprotein (HDL).

Results: While there was no difference between the pretest and posttest values of IL-1β, IL-10 and CRP values, a statistically significant decrease was observed in the post-exercise IL-6 ($p<0.001$), TNF-a ($p<0.001$) and MCP-1 ($p=0.001$) values. In addition, compared to the pretest values, there was a significant decrease in the posttest values of total cholesterol (TC) ($p<0.001$), TG ($p=0.001$), low-density lipoprotein (LDL) ($p<0.001$), HDL ($p<0.001$), non-HDL-C ($p<0.001$), and PAI ($p<0.001$) .

Conclusions: This study demonstrated that after seven weeks of exercise training, TC, TG, LDL-C, non-HDL-C and PAI decreased and HDL-C increased, indicating improvement in dyslipidemia. In addition, the decrease in IL-6, TNF-a, and MCP-1 suggests a decrease in systemic inflammation. These findings support the beneficial effects of exercise on cardiovascular health.

Keywords: Physical exercise, non-high density lipoprotein, plasma atherogenic index, interleukins.

ID: **768**

Topic: **Cardiology » Chronic stable angına pectoris**

Presentation Type: **Oral**

ASSOCIATION BETWEEN CORONARY SLOW FLOW AND SERUM OSMOLARITY

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Objectives: The coronary slow flow (CSF) phenomenon is frequently observed during coronary angiography (CAG) and associated with various clinical manifestations including myocardial ischemia, life-threatening arrhythmias, sudden cardiac death, and recurrent acute coronary syndromes. Despite of various known underlying factors, pathophysiology of CSF is still poorly understood. Serum osmolarity is associated with several clinically adverse events including cardiovascular, respiratory and renal disorders. Although the prognostic value of serum osmolarity with regard to various clinical conditions such as stroke, intracranial haemorrhage and acute coronary syndrome has confirmed by recent studies its relationship between CSF still has not been well established. In this study we aimed to elucidate the relationship between serum osmolarity and CSF.

Methods: The records of 463 patients with CSF and 455 control subjects with normal coronary arteries detected by CAG were investigated retrospectively. For each group, following variables were analyzed; demographic and clinical characteristics, laboratory values and two dimensional quantitative coronary angiography (QCA) measurements. Epicardial coronary blood flow was quantified visually using the thrombolysis in myocardial infarction (TIMI) frame count method. Serum osmolarity was calculated using the equation (2×serum sodium [mEq/L])+(BUN [mg/dL]/2.8)+(glucose [mg/dL]/18). All revealed data statistically analysed.

Results: According to our data, the calculated serum osmolarity value was significantly higher in patients with CSF compared to control subjects (290.1 ±14.2 mOsmol/kg H2O vs 277.3±7.0 mOsmol/kg H2O, $p<0.05$). In addition, estimated TIMI frame counts for all coronary arteries were significantly higher in the CSF group than in the control subjects ($p<0.01$). Furthermore, ingroup analysis revealed that there was a moderate positive correlation between TIMI frame count and serum osmolarity in CSF group. ($r=0.49$; $p<0.01$)

Conclusions: Our data showed that, patients with CSF have higher serum osmolarity level compared to control subjects. Besides, There was a positive correlation between serum osmolarity and coronary flow velocity. This data could highlight the role of serum osmolarity in the pathogenesis of CSF

ID: **785**

INVESTIGATION OF THE EFFECT OF WARFARIN ON MORTALITY IN PATIENTS WITH COVID-19

Salih ŞAHINKUŞ

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Objective: We aimed to investigate the effects of warfarin on the prognosis of patients diagnosed with coronavirus disease 2019 (COVID-19).

Methods: Patients using warfarin and diagnosed with COVID-19 were divided into two groups depending on whether the INR is effective or not. The types of chronic diseases, drugs used, haematological and biochemical parameters and prognoses in each group were statistically analysed.

Results: The data of more than 600 COVID-19 patients who were retrospectively hospitalized in the intensive care unit were accessed through the hospital registry system. Totally 23 patients using warfarin, 8 (65.2%) patient's INR is between therapeutic range and 15 of them is not. There was no significant difference between the two groups in terms of demographic characteristics and laboratory data. The mortality rates for the two groups were similar (40.0% vs. 37.5%, respectively; p = 0.633).

Conclusion: Whether the dose of warfarin at the target INR value does not affect mortality in patients with COVID-19.

ID: **794**

EFFECT OF NEW DIRECT ORAL ANTICOAGULANTS ON MORTALITY IN COVID-19 PATIENTS

Ercan Aydın

Objective: We aimed to investigate the effects of new direct oral anticoagulants (NOAC's) on the prognosis of patients diagnosed with coronavirus disease 2019 (COVID-19).

Materials and methods: Patients using NOAC's and diagnosed with COVID-19 were divided into two groups depending on whether using low dose NOAC (for any indication) or normal dose. The baseline characteristics, other drugs used, haematological and biochemical parameters and in-hospital outcomes in each group were statistically analysed.

Results: Totally 39 patients using NOAC's, 22 (56.4%) patients used normal dose NOAC's and 17 (43.6%) of them used low dose NOAC's. There was no significant difference between the two groups in terms of demographic characteristics. In laboratory data C-reactive protein and procalcitonin values were higher in the group using normal dose of NOAC. The mortality rates for the two groups were similar (40.0% vs. 37.5%, respectively; $p = 0.633$).

Conclusion: Whether the dose of warfarin at the target INR value does not affect mortality in patients with COVID-19.

Oral Presentation Session

Special Cases in Cardiovascular Surgery

Date: 31.10.2020 Time: 07:00 – 07:45 Hall: 5

ID: **765**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Oral**

CAUSES OF MORTALITY IN ELECTIVE VASCULAR SURGERY CASES

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Objective:Systemic reasons are mostly behind mortality rates in patients that have undergone elective vascular operations. This study aimed at examining mortality causes post elective surgery in our clinic.

Methods: 931 patients as elective cases in our clinic starting in January 2015 to January 2020 have been included into this study. Systemic risks in all patients were taken into consideration before the operations. Data related to patients' sex, age, coexisting systemic diseases, operation type, intensive care unit stay and reasons for mortality have been recorded.

Results :Between the dates of January 2015 to January 2020, a total number of 931 elective vascular surgery was carried out under general anesthesia. Mortality rate was 2.4% (23 patients). 19 of those were males, 4 were female patients. 67.1±9.4 was the mean age. Mean intensive care unit stay was 8.7± 7.1 days. Prior to the surgery, 7 of those patients had hypertension, 10 had coronary artery disease, 3 patients had diabetes, 3 had transient ischemic attack. Mortality occurred in 5 (21.7%) of the patients who were operated on for aortobifemoral bypass, in 5 (21.7%) of femoropopliteal bypass, in 3 (13%) aortobifemoral and bilateral femoropopliteal bypass, in 3 (13%) carotid thromboendarterectomy, in 1 (4.3%) crossfemoral bypass cases.
Mortality was caused by internal organ related reasons in 9 (39%) patients (low cardiac output, arrhythmia), multiple organ insufficiency in 4 (17%) patients, respiratory disease in 3 (13%) patients, gastrointestinal complications in 3 (13%) patients (mesenteric ischemia and bleeding), infection in 1 (4.3%) and neurological reason in 1 (4.3%) patient.

Conclusion: Detailed surgical analysis before elective vascular operations is noteworthy. The leading cause of mortality in elective vascular surgery patients is internal organ complications.

ID: **770**

Topic: **Cardiovascular Surgery » Abdominal Aortic Aneurism**

Presentation Type: **Oral**

EMERGENCY SURGICAL TREATMENT OF RUPTURED ABDOMINAL AORTIC ANEURYSM

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[2]*Trakya University Hospital, Edirne, Turkey*

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Objective: Acute cases of a ruptured abdominal aortic aneurysm require immediate diagnosis and treatment, as early as possible for a better prognosis. In this study, we operated on 20 patients who were diagnosed with a ruptured aortic aneurysm, as an emergency.

Method: 20 patients who were admitted to emergency between February 2012 and February 2017 were included as a part of this study. Majority of those patients (63.2%) reported abdominal pain as their complaint, 31.6% reported lower back pain and 1 of the patients (5%) presented with acute abdomen. We utilized a median laparotomy incision on all of the patients who went under surgery (100%). On 8 of those patients (40%) we performed an aneurysmectomy with aortobifemoral bypass, on 10 patients (50%) aneurysmectomy and aortobiiliac bypass was carried out as 2 other patients (10%) were given a tubular graft interposition to abdominal aorta in addition to aneurysmectomy.

Results: 19 out of 20 patients with abdominal aortic aneurysm were males (95%), and 1 was a female (5%). Median age within the group was 64.9 (± 9.4), the average age for males was 64.2 (± 9.3) and the female patient was 77 years old. Patients in the group carried other risk factors such as hypertension (100%), hyperlipidemia (85%), diabetes (30%), COPD (40%), smoking (95%) and a high serum creatinine level of above 1.5mg/dl (25%). All of those patients underwent surgery under emergency circumstances.
Polytetrafluoroethlene graft (on 84.2% of patients) (all of which were bifurcated) and Dacron graft (on 10.5% of patients) (all of which were tube graft) were used in the operations. An average of 8± 3,25 units of erythrocyte per patient was needed for blood transfusion.
Each patient spent their post-operative time in intensive care unit under observation. Following the operations, all patients' lower extremity distal pulse was palpable (100%). Patients had an average 3.75 day (± 2.04) stay in the intensive care unit. Mortality rate was 20% (4 patients). The cause of mortality was cardiac reasons and renal failure after the surgery.

Conclusion: Earlier surgical intervention with no delay ensures higher rates of survival in patients with ruptured abdominal aortic aneurysms a clinical condition known with a high mortality rate. Clinical diagnosis of the rupture by the physician on first contact with the patient is crucial to make an emergency surgical intervention possible without any delays as the patient is transferred to a cardiovascular surgery clinic.

ID: **771**

Topic: **Cardiovascular Surgery » Various Veins**

Presentation Type: **Oral**

A CHALLENGING AND COMPLEX PROCEDURE IN VASCULAR SURGERY: ISOLATED VENOUS INJURIES

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Objective:Vascular surgeons more often than not have difficulties in detecting and repairing major vein injuries. In this study, our aim is to assess the outcome of surgical intervention on isolated venous injuries in patients who went into operation in the last five years.

Methods: From January 2012 to January 2017, 33 patients underwent surgery for isolated venous injuries resulting from blunt trauma, firearms, stabbing and iatrogenic causes. 9 (29%) of those patients were female and 24 (71%) were male; their age averaged 40.5 ± 12.1. They were operated under general anesthesia. The techniques that were utilized during those operations were primary repair, graft interposition, end-to-end anastomosis, saphenous vein interposition and ligation techniques.

Results: The distribution of causes to patients' injuries were as follows: 14 patients (42.4%) were injured by iatrogenic causes, 10 (30.3%) were stabbed, 6 (18.1%) had blunt injuries, and 3 (9%) had gunshot wounds. 16 of the isolated vein injuries were iatrogenic inferior vena cava injuries, 7 patients had iliac vein injury, 5 patients had axillary vein injury, 2 patients were with brachial vein injury, 2 patients with femoral vein injury and 1 patient with popliteal vein injury. End-to-end anastomosis was performed in 14 (42.4%) patients, primary repair was done in 9 (27.2%) patients, saphenous vein interposition was carried out in 9 (27.2%) patients and ligation was performed in 1 (3%) patient. Following the surgeries, deep venous thrombosis developed in 3 patients and one patient had compartment syndrome.
Conclusion: A state of homeostasis should be promoted and maintained immediately in patients with isolated venous injuries as well as surgically repairing the injury to ensure continuous venous circulation; anticoagulation should be administered where appropriate in order to prevent the formation of venous thrombosis.

ID: **778**

Topic: **Cardiology » Peripheral arterial diseases**

Presentation Type: **Oral**

PERCUTANEOUS ENDOVASCULAR TREATMENT OF HEPATIC ARTERY PSEUDO ANEURYSM

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CASE PRESENTATION

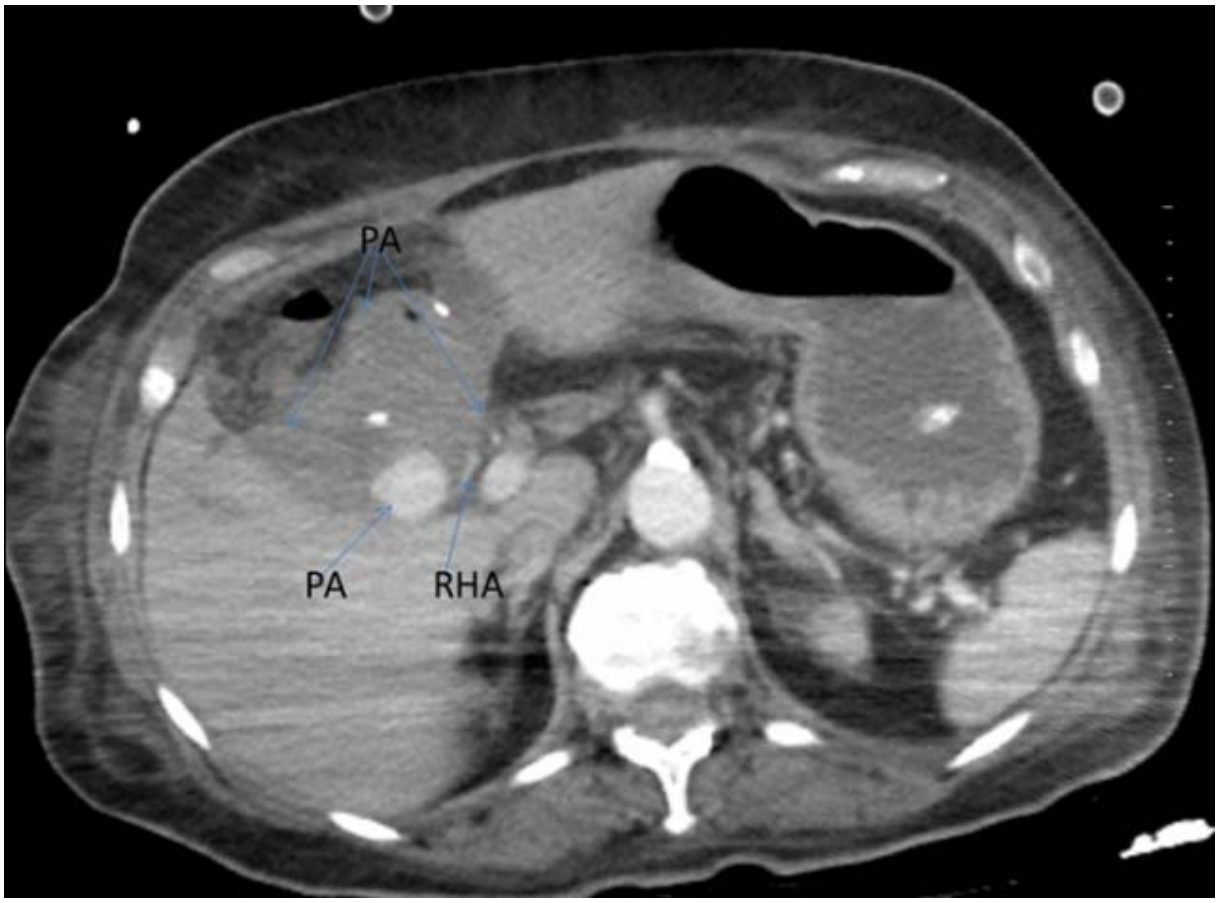
56 years old female patient was admitted to emergency department 6 days after successful laparoscopic cholecystectomy. Gastric pain with melena was chief complaint. After observing progressive decline in Hgb levels despite RBC transfusions, contrast abdominal CT revealed hepatic artery pseudo aneurysm and intraabdominal hematoma (picture 1). The patient is consulted with interventional cardiologists for percutaneous endovascular repair option.

Patient was transferred to catheter laboratory. The hepatic artery and pseudoaneurysm was visualized with 6Fr Judkins catheter and transfemoral approach. Final treatment decision was planned as placing a graft stent to pseudoaneurysm segment. Severe angulations on the course of the artery and angle between celiac truncus and abdominal aorta made it very difficult to obtain a proper back up from guiding catheter for device advancement via transfemoral approach. After switching to transbrachial route and using 6Fr MPA guiding catheter, a strong backup for the intervention was acquired. The pseudoaneurysm segment was crossed with PT-2 0.014 hydrophilic guidewire but we failed to advance covered stent through second angulation on the artery. A second guidewire (Sion Blue 0.014) was crossed through lesion side parallel to first guidewire as buddy-wire and this time successful advancement and placement of covered stent was achieved.

DSA visualization of hepatic artery revealed no residual pseudoaneurysm with normal flow distal to covered stent area. The final result was confirmed with 3D CT angiogram of the region (picture 3).

DISCUSSION

Incidence of hepatic artery pseudoaneurysm is 0.6% after cholecystectomy. It is a fatal complication which ends up in perforation of artery in 60-80% percentage of cases. We have shown that in experienced centers with appropriate planning before the procedure, percutaneous endovascular intervention with either coil embolization or graft stenting would be a lifesaving option in such cases.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ID: **775**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Carotid Artery Disease**

Presentation Type: **Oral**

SURGICAL REPAIR OF A COMMON CAROTID ARTERY PSEUDOANEURYSM AFTER GUNSHOT WOUND

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BACKGROUND

Carotid artery pseudo-aneurysms (CCAP) have a low incidence. With regard to aetiology they are associated with both penetrating and blunt trauma, among other causes. Surgical intervention is invariably required due to high risks of rupture and embolisation. Notwithstanding, treatment is tailored to the individual patient. This case describes a unique example of common carotid artery pseudo-aneurysm and reviews the available treatment options.

METHOD

A 22 year-old male presented to our institution with a pulsatile and expanding mass in the right anterior cervical region. 12 months previously he had sustained a gunshot wound to the same region, suffered cardiac arrest, and was treated at another facility successfully. His symptoms included dysphonia and dysphagia. A diagnosis of right-sided CCAP was made via Doppler Ultrasound and CT Angiogram imaging studies.

RESULT

The patient underwent resection of the lesion with PTFE bypass grafting under general anaesthesia with continuous electroencephalographic monitoring. The procedure was uneventful and there were no complications post-operatively. The patient was discharged 5 days post surgery. Post-operative imaging at 3 and 6 months post-operatively revealed a patent graft.

Treatment of CCAP depends on the nature and location of the lesion, in addition to patient age and comorbidities. Open surgical and endovascular techniques have been described. Surgical options include excision with primary anastomosis, excision with interposition graft and carotid ligation. The latter is performed infrequently due to significant associated morbidity and mortality. Endovascular techniques are growing in popularity and include deployment of bare metal and covered stent grafts. Bare metal stents can be used in isolation or combined with aneurysmal sac coiling via a stent.

CONCLUSION

We present a case of CCAP in the context of previous gunshot trauma, treated successfully with resection and PTFE bypass graft.

ID: **776**

Topic: **Cardiovascular Surgery » Hybrid Cardiovascular Surgery**

Presentation Type: **Oral**

PENETRATING NECK INJURY - A HYBRID APPROACH TO REPAIR

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BACKGROUND

Penetrating neck injuries (PNI) comprise 5 to 10 percent of adult traumatic injuries. Exsanguination is the most common cause of immediate death, usually involving the carotid artery. Mortality is significantly increased in the presence of pharyngo-oesophageal injury. We present a unique case of PNI in our institution, managed with a hybrid endovascular and open surgical approach.

METHOD AND RESULT

A 33 year-old male presented to our institution via ambulance having sustained a stab wound to the left side of his neck. On arrival he was profoundly unstable with haemorrhagic shock, severe acidosis and GCS 3. A multi-disciplinary trauma team was in attendance for stabilisat3ion and resuscitation. Secondary assessment revealed a clean 3cm laceration between the infra-auricular and infra-mandibular areas of the left side of the neck, entry point zone 3.

Imaging of the head and neck with CT aortogram revealed extensive retropharyngeal haematoma, contrast blush at the origin of the left internal carotid artery (ICA), compression of the left internal jugular vein (IJV), and multiple pharyngeal lacerations. The external carotid artery (ECA) was unaffected.

The patient was promptly transferred to a hybrid operating suite. Digital subtraction angiography (DSA) confirmed a 7mm diameter pseudoaneurysm in the wall of the proximal left internal carotid artery (ICA). An appropriately sized stent graft was unavailable to treat the pseudoaneurysm. Consequently, a viatrac 14 balloon was advanced to the distal common carotid artery (CCA) and left in place to control bleeding if necessary.

Thereafter an oblique, curvilinear incision was made over the left side of the neck. During exposure of the large vessels of the neck, significant haematoma was encountered and evacuated with gentle suction. The CCA, ICA, ECA and IJV were identified and controlled with silastic loops . Transverse lacerations were identified in the lateral walls of the proximal ICA and IJV, and repaired primarily with continuous 6-0 non-absorbable polypropylene sutures. The patient was transferred to ICU post-operatively for neurological observation and haemodynamic monitoring. He made a good clinical recovery and was discharged five days later.

CONCLUSION

We present a case of penetrating neck injury with concomitant lacerations of the internal carotid artery and internal jugular vein, in a profoundly unstable patient. The management of PNI requires rapid treatment by an experienced multi-disciplinary team and a high index of suspicion regarding damage to deep structures. Hard clinical signs are frequently absent and consequences of delayed diagnosis and intervention may include permanent neurological injury and death.

ID: **840**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

MANAGEMENT OF CARDIOVASCULAR SURGERY PATIENTS DURING PANDEMIC PROCESS

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OBJECTIVE: The Covid 19 pandemic has had a significant impact on the functioning of the health system around the world. Elective surgeries were stopped in our clinic between the date when the first case was announced and the period when restrictions were reduced. Due to the role of other public hospitals in the management of pandemic-related treatments, our clinic has played a critical role in the treatment of cardiovascular surgery patients.In our study, it was aimed to compare the data of patients treated on 11.03.2020-01.06.2020, when restrictions were heavily applied due to the pandemic, and the characteristics of the procedures performed in the same period of the previous year. In addition, it was aimed to present institutional protocols for performed operations.

METHODS: Data of patients treated in our University Hospital between 11.03.2019-01.06.2019 and 11.03.2020-01.06.2020 are analysed retrospectively. The preoperative and postoperative prothocols as well as results of the pandemic period with restrictions and pre-pandemic period are compared.

RESULTS: During the pandemic, outpatient and surgical treatments were maintained in our clinic. The number of outpatient admissions, which was 2553 between 11.03.2019-01.06.2019, was 1012 between 11.03.2020-01.06.2020. During the pandemic, 14 CABG, 2 ascending aortic replacements, 3 peripheral bypass, 3 embolectomy, 2 sternum revisions, 5 chemotherapy ports, 1 vascular injury repair operation were performed. The operation of two patients whose early CABG decision was made was delayed due to Covid PCR positivity. Covid tests were performed on the operated patients, at the time of angiography and previous to operation and no positivity was found in any of them. A routine CT scan was not performed to restrict the risk contact . During this period, tests were also taken from patient companions. In contrast, 84 adult open heart surgery procedures were performed in the previous year, and 21 arterial surgery procedures were performed. 46 chemotherapy ports were installed, 2 vascular injury repair procedures, 3 tube pericardiostomy, 34 venous surgical interventions were performed. During the pandemic, there was no significant difference between the patient loss (n = 3) and the previous year (n = 5) in the surgical interventions followed-up in the postop intensive care unit ($p>0.05$).

CONCLUSIONS: With a careful perioperative management, the surgical process can be prevented from being affected by the pandemic. However, it may not be possible to achieve this in cases requiring emergency surgery.

Oral Presentation Session

Multimodality Imaging: Basics and Advances

Date: 31.10.2020 Time: 08:00 – 09:00 Hall: 4

ID: **161**

Topic: **Cardiology » Stroke prevention in Atrial fibrillation**

Presentation Type: **Oral**

THE CORRELATION BETWEEN LEFT ATRIAL VOLUME INDEX AND CEREBROVASCULAR STROKE

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Background: Increased left atrial (LA) size was associated with poor cardiovascular outcomes such as the development of heart failure, atrial fibrillation (AF), and stroke in the elderly.

Aim of the work: To determine the relation between left atrial volume index (LAVI) and the occurrence of ischemic cerebrovascular stroke (CVS) in patients with sinus rhythm.

Patients and Methods: A prospective analysis of the data of patients admitted to a tertiary care center. Left atrial volume index (LAVI) was measured in 1222 patients admitted to a tertiary care center with first attack of acute ischemic cerebrovascular stroke (CVS) and the data was matched with 1222 patients admitted by diagnosis other than acute ischemic stroke. Patients with valvular heart diseases, history of AF and with known cardioembolic source of stroke as left ventricular thrombi or masses were excluded from both groups.

Results: The mean age was 61.1±14.4, 61.5±12.4 years, males were 806 (71.43%), 852 (73.47%) respectively. LAVI was 35±10.3 ml/m2 in CVS group while 25.8±6.4 ml/m2 in non-CVS group which was statistically significantly (P value= 0.02*).

Table (1): Baseline patient demographic, clinical, laboratory, echocardiographic data

		Total (n=2444)	Acute CVS (n=1222)	No CVS (n=1222)	*P*-value
Age (years)			61.1±14.4	61.5±12.4	**0.75**
Sex (Males)			806 (66%)	852 (70%)	**0.65**
Risk Factors	**DM**		655 (53.6%)	603 (49.3%)	**0.6**
	HTN		702 (57.5%)	675 (55.2%)	**0.55**
	Smoking		599 (49%)	564 (46.2%)	**0.71**
	Dyslipidemia		310 (25.4%)	299 (24.5%)	**0.81**
Clinical examination	**Mean BP (mmHg)**		122±15	119±17	**0.88**
	HR (bpm)		82±16	85±18	**0.76**
Laboratory data	**Hb (g/dl)**		12.3±1.3	12.9±1.7	**0.61**
	Platelets (10^3/l)		255±110	235±95	**0.35**
	INR		1.15±0.11	1.09±0.18	**0.75**
Ejection Fraction %			55±12	51±11	**0.41**
Left atrial volume index (ml/m2)			35±10.3	25.8±6.4	**0.002***

Results are represented as number (%) or mean ± standard deviation, BP = Blood Pressure, HR = Heart Rate, Hb = Hemoglobin, WBC = White Blood Count, INR = International Normalization Ratio, * significant P value < 0.05

Conclusion: LAVI can be used as a strong predictor for the occurrence of CVS in patients with sinus rhythm.

ID: **216**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

ASSOCIATION OF INTERATRIAL SEPTAL THICKNESS WITH SEVERITY OF CORONARY ARTERY DISEASES

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Background

Paracrine effect of the epicardial adipose tissue may promote coronary atherosclerosis. Adipose tissue is the main determinant of interatrial septum thickness (IST) and is a true marker of cardiac adiposity. The relationship of IST with the presence and severity of coronary artery disease (CAD) is thoroughly investigated around the world. This study was conducted to evaluate the association of interatrial septal thickness with severity of coronary artery diseases.

Methods

A total of 100 patients with ischemic heart disease who agreed to undergo coronary angiography were included in the study. Coronary angiogram was done during index hospital admission. Interatrial septal thickness was measured using bidimensional echocardiography. On the basis of interatrial septal thickness, study subjects were divided into two groups: 50 patients with IST ≥14.2 mm were assigned as Thick and 50 patients with IST<14.2 mm were assigned as Thin. Clinical (age, sex, smoking habit, hypertension and diabetes mellitus, clinical presentation of coronary artery diseases) and anthropometric (waist circumference and body mass index) variables were collected. Severity of coronary artery diseases was expressed by vessels score and Gensini score. Patients with a Gensini score ≤36 points were considered as absent or mild and those with Gensini score >36 points as severe coronary artery diseases.

Results

Severe coronary artery disease patients were significantly more in thick group than thin group (78% vs 14%, p<0.001). The difference of mean interatrial septal thickness between the mild and severe coronary artery disease groups were statistically significant (15.5 mm vs 12.1 mm, p<0.001). Interatrial septal thickness showed a positive correlation with Gensini score (r=0.58) and Vessel score(r=0.51). Univariate and multivariate regression analysis revealed interatrial septal thickness found to be independently significant predictor of severe CAD with odds ratio being 6.61 vs. 9.82.

Conclusions

The study demonstrated that there was significant association of interatrial septal thickness with severe coronary artery disease. So presence of severe coronary artery disease can be predicted by echocardiographic measurement of interatrial septal thickness.

Table: Comparison of mean interatrial septal thickness between patients with significant and insignificant CAD by Gensini Score (N=100)

IST mm	Significant CAD (n=55) ((≥36)	Insignificant CAD (n=45) (<36)	p value
Mean □ SD	15.6□ 2.0	12.1□ 2.5	<0.001s

S=Significant
p value reached from unpaired t test.

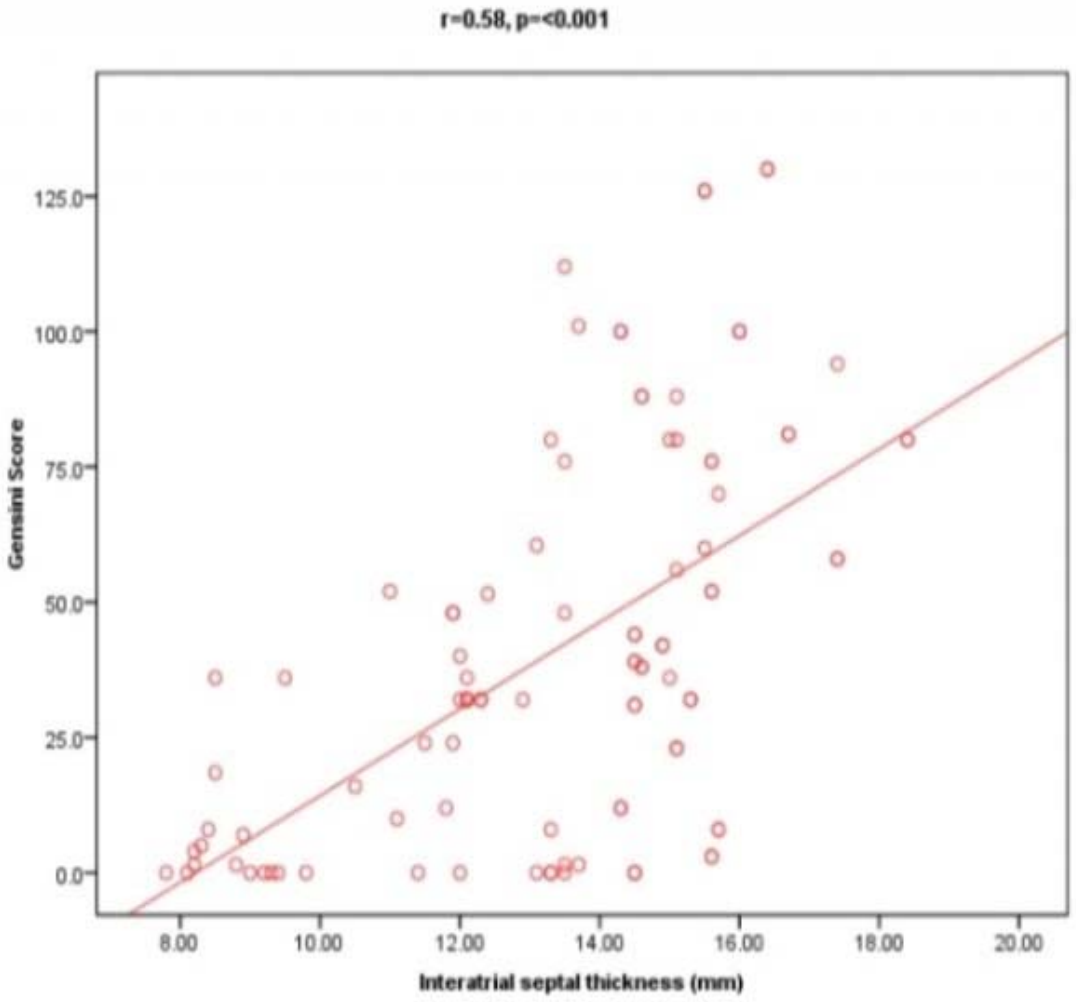

Figure 9: Scatter plot diagram showing correlation between Interatrial septal thickness (IST) and Gensini score.

ID: **11**

Topic: **Cardiology » Cardiac imaging - Cardiac CT**

Presentation Type: **Oral**

ROLE OF MULTI-DETECTOR COMPUTED TOMOGRAPHY IN DETECTION OF FACTORS AFFECTING PROGRESSION OF CORONARY ATHEROSCLEROSIS OVER TIME

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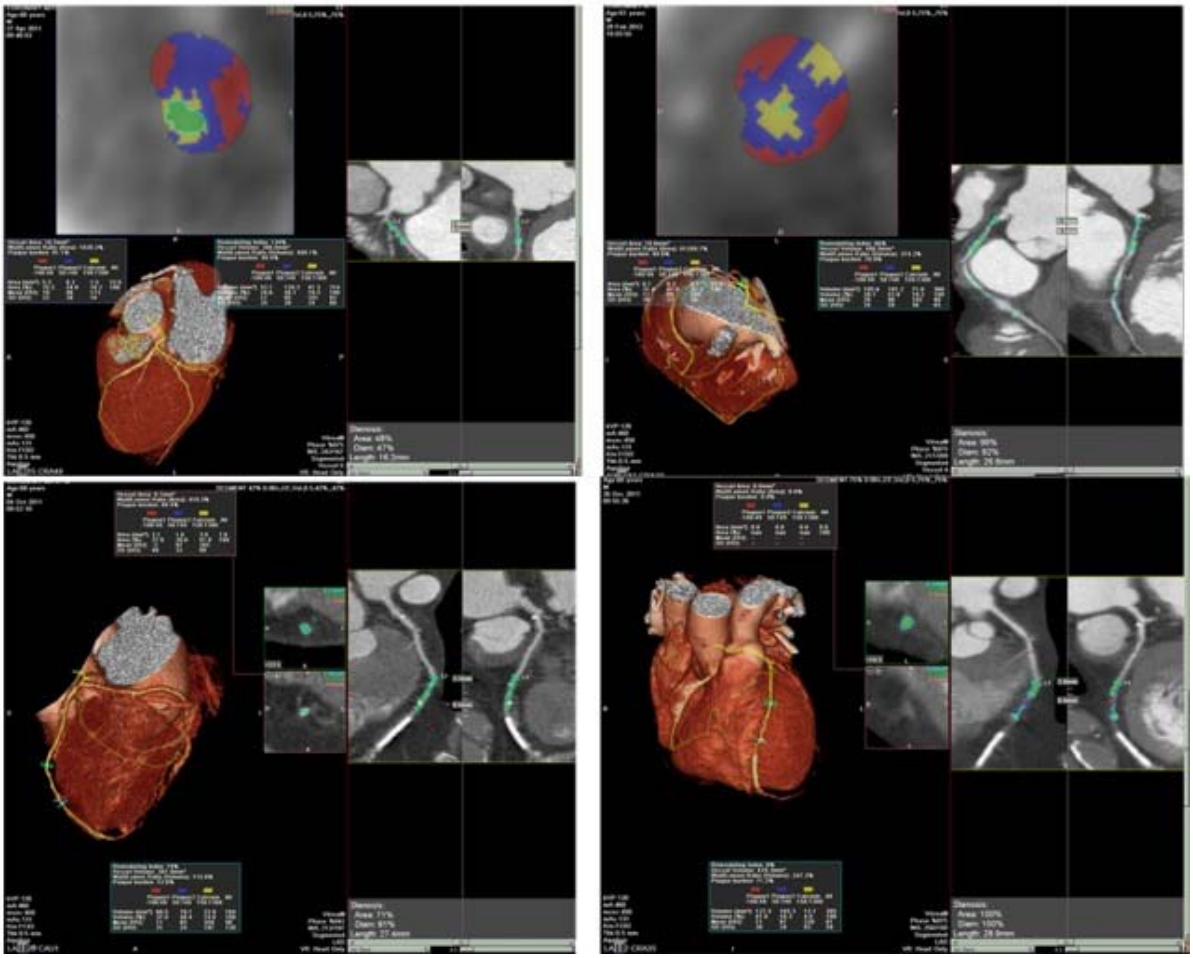
Background: The coronary atherosclerosis clinical presentations (including stable, unstable angina, non-ST and ST elevation myocardial infarction) depends on the composition of the atherosclerotic plaque and the changes occurring on the molecular and cellular level of this plaque. These changes, such as increased plaque volume, positive remodeling and calcium deposition can be detected by coronary MDCT.

The study was designed to determine the value of MDCT to detect factors affecting progression of coronary atherosclerosis by assessing the serial changes in coronary plaques over an interval of time.

Methods: The study was conducted on 40 patients who underwent repeated coronary MDCT. History of risk factors was noted. Baseline and follow-up cardiac CT scans were performed. Detected atherosclerotic plaques were evaluated using these parameters: 1. QCA-Like Parameters: a) Minimum lumen diameter. b) Diameter stenosis %. 2. IVUS-Like Parameters: a) Atheroma volume %. b) Total atheroma volume. c) Normalized total atheroma volume for segment length. d) % change in total atheroma volume. e) Minimum lumen area. f) Area stenosis %. 3. Coronary remodeling was calculated.

Results: Among the 40 patients, 85% were males. The mean age was of 60.5 yea. As for risk factors, 47.5% had DM, 77.5% had HTN, 55% were current smokers and 65% were dyslipidemic. The mean duration between the baseline MDCT and the follow up one was 25.9 months +/- 19.2 months. Sixty-eight plaques were detected, evaluated using MDCT in both settings and compared to each other. To ensure the accuracy of the change in plaque characters we considered this change was significant when observed in two of three characters (the 3 characters were % DS, % AS and % change in TAV). Therefore, we obtained 39 plaques (57.35%) had progressed, 24 plaques (35.3%) had no change and 5 plaques (7%) had regressed. According to our study, the most statistically significant (p value =0.001) risk factor associated with plaque progression is DM. Dyslipidemia is the 2nd statistically significant (p value =0.012) risk factor in our study. Hypertension and smoking are less associated with plaque progression with P value of; P1=0.288, P2=0.593 respectively. Calcium deposits were observed in 17.9%, 50% and 80% of the progressed, stable and regressed plaques, respectively. Therefore, there was a significant association between plaque stabilization and the presence of calcium deposits (P value=0.001).
Positive remodeling was detected in 71.8%, 41.7% and 60% of the progressed, stable and regressed plaques, respectively. Therefore, there was no significant association between vascular remodeling and plaque progression (P value=0.228).

Conclusion: MDCT can be used for noninvasive monitoring and follow up of coronary atherosclerosis. Our study showed that diabetes mellitus and dyslipidemia were the main risk factors associated with coronary artery atherosclerosis progression. Calcium deposits were associated with plaque stabilization.



	Decrease (n = 5)		No change (n = 24)		Increase (n = 39)		[illegible]	[illegible]p
	No	%	No	%	No	%		
DM	0	0.0	5	20.8	25	64.1	15.543*	<0.001*
HTN	3	60.0	21	87.5	31	79.5	2.139	0.288
Smoking	2	40.0	13	54.2	21	53.8	0.363	0.866
Dyslipid	1	20.0	14	58.3	31	79.5	8.636*	0.012*
F.H	1	20.0	11	45.8	18	46.2	1.274	0.593

ID: **215**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

ASSESSMENT OF MITRAL INSUFFICIENCY BY MULTIPARAMETRIC APPROACHES IN CASE OF PROLAPSE

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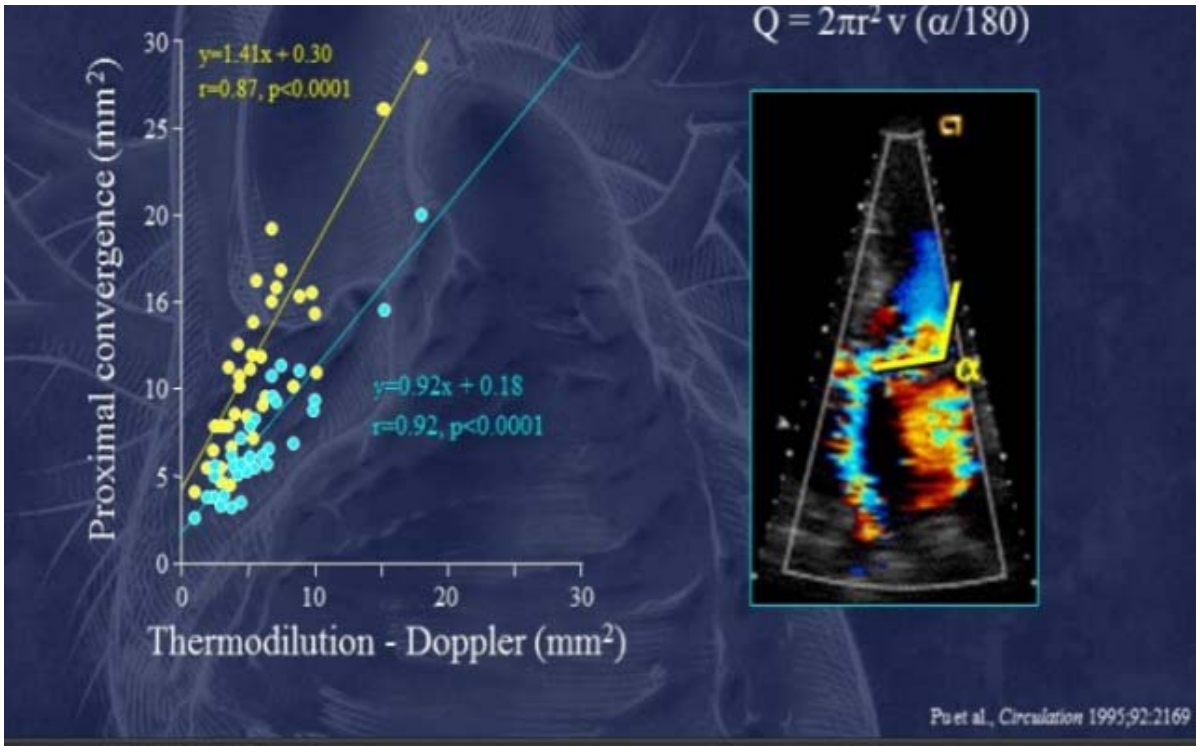
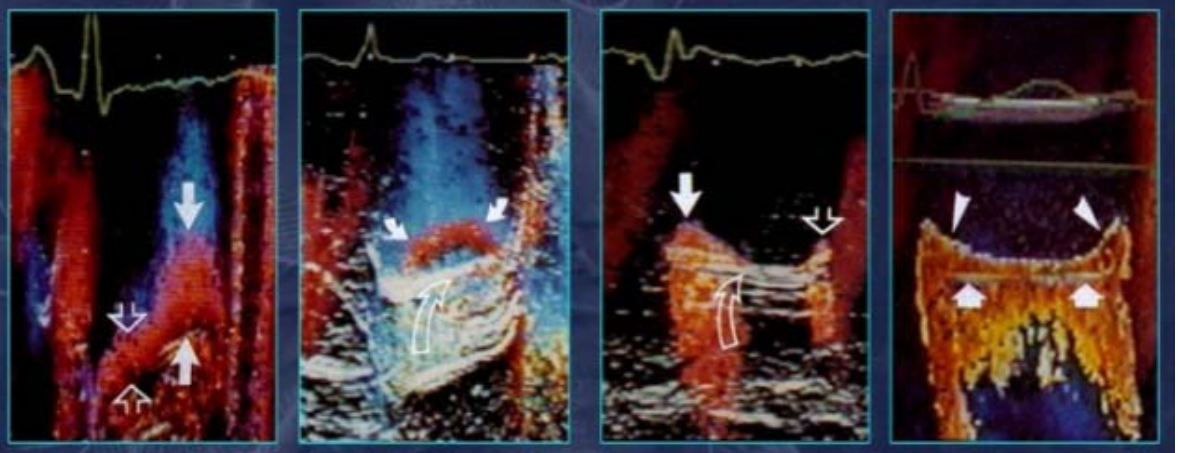
In case of prolapse the evaluation of mitral insufficiency by the surface of the regurgitating orifice and the volume regurgitant often overestimated hence the need to supplement by the multiparametric evaluation essentially to correctly calculate the Telediastolic Volumes and the telesystolic volumes by deducting the true regurgitating volume by the Systolic Ejection Volume and the tissue method to calculate the regurgitation fraction.
This comparison focused on 10 patients with severe MI by the usual measures and when we add these multi-parameter approaches we are approaching validation of our measurements.
3 patients were rated severe by the usual method became moderate to severe and the remaining 7 patients were severe with high reliability.

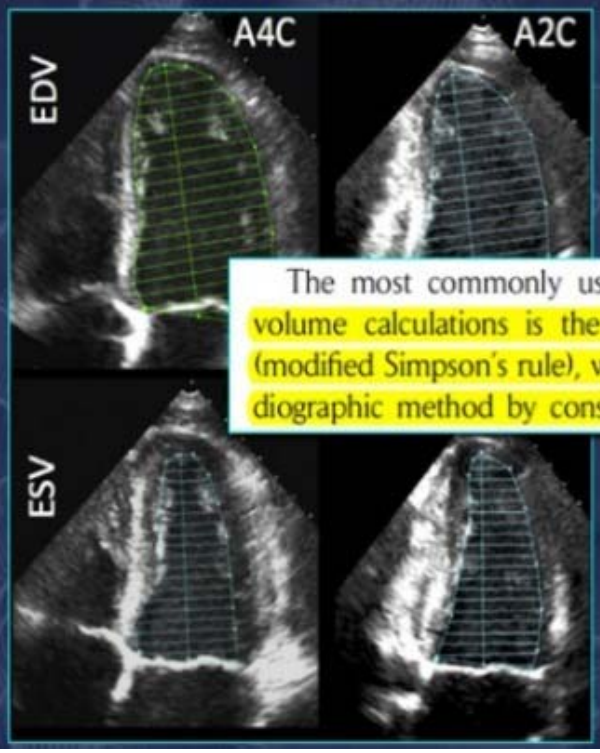


Mitral Regurgitation
Variable ERO during systole

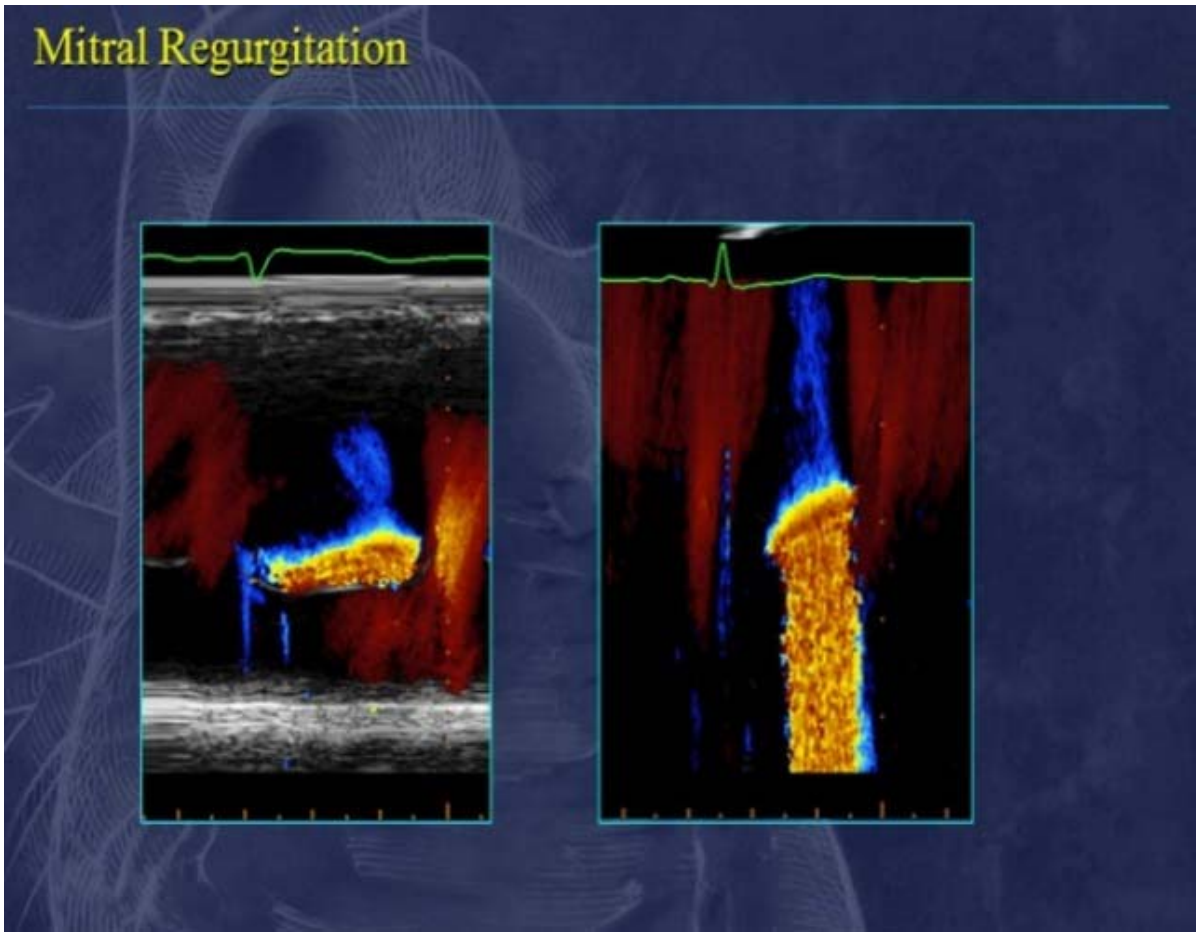


Mitral valve prolapse | Rheumatic mitral valve disease | Functional mitral regurgitation | Functional mitral regurgitation

Mitral Regurgitation
2D-echocardiography is the most commonly used method, …

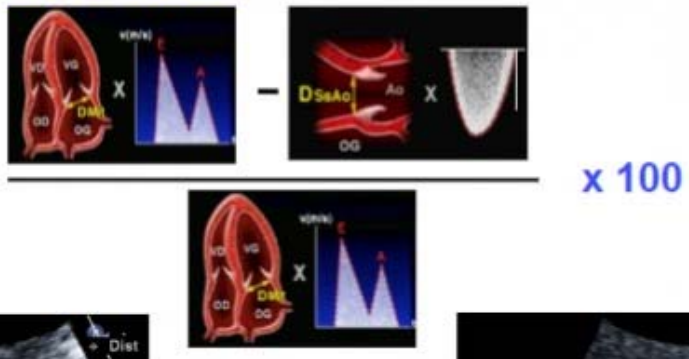


The most commonly used method for 2D echocardiographic volume calculations is the biplane method of disks summation (modified Simpson's rule), which is the recommended 2D echocardiographic method by consensus of this committee (Table 1). An



Fraction de régurgitation

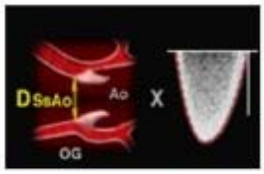
2/ Méthode Doppler pulsé



Fraction de régurgitation

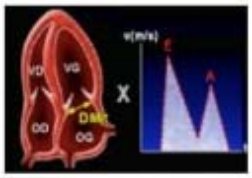
1/ Méthode des Volumes

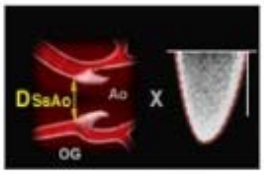
$$\frac{\text{Volume d'éjection - Simpson (biplan) - ou 3D} - \text{DSsAo} \times \text{Ao}}{\text{Volume d'éjection - Simpson (biplan) - ou 3D}} \times 100$$

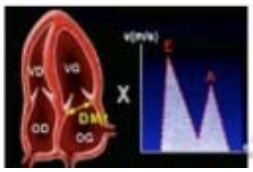


2/ Méthode Doppler pulsé

$$\frac{\text{VD VG OD OG DMit} \times \text{v(m/s) E A} - \text{DSsAo} \times \text{Ao} \times \text{OG}}{\text{VD VG OD OG DMit} \times \text{v(m/s) E A}} \times 100$$







ID: **340**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

TRANSTHORACIC ECHOCARDIOGRAPHY (TTE) ROLE IN THE ASSESSMENT OF CARDIOTOXICITY DEVELOPED AS A RESULT OF CHEMOTHERAPY TREATMENT OF PATIENTS WITH CANCER

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Background: The role of Transthoracic echocardiography (TTE) in the evaluation of chemotherapy induced cardiotoxicity.

Methods: 43 patients were included in the research. Inclusion criterias: Cardiologically healthy 20-65 years old females receiving chemotherapy with the anthracycline consisted scheme due to breast cancer diagnosis. Exclusion criterias: those who have structural myocardial disease, those who receive chemotherapy whole life and patients with chronic kidney failure. Criterias for the evaluation of effectiveness: A) dynamics of left ventricle geometric values (end-systolic size, end-diastolic size, end-systolic volume, end-diastolic volume and stroke volume); B) left ventricular systolic function (LVEFsimpson) ; C) left ventricular diastolic function (e΄, E/e΄, LAVİ, TRvel) ; D) function and morphology of valves have been evaluated. All patients were examined with TTE before, between each and after fourth chemotherapy courses.

Results: In TTE examination before, between each and after fourth chemotherapy courses of patients without pre-existing left ventricular systolic and diastolic disfunction: A) significant changes in left ventricle end-systolic size, end-diastolic size, end-systolic volume, end-diastolic volume and ejection fraction are not observed; B) Ejection fraction is not decreased more than a lower limit of 10% of initial values; C) diastolic disfunction was noticed in the assessment of left ventricular diastolic function with the detection of following values: e'septal <7, E/e' > 15, LAVI > 34ml/m²; D) No significant changes of valve functions were noted. Positive correlation was detected between increasing numbers of chemotherapy courses and impairing diastolic function of left ventricles.

Conclusion: TTE is an effective and sensitive method for the evaluation of chemotherapy induced cardiotoxicity. It gives an opportunity to substantiate systolic and diastolic disfunction of patients.

ID: **292**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

LONGITUDINAL 2D STRAIN ANALYSIS TO PREDICT CORONARY ARTERY DISEASE IN PATIENTS WITH NO REGIONAL WALL MOTION ABNORMALITY AT REST

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Aims:

Speckle-tracking imaging is a novel method for assessing left ventricular function and ischemic changes. The aim of this study was to predict the presence of coronary artery disease by longitudinal 2D strain analysis using speckle tracking echocardiography in patients with stable or unstable angina with no regional wall motion abnormality at rest .

Methods:

This cross-sectional study included a total 66 patients (mean age, 51.92 ± 8.9 years) with suspected coronary artery disease, without regional wall motion abnormality on resting echocardiography who underwent coronary angiography. Longitudinal 2D strain analysis by speckle tracking echocardiography was performed in all patients before coronary angiography. Global and segmental peak systolic longitudinal strain were recorded & computed by offline dedicated software semi-automatically on bull's-eye report. The patients were divided into two groups according to the coronary angiographic findings; group- I: significant coronary artery disease on coronary angiogram (n=35), group-II : normal coronaries on coronary angiogram (n=31). All the baseline characteristics and outcome were then compared between the two groups.

Results:

Peak systolic longitudinal strain value of all left ventricular segments were obtained successfully in 66 patients. Peak systolic longitudinal strain (both global and segmental) was significantly decreased in patients with significant coronary artery disease on coronary angiogram group. Receiver operating characteristic curve analysis demonstrated that global peak systolic longitudinal strain could effectively detect patients with coronary artery disease (area under receiver operating characteristic curve = 0.877, 95% CI=0.749–0.960). According to receiver operating characteristic curve analysis, -18.77% appeared to be a good cutoff value for predicting those with significant coronary artery disease (specificity 77.4% and sensitivity 82.9 %).

Conclusion:

The present study showed that resting peak systolic longitudinal strain (global & segmental) is significantly reduced and highly sensitive to detect significant coronary artery disease in patients with stable & unstable angina , even when resting wall motion and LV ejection fraction were normal. It is also observed that 2DSTE seems capable in identifying high risk patients with left main & triple vessel disease.

ID: **603**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

ARE THERE ASSOCIATION BETWEEN EPICARDIAL FAT THICKNESS AND CARDIOVASCULAR DISEASE?

Sabiye Yılmaz

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BACKGROUND AND AIM: Epicardial adipose tissue (EAT) is reported to be associated with cardiovascular risk profiles and the pathogenesis of atherosclerotic coronary artery disease (CAD). But there are conflicting theories regarding the accuracy of echocardiography for determining the value of EAT in cardiovascular risk assessment. The aim of this study was to determine the association between EAT thickness with CAD and myocardial function.

METHODS: A total of 183 patients were enrolled. Subjects were divided into two groups, those with and without CAD. EAT thickness on the free wall of the right ventricle (RV) in parasternal long-axis view at end-systole were measured using transthoracic echocardiography. Also conventional echocardiography parameters and tissue Doppler imaging were performed to evaluate systolic and diastolic functions.

RESULTS: Population characteristics are displayed in the table1. The patients with CAD were older (54.5± 9.6 years vs 43.4± 8.5 years, P=0.000) and more likely male (86.5% vs 50%). The patients in the non-CAD group had a low cardiovascular risk factors including smoking, BMI, diabetes and hypertension. There was no significant difference between the groups with respect to LDL and TG but HDL cholesterol levels were significantly lower in the CAD. The CAD group had thicker EAT than the non-CAD group (6.2+1.6 mm vs 4.4+1.2 mm P <.001). The area under the curve on receiver operating characteristic (ROC) curve analysis of EAT thickness for predicting CAD was 0.484 with a sensitivity of 79% and specificity of 71%. [ROC area 0.811, P<0.001, 95%CI (0.746-0.877)]. EAT thickness showed a significant positive correlation with age (r = 0.572, P= 0.000), BMI (r = 0.502, P = 0.000), DM (r = 0.323, P= 0.000), and HT (r = 0.304, P= 0.000). There was a negative correlation between lower high-density lipoprotein (HDL) (r=-0.168, P= 0.040) and epicardial fat thickness, but this relationship was not detected with low-density lipoprotein (LDL) and triglyceride (TG) level. Moreover, EAT was associated with reduced diastolic function by lower early diastolic myocardial velocity (e') (r=-0.627, P=0.000) and higher E/e' ratio (r=0,283, p=0.001). Also, EAT was negative correlated with decrease in LV systolic functions evaluated by EF (r=-0.467, P=0.000) and systolic velocity of the mitral annulus (s') (r=-0.501, P=0.000).Multivariate logistic regression analysis revealed that EAT thickness is influenced by age (β =0.009, P<0.001) and BMI (β=0.012, P<0.001) after adjustment for conventional risk factors.

CONCLUSIONS: EAT thicknesses were increased in CAD patients and strongest predictor of CAD and can be evaluated with together other cardiovascular risk factors to determine cardiac risk. Also, patients with CAD had thicker EAT as well as lower systolic and diastolic function compared with controls and it can be used as an easily applicable method with other echocardiographic parameters in the evaluation of cardiac functions.

ID: **769**

Topic: **Cardiology » Cardiac imaging - Cardiac MRI**

Presentation Type: **Oral**

MITRAL ANNULAR DISJUNCTION IN A PATIENT WITH SEVERE MITRAL REGURGITATION AND MITRAL VALVE PROLAPSE

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Mitral annular disjunction (MAD) is a structural abnormality defined as separation of the mitral valve annulus from the ventricular myocardium. It is present in some patients with mitral valve prolapse(MVP) and is associated with myocardial fibrosis and ventricular arrhythmia independently of MVP. In this case, we aimed to present a 42-year-old patient who applied to the cardiology clinic with the complaints of palpitations and syncope, who was found to have bileaflet MVP, MAD, and advanced MR by transthoracic echocardiography and cardiac MRI, and then underwent surgical repair.

Case

A 42-year-old female patient has been followed up in the cardiology clinic with a diagnosis of MVP for about 9 years, and she reports that she has intermittently complained of palpitations, independent of effort and stress, causing presyncope-like symptoms. T negativity was detected in inferolateral leads (D2, D3, AVF, V4-6) in ECG. Transthoracic echocardiography (TTE) revealed enlargement in the left heart cavities (LVEDD 59 mm, LA diameter 45 mm), bi-leaflet MVP and advanced mitral regurgitation. Cardiac MRI showed bileaflet MVP, MAD during systole, advanced mitral regurgitation (from A1-P1 and A3-P3 scallops), late gadolinium enhancement in the left ventricular inferolateral wall. When rhythm holter examinations were examined, ventricular premature beats were observed in right bundle branch block morphology, sometimes single, sometimes multiple morphology, suggesting possible left ventricular origin. Beta blocker was administered at the maximum tolerated dose as antiarrhythmic therapy. The patient whose complaints continued, was consulted with cardiovascular surgery and a decision was made for the operation. Annuloplasty was applied to the mitral annulus. In the post-operation control TTE, the trace was monitored for MY. The patient was discharged with full recovery.

Discussion

Although it generally has a good prognosis; It is known that the risk of arrhythmia is significantly increased in individuals accompanied by bileaflet MVP, papillary muscle fibrosis and mitral annulus disjunction (MAD). In the study conducted by Marra et al, a relationship was found between MAD in MVP patients with bileaflet prolapse, late gadolinium enhancement, the presence of curling, and sudden cardiac death. Non-invasive imaging methods such as TTE, transesophageal echocardiography and CMR imaging can often be used for MAD diagnosis. However, since it can only be detected during ventricular systole, care should be taken during evaluation. MAD is associated with ventricular arrhythmias and sudden cardiac death, caution should be exercised in terms of diagnosis in patients with MVP

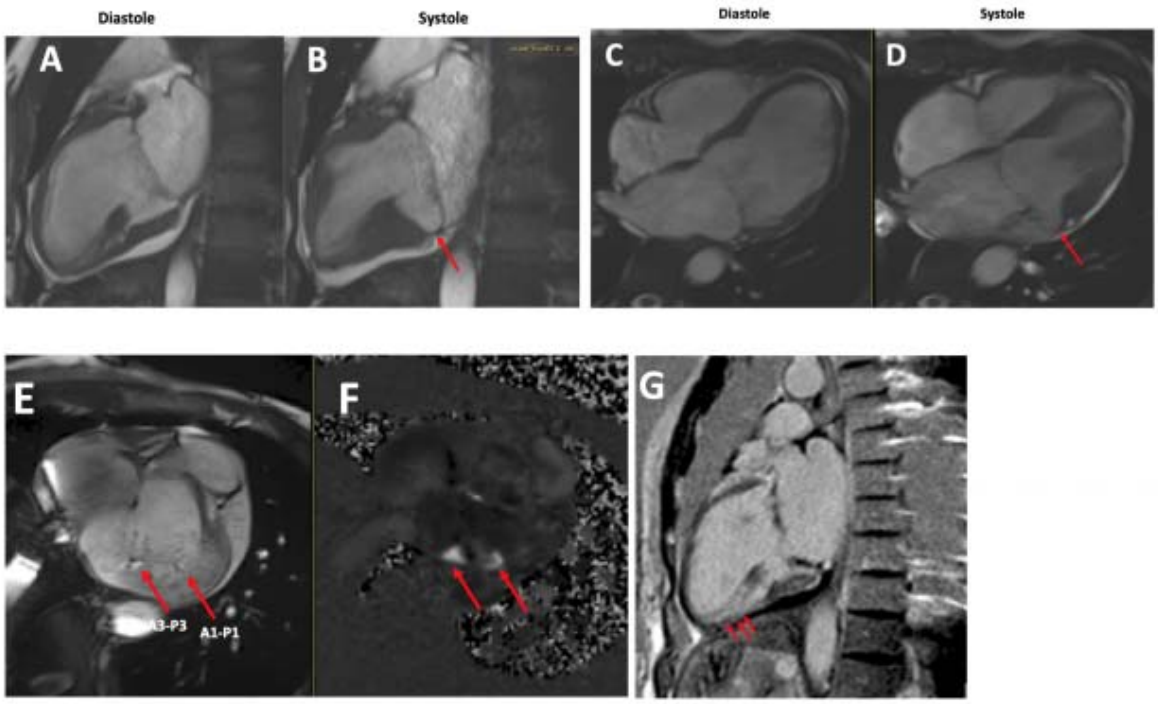

Figure: A-D) Cardiac magnetic resonance imaging shows the MAD in the four chamber image (labeled) E) Cine image showing MR jets from A1-P1 and A3-P3 scallops, F) Flow mapping showing MR jets from A1-P1 and A3-P3 scallops, G) LGE images showing the mild fibrosis at the LV inferolateral wall.

ID: **737**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

THE PREDICTIVE VALUE OF THE COMBINED SYSTOLIC-DIASTOLIC INDEX FOR NON-DIPPER HYPERTENSION

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Introduction: Non-dipper hypertension is defined as less than 10% systolic and diastolic blood pressure (BP) reduction during sleep compared to day-time. Previous studies showed that a non-dipper BP pattern is associated with end-organ damage and increases cardiovascular risk. In many studies, non-dipper hypertension has been found to cause more significant diastolic function impairment, more severe arterial stiffness, increased subclinical left ventricular (LV) dysfunction, and increased left atrial mechanical dysfunction. In previous studies showed that the early diastolic mitral velocity (E) / [early diastolic mitral annular velocity (Ea) × systolic mitral annular velocity (Sa)] index, defined as the combined systolic-diastolic index, is associated with decreased LV systolic function, increased LV end-diastolic pressure and increased brain natriuretic peptide levels. This study aims to investigate the predictive value of the combined systolic-diastolic index for non-dipper hypertension.

Methods: A total of 83 patients were included in the study. Physical examination, laboratory tests, 24-hour ambulatory blood pressure monitoring, and conventional echocardiography were administered to all patients. The participating patients were divided into two groups as 42 patients with dipper hypertension and 41 patients with non-dipper hypertension based on ambulatory blood pressure monitoring.

Results: The mean age of the patients was 51.7 ± 9 years. Of all the participants, 57.8% were females, and 22 (26%) had diabetes mellitus. Clinical and demographic characteristics and laboratory findings were similar between the two groups except for night-time systolic BP and diastolic BP. LV end-diastolic diameter, LV end-systolic diameter, interventricular septum, posterior wall, left atrial diameter, left ventricular ejection fraction, mitral inflow velocities, deceleration time, isovolumetric relaxation time, isovolumetric contraction time, and late diastolic myocardial velocity (Am) were similar in the groups. Left ventricular mass index (LVMI) (91.6 ± 12.9 vs. 106.1 ± 7.9, p < 0.001), E/Em (7.4 [6.6–8.3] vs. 10 [8–12], p < 0.001, combined systolic-diastolic index (0,98±0.18 vs. 1.29±0.43, p <0.001) were significantly higher and Em (9.9 ± 2.7
vs. 7.9 ± 3.4, P = 0.004) was significantly lower in the non-dipper group compared with the dipper group. Multiple logistic regression analysis was performed to determine independent predictors of non-dipper hypertension. LVMI (OR 1.048, 95% CI: 1.010–1.086, P = 0.012) and combined systolic-diastolic index (OR 2.115, 95% CI: 1.061–5.143, P = 0.014) were determined as independent predictive parameters for non-dipper hypertension.

Conclusion: The increased combined systolic-diastolic index on transthoracic echocardiography suggests that we may come across non-dipper hypertension and a high risk of end-organ damage. The combined systolic-diastolic index may be used as a useful parameter in risk stratification in hypertensive patients.

ID: **806**

Topic: **Cardiology » Preventive cardiology**

Presentation Type: **Oral**

MYOCARDIAL PERFORMANCE INDEX IS ASSOCIATED WITH ATHEROSCLEROTIC EVENT ASSESSED BY SCORE RISK SCORE

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Objective: The myocardial performance index (MPI) has been widely used to quantitatively assess myocardial performance (1). It is more reflective of overall cardiac function than systolic and diastolic function alone. The SCORE system estimates the 10 yearrisk of a first fatal atherosclerotic event.The aim of this study was to investigate the relationship between MPI and SCORE risk score in patients undergoing angiography.

Methods: this study included 154 patients undergoing angiography. Demographic characteristics, additional data, laboratory data and echocardiography findings were recorded. The tei index was calculated as the sum of the theisovolumic relaxation time and the isovolumic contraction time divided by the ejection time by using mitral pulsed-wave Doppler echocardiography. The SCORE risk score was calculated according to charts in 2016 ESC guidelines on cardiovascular prevention (2).

Results: The patients were divided into two groups according to SCORE risk score. The low risk score group was defined <%1 SCORE risk. The moderate-high risk score group was defined ≥ %1 SCORE risk. There were 40 patients in the low risk score group (mean age: 44,42±5,49 years), 114 patients in the moderate-high risk score group (mean age: 56,87±10,43 years). In patients with moderate-high risk score group were older (p<0,001). Ejection fraction was lower in the moderate-high risk score group than the other group. MCV, LDL cholesterol, level of glucose and creatinine were higher in the moderate-high risk score group than the other group (p<0.05). In Patients with moderate-high risk score had high MPI (p = 0,004).

Conclusion: In this study, we investigate the relationship between MPI and SCORE risk score in patients undergoing angiography.

Variables	Low SCORE risk Group (n:40)	Moderate-High SCORE risk Group (n:114)	p value
Gender (male)	13	61	0,022
Age (years)	44,42±5,49	56,87±10,43	<0,001
Hypertension, (n)	0	49	
Diabetes, (n)	0	32	
BMI	29,38±5,33	29,34±5,72	0,964
LVEF (%)	64,15±3,94	60,71±6,26	0,002
Hemoglobin (g/dl)	16,87 (10,40-19,30)	14,06(10,10-17,60)	0,513
WBC x1000/mL	7590±1610	8520±1011	0,575
MCV (fL)	84,66 (59,0-97,9)	87,75(65,4-116,3)	0,028
Platelet count (µl)	266,50±67,17	250,07±65,82	0,189
LDL-C (mg/dl)	115,90±30,77	129,87±37,97	0,038
HDL-C (mg/dl)	40,98±10,09	46,14±12,46	0,020

Total cholesterol (mg/dl)	176,80±35,24	200,40±46,66	0,004
Glucose (mg/dl)	97,87(30-193)	124,58(72-458)	0,014
Urea (mg/dl)	11,01±0,92	30,94±8,63	0,004
Creatinin (mg/dl)	0,76(0,50-1,60)	1,06(0,50-2,80)	0,026
MPV (fL)	11,00±0,9	11,38±1,03	0,053
MPI	0,70±0,17	0,79±0,18	0,004

HDL-C, high density lipoprotein cholesterol; LDL-C, low density lipoprotein cholesterol; MPV, mean platelet volume; WBC, white blood cell;LVEF, left ventricular ejection fraction; MPI, myocardial performance index; MCV, mean cell volume; BMI, body mass index.

ID: **786**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

RELATIONSHIP BETWEEN THE PROGNOSTIC NUTRITIONAL INDEX AND CORONARY ARTERY DISEASE SEVERITY IN NON-ST ELEVATION ACUTE CORONARY SYNDROME

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Introduction: Malnutrition is associated with poor prognosis in several illnesses, and previous studies showed that it is an important poor prognostic factor for acute coronary syndrome. While evaluating malnutrition in these studies, various screening tools were used, and one of them is the prognostic nutritional index (PNI). The PNI was calculated using the formula [10 x serum albumin(g/dl) + 0.005 x total lymphocyte count (mm3)]. The PNI cut-off score of 45 points has been used in previous studies, and the PNI score < 45 groups defined as low PNI score and in groups with low PNI scores detected with more adverse outcomes in acute coronary syndrome. It is well known that inflammation is deeply involved in the progression of atherosclerosis. High degrees of malnutrition correlates with high levels of inflammation, which translates into an increased atherosclerotic burden. Based on this information, we aimed to investigate the relationship
between low PNI scores indicating malnutrition and the extent and severity of coronary artery disease in patients with the acute coronary syndrome.

Methods: A total of 360 consecutive patients diagnosed with non-ST elevation acute coronary syndrome (NSTE-ACS) were evaluated retrospectively. Gensini scores (GSs) were used to define the angiographic characteristics of coronary atherosclerotic lesions. The patients were divided into two groups, according to the GS.

Results: There were 157 (43.6%) patients in the high-GS group (GS ≥25) and 203 (56.4%) patients in the low-GS group (GS<25). The high GS score group patients were older, had a higher rate of diabetes mellitus (DM) history, lower creatinine clearance levels, higher peak troponin levels, lower left ventricular ejection fraction (LVEF), and a higher rate of low PNI score. Multivariable logistic regression analysis revealed that presence of DM (OR=0.539, %95 CI=0.337-0.861, p=0.01), low baseline GFR (OR=0.0.981, %95 CI=0.969-0.992, p=0.001), high peak troponin levels (OR=1.018, %95 CI=1.001-1.036, p=0.041), low LVEF levels (OR=0.942, %95 CI=0.912-0.974, p<0.001) and low PNI score (OR=3.036, %95 CI=1.916-5.102, p<0.001) were independent predictors of high GS in the study population.

Conclusion: PNI is a tool that can be easily calculated and provides information about malnutrition and also in NSTE-ACS, low PNI scores inform about the severity and complexity of coronary artery disease.

Oral Presentation Session

Surgery for Congenital Heart Defects: Important Observations and Outcomes

Date: 31.10.2020 Time: 08:00 – 09:00 Hall: 5

ID: **128**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

THE EARLY AND MID-TERM OUTCOMES OF A SINGLE INSTITUTE IN THE SURGICAL MANAGEMENT OF THE AORTOPULMONARY WINDOW

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Objective

Aortopulmonary window (APW) is a rare congenital defect that represents approximately 0.2–0.5% of all among congenital heart diseases; nonetheless, it may accompany various cardiac defects. Progressive pulmonary arterial hypertension development and its consequences is a major source of concern in such patients. Herein with this report, we share our single institute experience in patients who underwent APW repair.

Methods

Overall 9 patients were included in the study of who had undergone surgical repair with the diagnosis of APW between 2005- 2018 in our center. The medical records were reviewed retrospectively. Postoperative clinical and echocardiographical examinations in follow-up were performed.

Results

The median age was 4.4 months (range 2 – 10 months) and mean weight at repair was 4.7 kg (range 3.5–8 kg). Four patients had Mori's Type I while 4 patients had Type II and 1 patient had Type III APW. Three patients had simple APW whereas, six patients had additional surgical procedures due to concomitant heart defects including atrial septal defect (n=4), ventricular septal defect (n=3), patent ductus arteriosus (n=1) and subaortic discrete membrane (n=1). The baseline mean systolic pulmonary artery pressure was 72.7 ± 11.4 mmHg (range 50–100mmHg). Patch repair method was performed via the sandwich technique (transwindow) in four patients; one of those was performed as a result of bleeding during simple ligation process. On the other hand, transaortic and transpulmonary approaches were utilized in two each patient. Double ligation was performed on one patient. Two hospital mortalities occurred: in one due to the prolonged mechanic ventilation support followed by pneumonia and in another individual due to the low cardiac output. The mean follow-up was 32 months (range 10-76 months). Five patients were in NYHA Class I at last follow-up; beyond that, there was no requirement for reoperation during follow-up.

Conclusion

APW leads to pulmonary hypertension, surgical correction therefore should be performed as soon as the diagnosis is established, regardless of age. Although various techniques have been introduced so far, precautions should be taken in each patient considering the fragile nature of the affected tissue. Moreover, associated anomalies remain challenge thus require further imaging and advanced strategies. However, surgical repair provides satisfactory results in the early and mid-term follow-up.

Keywords: Aortopulmonary window, simple ligation, congenital heart disease

ID: **146**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

TOTAL CORRECTION IN TETRALOGY OF FALLOT PATIENTS WITH LOWER PULMONARY INDEX

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BACKGROUND: The Tetralogy of Fallot is still one of the most controversial topics in pediatric cardiac surgery. Although it is the most frequently finding in cyanotic congenital heart diseases, in some group of patients whether -total correction or palliative surgery should be done can be very disputed.

METHODS: In our Hospital we prefer total correction in all suitable cases even when pulmonary index is low. The reason is that palliative surgery complications are more and more severe than after total correction. As we know if Mcgoon ratio is more than 2 total correction is recommended. In total correction VSD is closed, RVOT enlarged. If Mcgoon ratio between 1.6 and 2.0 total or palliative surgery can be done dependent on surgeon choice. if Mcgoon ratio is less than1.6 it is recommended to go under 2 phases repair. But We gave a chance to 2 patients with Mcgoon ratio less than 1.6. to make primary repair with extended pulmonary reconstruction. If the patient pulmonary vascular bed is well developed as you see on the picture, we can expand sizes of pulmonary branches to the pulmonary Hilus with the patch. During last year 11 Tetralogy patients we have implemented Total Corrections. Pulmonary Artery Index was so low in these two patients. In 1st one, we evaluated pulmonary arteries by echocardiography. In 2nd one was done both with Echocardiography and CT Angiography. The kids were 40 and 43 months. McGoon ratio in 1st was 1.59 and 1.33 in 2nd.

RESULTS: Cardiopulmonary Bypass and X clamping time is prolonged in both, in 1st patient CPB 120 min, X clamping 108 min, in 2nd CPB 132 min, X clamping 115 min. We can say as comparison CPB time was approximately 60 min in rest. After CPB RV/LV pressure ratio was high, we measure in both patients again in 20 mins, and was high yet. Both patients were monitored for 1 day in ICU. We observed only Sinus Tachycardia in 1st patient and no other complication. In 7th postoperative day was observed degradation in RV pressure and RV/LV pressure ratio. In 1st patient RV pressure 32 mmHg, in 2nd 38 mmHg.RV/LV ratio <0.35 in both. 1 month after surgery sizes of pulmonary branches are LPA~9.0 mm RPA~12.0 mm. During Echocardiography examination we didn't observe any serious difference with rest of patients.

CONCLUSIONS: As we know these patients are candidate for Palliative surgery, we think that this type of Primary Repair, is a suitable alternative for Palliative surgery, if Pulmonary Vascular Bed is normal developed

ID: **224**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

SURGERY OF EBSTEIN DISEASE: REPORT OF 7 CASES

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Introduction: Rare congenital heart disease characterized by the displacement of the tricuspid septal leaflet towards the right ventricle apex. The etiology is not known. It manifests as cyanosis. The prognosis is linked to functional status, the importance of correct dysfunction, the severity of arrhythmias and cyanosis. The diagnosis is based on echocardiography. The aim of our study is to determine the predictors of early mortality and to evaluate surgical treatment result.

Methods: It is a retrospective, descriptive and monocentric study on 07 patients with an Ebstein disease operated at our institution between January 2004 and august 2016. This study covered the first month after surgery correction.

Results: The average age of discovery of the disease is twenty-six years with female predominance. All patients are symptomatic with cyanosis. The rhythm was sinus in 06 patients. Left ventricular volume and the function were correct in all cases. The function of the right ventricular was alters in 50% of cases with rights cavities dilated in all patients. Tricuspid insufficiency was present in all patients. The preferred gesture is the technique of carpentier. Valve tricuspid replacement with cavopulmonary derivation was realized in one case, Da Silva technique was praticated in two cases. The postsurgical echocardiography showed satisfactory tricuspid repair in all cases. Narrowing mortality one case per ventricular fibrillation in 04 day post operation. The factor predictive of early mortality was ventricular rhythms disorders with good result of conservative surgery.

Conclusion: It's a rare heart disease; echocardiography remains the key diagnostique. It must operate patient before the onset of complications. The prognosis is improved by the trial of the chirurgicales. The treatment techniques is based mainly on conservative surgery.

ID: **745**

Topic: **Cardiovascular Surgery » Adult Congenital Heart Disease**

Presentation Type: **Oral**

PULSELESS FOUR EXTREMITIES: ATYPICALLY LOCATED COARCTATION WITH CONCOMITANT ABERRANT RIGHT SUBCLAVIAN ARTERY

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Pulseless Four Extremities: Atypically Located Coarctation With Concomitant Aberrant Right Subclavian Artery

Although coarctation of aorta (CoA) is a common anomaly among congenital heart defects (4%-8%) and aberrant right subclavian artery(ARSCA) is the most common congenital aortic arch anomaly (with a prevelence of 0,5%-2%), coexistance of this two anomaly is rare clinical entity, which accounts for 1% in cases of ARSCA. An unusual case of pulseless four extremities caused by atypically located critical CoA with ARSCA in a 21 year old patient without any symptom for years such as syncope is presented. This case report describes the successful diagnosis of the interesting patient mentioned above and the surgical complete correction procedure.
Case Report

A 21-year-old woman with a 3-month history of chest pain, cough, leg pain and weight loss applied to our hospital and atypical CoA, aneurysm formations at descending aorta and ARSCA were diagnosed as a result of the examinations(Fig. 1).

The operation was performed through a median sternotomy with cardiopulmonary bypass(CPB). CPB initiated after double arterial(femoral and carotid) and right atrial cannulation. The connection of ARSCA and right carotid artery was provided by a 7 mm dacfron graft. Left subclavian artery which was originating from aneurysm, was connected to the ascending aorta with a 8 mm dacron graft. And finally, using 22 mm dacron graft, extra-anatomical by-pass from the arcus to the descending aorta was performed. The patient discharged after 12 days of follow-up with significant relief of symptoms and palpabl peripheral pulses.

Discussion

Patient specific surgical approach should be planned for atypically located CoA with concomitant branching anomalies such as ARSCA to avoid neurological complications.

ID: **832**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

IS THAT NEW ARENA; NEONATAL CORONARY ARTERY BYPASS SURGERY FOR 2.5 KG PATIENT WITH TGA-VSD

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OBJECTIVE

Transposition of Great Arteries comprises 5.5% of heart disease in the fetal population. It is classified as complex d-TGA in presence of a VSD (30%). Coronary anomalies present in 30% of patients with complex TGA and were significantly correlated with the side by side configuration of the great arteries. In that patients, coronary anomaly is an important cause of morbidity and mortality, and necessity of myocardial revascularization in infants is an extremely difficult situation.

We present the case TGA-VSD with intramural coronary arterial anomaly in which performed Arterial switch operation, VSD closure and LAD-LIMA coronary artery bypass greft as surgical procedure.

METHODS

Patient was 2.5 kg, 18 day-old boy. Echocardiography showed that it has TGA, restrictive 4mm perimembranous-outlet VSD, 3mm ASD, 2mm PDA, Aortic annulus:9mm, Pulmonary annulus: 11mm. Preoperative laboratory was that; Troponin: 0.1 ng/mL (high of 5 times of normal range) TSH: 8.9 mIU/L Lactate:6.7 mmol/L Tbil: 6.9 mg/dl O2sat: 61-69%

We saw the great arteries almost side by side, Left coronary artery was in sinus I, intramural and opening in high position of sinus at operation.

RESULTS

After starting extracorporeal circuate, we performed the ligation and division of PDA, closure of VSD. When transected the aorta, left coronary artery was seen with small ostium and high opening over the sinus. We prepared the osteal place using coronary punch and transferred the both coronary buttons separetly. After Lecompt maneuver we performed neopulmonary artery anastomosis with otolog pericardial patch. After cross-clemp was removed and heart started beating, left side of the heart showed that dysfunction and dilatation. We decided LAD-LIMA bypass to get blood flow at left side. After all, there was no enough sign to wean cardiopulmonary bypass so patient was got into ICU with ECLS.
Postoperative lactate was 5.1mmol/L. The patient has still been followed by ECMO support in ICU on 3th day of operation. Transthoracic echocardiography showed that myocardial contractions were better. Troponin level is decrease day by day.

CONCLUSIONS

Congenital coronary artery anomalies associated with TGA have been recognized as important lesions with significant potential morbidity and mortality. Intramural coronary artery, coronary arterial atresia, and almost side by side position are difficulties for this patient. The internal thoracic artery is a reliable and durable conduit that demonstrates proven growth potential in children. Coronary artery bypass surgery in infants has a life saving role in trouble situations of coronary transfer operation.

ID: **837**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

IS THAT NEW TREND?; SUTURLESS ATRIOVENTRICULAR CANAL DEFECT SURGERY

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OBJECTIVE:

Atrioventricular canal defects account for about 5 percent of all congenital heart disease, and are most common in infants with Down syndrome.

Although Surgical techniques for repair of complete atrioventricular (AV) canal have devoloped in recent years, chosen of technique has still been controversy. We present our chosen technique and results avoiding the need of any patch by directly closing both defects.

METHODS:

A total of 57 patients diagnosed with AV canal defect by January 2018 were operated. Of them, 36 had complete av canal defect. In the complete AV canal defect group, 14 patients were repaired with the two-patch technique, 18 patients single patch technique, and 4 patients were operated on with no-patch at neither the ventricular nor the atrial level. Repair was assessed by transesophageal echocardiogram in the operating room.

Vsd component was closed with interrupted U shape pledgetted 6/0 polypropilene sutures on the right ventricular side. The stitches were then passed through the corresponding bridging leaflet and were directly tied. The cleft was completely closed as usual. Gentle traction approximates the border of the ostium primum. The ostium primum is closed with running suture on the tricuspid leaflets, 1mm to the right of the ventricular sutures.

RESULTS:

There was no mortality in the no-patch patients. Mean ischemic time was 39.88 min. and mean pump time 58.53 min. All patients were in sinus rhythm. At follow-up only 2 trivial and 1 mild mitral regurgitation was observed. In two patients, one millimeter residual vsd was observed and were left untouched.

CONCLUSION:

One of the advantages is it simplifies the procedure, which reduce both ischemic and pump times. Second, lowering the level of the left AV valve implantation at the crest of the septum the area of coaptation is increasing resulting in better competence. With two suture lines, ventricular and atrial side, tension is distributed and tearing risk is decreased. This technique can be use only suitable patients such as suture lines, enough tissue to close. LVOT should be check for obstruction. No-patch technique is fast, simple and reproducible. Initial results are promising, but further studies are required to confirm the finding and to determine what patients can benefit from these techniques.

ID: **784**

Topic: **Cardiovascular Surgery » Adult Congenital Heart Disease**

Presentation Type: **Oral**

A RARE CONGENITAL HEART DISEASE: QUADRICUSPID AORTIC VALVE

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Quadricuspid aortic valve(QAV) is a very rare congenital heart disease. QAV may be related with coronary artery anomally, ventricular septal defect, patent ductus arteriosus, subaortic stenosis, valsalva aneurysm, hypertrophic cardiomyopaty, transposition of great arteries, tetralogy of fallot and mitral regurgitation. Majority of the patients with QAV develop aortic insufficiency in adulthood. Here we report a case of 45-year-old mildly symptomatic woman with quadricuspid aortic valve.

45 years old woman without a remarkable past medical history was admitted to our hospital with complaint of exertional dyspnea for two months. Physical examination revealed grade 2 diastolic murmur at the aortic region. The ECG was sinus rhythm without pathological alterations. As transthoracic echocardiography showed vision of quadricuspid aortic valve with mild aortic regurgitation in the short axis. For further examination transesophageal echocardiography was performed, appearance of X during diastol and shape of rectangle in sistol were seen as a diagnostic sign of quadricuspid aortic valve. (figure 1-2) As patient was stabil, we compromised on follow up with medical therapy. Colour doppler revealed mild aortic regurgitation. (Figure 3) Cardiac MRI excluded additional malformations and endorsed the diagnosis. (Figure 4) Quadricuspid aortic valve(QAV) is a very rare congenital heart disease. QAV may be related with coronary artery anomally, ventriculalr septal defect, patent ductus arteriosus, subaortic stenosis, valsalva aneurysm, hypertrophic cardiomyophaty, transposition of great arteries, tetralogy of fallot and mitral regurgitation. Majority of the patients with QAV develop aortic insufficiency in adulthood. The treatment of the patients depend on the functional condition, related malformations and symptoms of the patients. Progress to surgery is based on the endications of tricuspid aortic valve. As our patient was stabil, we compromised on follow up with medical therapy.

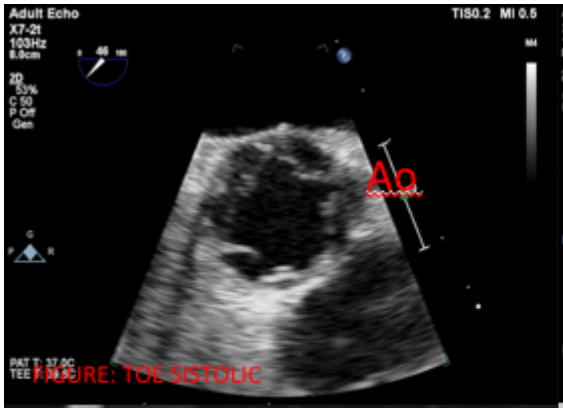

FIGURE: TOE SISTOLİC

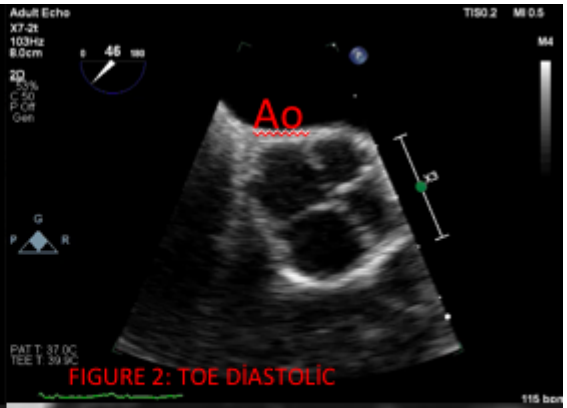

FIGURE 2: TOE DİASTOLİC

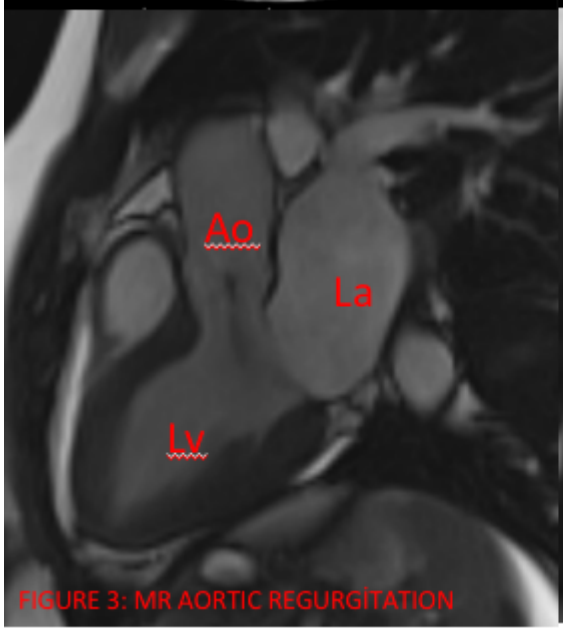

FIGURE 3: MR AORTIC REGURGİTATION

FIGURE 4:MR DIASTOLİC

Oral Presentation Session

Endovascular Solutions for Aortic and Peripheral Vascular Disease

Date: 31.10.2020 Time: 09:15 – 10:15 Hall: 4

ID: **482**

Topic: **Cardiology » Diseases of aorta**

Presentation Type: **Oral**

IATROGENIC TYPE A AORTIC DISSECTION DURING THE PERCUTANEOUS CORONARY INTERVENTION: MANAGEMENT, IMAGING AND OUTCOMES: A SINGLE CENTRE EXPERIENCE

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Objective:

Iatrogenic aortic dissection (IAD) during coronary interventions is a rare but fatal complication. It is seen that this experience has been shared as a case report from many centres in our literature research, but there is not enough experience and trial on this subject. İn the literature, there are recommendations and staging in this subject based on an observational study by Dunning et al. In this trial, we report our iatrogenic aortic dissection cases and their acute, short and long-term results.

Material and Method:

We screened 6096 coronary angiographies performed in our centre between February 2017, February 2019. Ascending aortic dissection developed in 8 patients. 7 patients had post-event and control CT angiography images. There were 1-month and 1-year follow-up examinations.

Results:
The incidence of iatrogenic aortic dissection was 0.13%. The female gender ratio was calculated as 63%. 37% of the patients presented with the acute coronary syndrome. In 37% of the patients, dissection was progressed with support catheter use such as AL and EBU, but in other patients, dissections were developed due to hydraulic pressure with the JR catheter. Regardless of the Dunning staging, 7 patients were followed-up with medical treatment and 1 patient with decreased coronary flow was referred to an emergency coronary bypass surgery. In four patients who were followed up with medical treatment, regression was observed in the first tomography and in other patients, regression was observed in the control tomography. In-hospital death was not developed in any patient, 1 month and year mortality rates were 0%.

Conclusion:
It is known that IAD is a mortal disease in the past and urgent surgical treatment is recommended for Dunning stage 3 patients. According to our study, regardless of Dunning staging; medical treatment is the first choice for the all hemodynamically stable patient; however surgical treatment is only needed in patients with the decreased coronary flow.

Table 1: Basal, procedural and follow-up characteristics of aortic dissection patients

Case	Age	Sex	Procedure	Dissection Origin	Catheter type	Cause	Dunning Stage	Hospitalisation Duration	Therapy Modality	Outcome	1 month follow up	1 year follow up	First CT	Control CT
1	61	F	Cx- OM elektif PTCA	LMCA	AL-2 6F	Malaposed Catheter	3	15 day	Stent	D/C	uneventfull	uneventfull	Tip A dissection	Total regression
2	73	M	OM AMI	Non koroner kusp	AL-3	Malaposed Catheter	3	5 day	Medical follow only	D/C	uneventfull	uneventfull	Tip A dissection	Total regression
3	48	F	RCA AMI	RCA	JR 4 7F	Hidrolic dissection	1	5 day	Stent	D/C	uneventfull	uneventfull	Total regression	-
4	70	M	RCA Elektif PTCA	RCA	JR 4	Deep Engage	1	1 day	Stent	D/C	uneventfull	uneventfull	Total Regresyon	-
5	38	F	RCA AMI	RCA	JR 4	Hidrolic dissection	1	5 day	Stent	D/C	uneventfull	uneventfull	Partial Regresyon	Total regression
6	57	M	RCA CTO	RCA	JR4	Hidrolic dissection	1	5 day	Medical follow only	D/C	uneventfull	uneventfull	Tip A dissection	Total regression
7	50	F	RCA CTO	RCA	JR4	Hidrolic dissection	3	3 day	Medical follow only	D/C	uneventfull	uneventfull	Total regression	
8	50	F	RCA CTO	LMCA	EBU	Hidrolic dissection	1	16 day	CABG	D/C	uneventfull	uneventfull	-	-

ID: **438**

Topic: **Cardiology » Interventions for peripheral arterial diseases**

Presentation Type: **Oral**

OUTCOMES AND EFFICACY OF PERCUTANEOUS TRANSLUMINAL RENAL ARTERY STENTING IN PATIENTS WITH ATHEROSCLEROTIC RENAL ARTERY STENOSIS

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Objective: Renal artery stenosis is the most common cause of secondary hypertension. The aim of this study is to evaluate the outcomes of percutaneous transluminal renal artery angioplasty and stenting (PTRAS) procedure for atherosclerotic renal artery stenosis (ARAS) which is the most common cause of secondary hypertension.

Methods: This retrospective chart review included 27 patients who had PTRAS procedure from 2012 to 2017. This procedure was performed to patients with ARAS whose luminal narrowing <70%. Successful intervention was accepted if the residual stenosis <20%.

Results: The mean age of 27 patients with ARAS was 71.4±11.1 years, and 55.6% were males. Most common indication for renal angiography were uncontrolled hypertension (85.2%). PTRAS was indicated due to hypertension resistant to medical treatment in 92.6% of the patients. About 96.3% of the cases had hypertension. Renal artery stenosis was present on the right in 23 patients (85.2%), and on the left in 20 patients (74.1%). Bilateral renal artery stenosis was diagnosed in 16 patients (59.3%). Predilatation was performed in 9 cases (33.3%) with right stenosis, and in 10 cases (37%) with left stenosis, and direct stenting was applied in 7 (25.9%) and 6 (22.2%) of cases, respectively. The overall mortality rate was 22.2% during 5-year follow ups. No other major events were noted.

Conclusions: PTRAS is associated with improved blood pressure control, renal functions, and survival, and it can be performed with high success and low complication rates. Nevertheless, each patient should be evaluated individually for the risks and benefits.

ID: **121**

Topic: **Cardiology » Peripheral arterial diseases**

Presentation Type: **Oral**

EFFECT OF CAROTID STENTING ON THYROID FUNCTION

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OBJECTIVE: Increased TSH levels were previously reported following revascularization for unilateral carotid artery stenosis in euthyroid patients. In the present study, we aimed to investigate the effect of carotid stenting on thyroid function in euthyroid patients with contralateral carotid occlusion.

METHODS: Twenty patients who had one internal carotid artery with total occlusion and the other one with more than 50% stenosis was analysed from September 2010 to January 2019. All patients underwent carotid artery stenting. Thyroid function was measured before carotid stenting. Thyroid functions were re-measured at least 6 months after carotid stenting.

RESULTS: The mean age was 70.8 ±9.12 years of 20 patients. Fourteen patients were men (70%). Eighteen patients (90%) were hypertensive, 9 patients (45%) had diabetes mellitus, 7 patients (35%) had coronary artery disease, 5 patients (25%) had hyperlipidemia, and 3 patients (15 %) were smokers. TSH levels (0.97 ± 0.73 vs 1.22 ± 0.66, p:0.262) were increased by carotid stenting. T4 levels (14.44 ± 2.19 vs 13.57 ± 1.90, p:0.186) decreased by carotid stenting.

CONCLUSIONS: Although TSH level increases, T4 level decreases by carotid stenting. These findings needs to be validated future prospective studies.

ID: **92**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Carotid Artery Disease**

Presentation Type: **Oral**

THE PROGNOSTIC VALUE OF SERUM ALBUMIN LEVEL IN PATIENTS WITH CAROTID ARTERY STENOSIS UNDERGOING CAROTID ARTERY STENTING

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Background

The prognostic impact of poor nutritional status and cachexia in carotid artery disease is not clearly understood. Albumin is an important predictor of cachexia and may have an important value in patients with carotid artery stenosis who underwent carotid artery stenting (CAS).

Methods

We evaluated the in-hospital prognostic impact of albumin on 558 patients with carotid artery stenosis undergoing CAS. The patients were categorized three tertiles (T1, T2 and T3) according to their albumin levels. In hospital outcomes were compared between these groups.

Results

The patients' baseline characteristics and in-hospital outcomes were demonstrated in Table 1. The patients with lower albumin level (T1) had significantly higher transient ischemic attack (P=0.036), myocardial infarction (P=0.011) and mortality (P=0.05) compared to other two tertiles. Ipsilateral stroke and major stroke rates were also higher in T1 however it did not reach to statistical significance.

Conclusion

Our study demonstrated that serum albumin level is a prognostic factor for in-hospital outcomes of patients with carotid artery stenosis who underwent CAS. This result confirmed that nutritional situation is important in CAS patients. Further studies on independent multicenter cohorts are warranted to validate our findings.

Table 1 Baseline characteristics and in-hospital outcomes of patients stratified by albumin tertiles

Baseline characteristics	T1 (n=186)	T2 (n=186)	T3 (n=186)	P value
Age	70 ± 8	68 ± 9	65 ± 9	<0.001
Gender, male	129 (69.4)	140 (75.3)	149 (75.3)	0.330
Hypertension	139 (74.7)	145 (78.0)	145 (78.0)	0.696
Diabetes mellitus	88 (47.3)	92 (49.5)	79 (42.5)	0.384
Hyperlipidemia	92 (49.5)	120 (64.5)	102 (54.8)	0.126
Smoking	87 (46.8)	77 (41.4)	78 (41.9)	0.515
Previous myocardial infarction	75 (40.3)	77 (42.3)	62 (33.5)	0.192
Previous percutaneous coronary intervention	79 (42.5)	78 (41.9)	67 (36.0)	0.371
Previous coronary artery bypass grafting	44 (23.7)	45 (24.2)	51 (27.4)	0.664
Symptomatic lesion	57 (30.6)	62 (33.3)	50 (26.9)	0.414
In-hospital outcomes				
Ipsilateral stroke	7 (3.8)	2 (1.1)	3 (1.6)	0.167
Major stroke	4 (2.2)	1 (0.5)	2 (1.1)	0.363
Transient ischemic attack	11 (5.9)	6 (3.2)	2 (1.1)	0.036
Myocardial infarction	6 (3.2)	0 (0.0)	1 (0.5)	0.011
Death	8 (4.3)	2 (1.1)	0 (0.0)	0.005

ID: **250**

Topic: **Cardiology » Peripheral arterial diseases**

Presentation Type: **Poster**

RARE MANIFESTATIONS OF BEHÇET'S DISEASE: A CASE REPORT

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BACKGROUND: We are reporting a unique case of Behçet's Disease presented by high mortality systemic complication; right ventricular mass, tricuspid valve mass, right main pulmonary artery thrombosis, inferior vena cava thrombosis and Budd-Chiari syndrome which successfully treated after adding immunosuppressant to anticoagulant.

METHODS: A 30 years old Libyan man, scholar and sheep had a history of intermittent fever, chest tightness, night sweating, productive cough with whitish sputum which become mixed with streaks of blood and photophobia three months before admission treated as a case of enteric fever with no improvement. He was referred to our hospital for further evaluation. Wide range of investigation were done including blood investigation, sputum, and skin biopsy of suspicious nevus and ultra sound abdomen in addition to computed tomography of the brain, chest, abdomen and pelvis were performed in addition to transthorasic echocardiography and transesophegeal echocardiography, cardiac magnetic resonance as well.

RESULTS: laboratory investigation illustrated: Hg 9.7g/dl , WBC 17.5*103 /uL mainly granulocytes 85.9%, PLT 196*103/uL, CRP 16.9mg/dl, ESR 100mm/1st hr , ALT 78.4 U/L, AST 55. U/L, T.bilerubin1.32mg/d , direct bilirubin 0.83mg/dl, alkaline phosphates, INR 2.48 on anticoagulant, urea, electrolytes and creatinine were normal, serum amylase and lipase normal . Blood film for malaria was negative, sputum for AFB negative 3 times. Tumor marker CA19-9 and alfa fetoprotein were normal. Anti-nuclear antibody (ANA) (IgG) (IFT HEp2) 1:160 titer, ds DNA (double strand) abs. IgG < 10.0 IU/ml, c-ANCA <1:2 titer, p-ANCA <1:10 titer. Peripheral blood film showed toxic granulation. Boon marrow biopsy was reactive bone marrow, skin biopsy showed intradermal nevus , ultrasound abdomen hepatomegaly it bright liver moderate ascites, and inferior vena cava thrombosis to the level below the renal vessels CT scan of brain was normal, chest high-resolution CT scan bilateral multiple emboli with radiological suggestion of septic origin, CT abdomen with contrast IVC thrombosis with Budd-Chiari syndrome, Cardiac echocardiography showed RV mass, TV attached structure at the ventricular aspect and pulmonary artery thrombus with no regional wall motion abnormality and preserved ejection fraction. CMR showed cardiac lesions measuring 3.5 cm related to interventricular septum and 1.4 cm related to lateral wall of the right ventricle with voidance of moderate heterogonous contrast enhancement.

CONCLUSION: The patient was diagnosed with Behçet's disease manifested by intracardiac vasculitis and Budd-Chiari syndrome. Although the patient was on anticoagulant and INR within therapeutic range, intravascular thrombosis progressed. But by adding immunosuppressant the thrombosis and intracardiac lesions were diminished and finally disappeared.

ID: **810**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Oral**

TROUBLE IN PARADISE: A CASE OF CHRONIC AND ACUTE MESENTERIC ISCHAEMIA

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Chronic mesenteric ischaemia (CMI) is an uncommon pathology that is often diagnosed late due to its slow onset of symptoms. Acute mesenteric ischaemia (AMI) is also uncommon and carries a high mortality rate if not treated.

A 40-year-old female underwent successful aortoiliac endarterectomy and aorta-superior mesenteric artery (SMA) bypass in 2015 for CMI and bilateral lower limb claudication using Dacron graft. Whilst overseas she developed severe abdominal pain and underwent a stenting procedure of the Dacron jump-graft with a VBX stent-graft. Her symptoms did not resolve, however they improved sufficiently to facilitate return to Australia. Shortly afterwards, her condition deteriorated. Upon presentation to our institution, she was found to have a small bowel obstruction requiring a laparotomy and small bowel resection.

Four days post-laparotomy the new VBX was found to be occluded. She was anti-coagulated with a heparin infusion initially, followed by endovascular revascularisation. Attempts at recanalising flushed coeliac trunk and SMA occlusions were unsuccessful. A wire was navigated through the occluded VBX and taken through the end-to-side Dacron-to-SMA anastomosis. Retrograde recanalisation of the SMA was performed, breaking back into the aorta to establish a flossing-wire. A sheath was taken antegrade into proximal SMA via the flossing-wire, and a buddy-wire advanced beyond the Dacron-to-SMA anastomosis. A Viabahn stent-graft was deployed covering the Dacron-to-SMA anastomosis and the SMA origin stented with Omnilink. Brisk flow was seen through the SMA and mesentery, and AMI resolved post-operatively.

Mesenteric ischaemia is a condition caused by small intestinal hypoperfusion secondary to a reduction or cessation of arterial supply. Ischaemic injury and complications arise from insufficient delivery of O2 and nutrients required for cellular metabolism. We present a case of successfully treated CMI and endovascular management of AMI after occlusion of a bypass graft.

ID: **789**

Topic: **Cardiovascular Surgery » Hybrid Cardiovascular Surgery**

Presentation Type: **Oral**

HYBRID REPAIR OF AN IATROGENIC SUPERFICIAL FEMORAL ARTERY PSEUDOANEURYSM

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Background

Pseudoaneurysm formation occurs after localised arterial wall injury and inadequate haemostatic plug formation. Iatrogenic pseudoaneurysm due to vascular wall injury secondary to overpenetration of drill bits or screws is a known but rare complication of orthopaedic procedures [1]. Pseudoaneurysm of the femoral artery branches are more commonly reported related to the profunda femoris artery and less common in the superficial femoral artery (SFA)[2].

Methods

A 52-year-old male amputee sustained a complex comminuted intra-articular fracture of the distal femur after falling onto his stump while mobilising with his prosthesis. He underwent an open reduction and internal fixation using a locking compression plate (LCP) via a lateral approach. At outpatient follow up 2 weeks post-surgery the patient complained of ongoing thigh swelling and pain. CT imaging found a 7 x 6 x 9cm pseudoaneurysm of the SFA.
A hybrid repair of the pseudoaneurysm was performed due to its size and location. Antegrade puncture of the ipsilateral common femoral artery was performed and initial digital subtraction angiography (DSA) confirmed the large pseudoaneurysm arising from the lateral wall of the mid-SFA, in line with the proximal locking screw of the LCP. A 6mm balloon across the origin of the pseudoaneurysm confirmed adequate tamponade of the vessel. A 6mm x 10cm Viabahn stent was deployed to cover the origin of the pseudoaneurysm. Final DSA showed a small amount of contrast extravasation but no washout. An incision was made over the pseudoaneurysm sac and a large volume of clot evacuated. The defect in the SFA was oversewn. Locking screws were noted to be prominent and at risk of re-injury to vascular structures after contraction of the pseudoaneurysm track. Due to the femoral screws requiring to remain insitu bone wax applied to protruding screw ends.

Results

The patient experienced an immediate reduction in swelling and pain post-operatively. He re-presented to hospital 4 days after discharge with progressive swelling in the same region. He was found to have a seroma in the region and treated with antibiotics and compression. At 3 months post-pseudoaneurysm repair the patient has been doing well with swelling and pain significantly reduced.

Conclusion

Iatrogenic pseudoaneurysms can be detected late due to expected swelling and pain post-trauma and surgical intervention. Management of pseudoaneurysm is variable depending on their size and location. Hybrid methods of repair should be considered in cases where traditional open repair would be difficult due to size, location and ongoing bleeding.

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ID: **818**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Oral**

OUTCOMES OF PHARMACOMECHANICAL THROMBECTOMY FOR PHLEGMASIA CERULEA DOLENS

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OBJECTIVE: Phlegmasia cerulea dolens is a limb-threatening form of deep vein thrombosis. This phenomenon results from the arterial insufficiency secondary to extensive venous occlusion. Conventional anticoagulant protocols are often inadequate for the rapid resolution of critical limb ischemia. Catheter-directed therapies are available for iliofemoral deep venous thrombosis. The aim of this study was to report the procedural results and follow-up outcomes of the patients who underwent pharmacomechanical thrombectomy for phlegmasia cerulea dolens.

METHODS: This single-operator observational report consists of data of 18 consecutive patients (12 women, 6 men; age range 19-61 years) with phlegmasia cerulea dolens secondary to iliofemoral deep venous thrombosis who had endovascular treatment during the 2-years period (May 2018- 2020). Clinical data of all patients about the pre-procedure, in-hospital, first month, the sixth month, and first-year (existing ones) were evaluated.

RESULTS: Illiofemoral venous thrombosis in 16 patients (12 left, 4 right legs), complete occlusion in the isolated right common femoral vein in 1 patient. The vena cava inferior agenesis had been detected in one patient. Three patients had vena cava inferior involvement. Four patients had peripheral neurological deficits at presentation. Three patients had familial thrombophilia, two patients had May-Thurner syndrome, one patient had active malignancy, two patients had malignancy history, and two patients had recent surgery history. The popliteal vein was the main access site. A temporary vena cava filter was placed in all patients. Venous angioplasty was required in 8 patients. Venous stents were not implanted in any of them. Phlegmasia cerulea dolens was successfully resolved in all patients without the need for open surgery. Fasciotomy or amputation was not applied to any patient. The one patient needs long-term physiotherapy because of the not fully recovered foot drop that had already existed before the intervention. The median duration of hospital stay was 3 days (range 1-10). No-major bleeding occurred. The Median follow-up time was 14 months. No patient experienced recurrent thrombosis. The mean Vilatta score of the patients in the 6th month was 4.5.±3.7. Six months after the intervention, twelve patients (75 %) were still free from post-thrombotic syndrome; three patients (19%) had the mild post-thrombotic syndrome, two patients (6 %) had the moderate post-thrombotic syndrome.

CONCLUSIONS:

Pharmacomechanical thrombectomy is an effective, safe, and widely accessible therapy for rapid resolution of extensive thrombosis in patients with phlegmasia cerulea dolens. Additionally, the rate of freedom from the postthrombotic syndrome in the midterm period is satisfactory.

ID: **748**

Topic: **Cardiology » Interventions for peripheral arterial diseases**

Presentation Type: **Oral**

INTERVENTIONAL TREATMENT FOR FEMOROPOPLITEAL PERIPHERAL ARTERIAL DISEASE

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Objectives

Atherosclerosis affecting the lower extremities frequently leads to lifestyle-limiting claudication is called peripheral arterial disease (PAD). Historically, patients with symptomatic PAD were treated medically, with surgical revascularization reserved as an option for advanced disease. Drug-eluting balloons (DEB), a treatment modality that allows homogeneous delivery of an antiproliferative drug (paclitaxel) to the arterial vessel wall without leaving prosthetic material behind, have become an effective strategy for treating femoropopliteal artery (FPA) lesions.

On the basis of this background, we designed a prospective study to evaluate the performance and outcomes of DEBs for femoropopliteal disease, by means of primary patency rate measured at 12 months.

From October 2017 to January 2019, 118 patients with PAD were revascularizated.

Methods

This was an independent, nonindustry-supported multiple center prospective study. Adult patients diagnosed with peripheral artery disease for claudication or rest pain as per Rutherford class 2 to 4 and ABI 0.4 to 0.7 were screened.

Angioplasty was performed in the operating room. Patients received a bolus of 5,000 IU of heparin after insertion of the introducer sheath. To define the anatomy, diagnostic arteriography was performed routinely before intervention. The lesion was crossed using a 0.035-inch hydrophilic guide wire . The angioplasty was performed by insertion of the appropriate size and length DEB. The target lesion was dilated approximately 10 mm beyond both ends of the lesion using a PEB vessel/balloon ratio of 1:1 (based on visual estimation) and an inflation time of 3 min at 4 to 12 atm. Procedure was considered as a successful vascular access when ≤ 30 diameter stenosis within the diseased segment was left after balloon post-dilation by visual estimate. Study balloons were inflated only once. Control arteriography was done at the end of the procedure for assessment of success and potential complications such as dissection, vasospasm, thrombosis or distal embolism.

Results

Patients returned for follow-up at 4 weeks, 3, 6, 9 and 12 months post–index procedure for physical examination, Rutherford classification, ankle-brachial index and patency as evaluated by duplex ultrasound.) Quantitative angiography was performed at baseline and at 12 months. Patients were usually seen within 4 weeks after the procedure. All assessments including clinical examination, Rutherford classifications, ABI measurements, and serial duplex ultrasonography scanning were performed pre-procedure, before hospital discharge, and every 3 months during the first year.

ABI (after 12 months) was statistically significantly higher than the baseline ABI ($p<0.001$ for both) and Rutherford (after 12 month) was statistically significantly lower than the baseline Rutherford ($p<0.001$ for both) .

Conclusions

In contrast to an elective stent or surgical revascularization strategy, DEB angioplasty of femoropopliteal region might best fit a long-term therapy with high procedural success rates at 1 year. With the unavoidable disease progress within and outside the treated arterial lesion, DEBs represent an attractive alternative that does not limit future treatment options when compared with any firstline revascularization strategy.

Oral Presentation Session

Essentials for Aortic Valve Surgery

Date: 31.10.2020 Time: 09:15 – 10:15 Hall: 5

ID: **389**

Topic: **Cardiovascular Surgery » Minimally Invasive and Robotic Cardiac Surgery**

Presentation Type: **Oral**

INFRA-AXILLARY MINI-THORACOTOMY FOR AORTIC OR DOUBLE VALVE REPLACEMENT

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OBJECTIVE: We prefer right infra-axillary mini-thoracotomy (RIAMT) for minimally invasive aortic or mitral or double valve replacement. Its cosmetic superiority over standard sternotomy was apparent, and remoteness from the ascending aorta was compensated for by using long-shafted minimally invasive instruments.

METHODS: Between July 2012 and December 2019, we have performed 390 operations using this approach. Aortic valve replacement group of this study has included 161 patients, double valve replacement group of this study has included 57 patients and 84 aortoplasty were performed.

Surgical technique: The right thorax was opened via a small, vertical right axillary skin incision and a third intercostal thoracotomy was performed. Cardio-pulmonary bypass was established through the right femoral artery and bicaval venous cannulation. The ascending aorta was clamped with flexible clamp. All sutures, for prosthetic valve seating, were tied down with the aid of a knot pusher. Other minimally invasive long shafted instruments were also utilized. Meanwhile, if aortic dilatation is moderate (<45 mm diameter) and another minimally invasive cardiac valve procedure (aortic or double valve replacement) is being performed and patient is not marfanoid, we have concomitantly reduced the diameter of the ascending aorta with a longitudinal J-shaped incision by this right infra-axillary mini-thoracotomy technique.

RESULTS: As concomitant procedures, annular patch enlargement was performed in five patients, right coronary artery bypass grafting in two (totally in six) and mitral valve repair in one (totally in twenty-one) patients. The length of skin incision was 8.5+/-0.5 cm for a double valve procedure. No case was converted to sternotomy. Between 1 and 90 months of follow-up, there were 6 (3.72%) (totally 1.53%) in-hospital mortality, and 5 long-term mortality, all the other patients were alive, and no valve-related complications were observed. The mean age was 50+/-9 (range, 15-77) years, of which 179 (45.89%) were female (56 % in mitral group). 60 patients had rheumatic complex valve diseases as the predominant lesion in aortic valve replacement group, 12 patients had bicuspid valve, and 38 patients had isolated aortic valve insufficiency.

CONCLUSIONS: This approach offers multiple advantages including cosmetic superiority, and facilitates direct access to the rib-cage by cutting only skin and subcutaneous fat. Despite these advantages, the ascending aorta is relatively distant compared with fore-chest thoracotomy or partial sternotomy. This procedure may carry a potential risk of stroke associated with retrograde perfusion through the femoral artery, this approach is limited by the longer cross-clamp and cardiopulmonary bypass times, which have raised some concerns in fragile, and high risk patients.

Keywords: Infra-axillary, mini-thoracotomy, aortic or double valve replacement, aortoplasty

Table 1: Infra-axillary mini-thoracotomy for aortic or double valve replacement and aortoplasty

Aortic valve replacement (AVR)	49
AVR and Aortoplasty	61
AVR and CABGX1(SV-RCA)	2
AVR and Mitral Ring Annuloplasty (MRA)	1
AVR and Mitral valve replacement (MVR)	*20
AVR and MVR and Aortoplasty	*23
AVR and MVR and TRA	2
Triple valve replacement	3
...	Total:161
Mitral and Tricuspid valve replacements: 14	*14 *DVR:57
MVR and Tricuspid Ring Annuloplasty (TRA): 6	

Figure - 1: Infra-axillary mini-thoracotomy

Figure - 2: Infra-axillary mini-thoracotomy / front-view

ID: **422**

Topic: **Cardiovascular Surgery » Pregnancy and Hearth Valve Disease**

Presentation Type: **Oral**

SHOULD UPPER MINI-STERNOTOMY APPROACH BE THE STANDARD FOR OPEN AORTIC VALVE PROCEDURES? THE BELFAST EXPERIENCE

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Background: Upper mini sternotomy has been established as an alternative to full sternotomy. Mini-sternotomy offers improved cosmetic appearance and comparable outcomes. With current drive to pursue minimally invasive procedures driven by patients' choice Upper mini sternotomy approach is of increasing popularity. We document single-centre experience showing short and medium term surgical outcomes of upper mini-sternotomy approach for aortic surgery.

Methods: Retrospective analysis of patients who undergone upper mini sternotomy Aortic valve procedures over the last five years. Analysis of patients' demographics, intra-op findings and evaluation of early / medium term outcomes. Data presented as median (interquartile range) or percentages.

Results: 231 patients had upper mini-sternotomy Aortic valve surgery at Royal Victoria Hospital in Belfast over the last 5 years between Sep 2014 and Sep 2019. Aged between 37and 86 (Average 67) years, Female 45%: Male 55%, and 120 patients with BMI >30 (52%). Majority were done in J shape hemi-sternotomy (87%) and through Right fourth ICS (94.4%). Central cannulation for both arterial and venous was the most favoured approach (99.2%). The aortic valve was replaced in 230 patients, with mechanical valve in 37(16%), bio-prosthetic valve in 193(84%). Suturless valve used in 20 cases (8.6%). Combined aortic surgery was performed in 7 patients (3%) (1 excision of Aortic Fibroelastoma, 4 Ascending Aorta replacement and 2 Aortic root replacement) ,mean cross clamp time 60 (33-170)min and CPB time 108(51-190)min .30-day Mortality 1(0.4%), conversion to full sternotomy in 11 patients (4.7%), reoperation for bleeding in 8 patients (3.4%), ICU stay 1 (1-20) day and hospital stay 8 (3 -32) Days, new onset AF in 8 (3.4%) ,CVA/TIA in 0.86%, 30-day readmission 7(3%). Early follow up echo (within 6-9 weeks) showed mean gradient of 9.7 (3-34) mmhg. Follow up 2.8±2 years.

Conclusion: Aortic valve, aortic root and ascending aorta surgery is amenable by mini sternotomy incision with good outcomes taking into consideration careful patient selection. It is essential to respect the learning curve and accepting low threshold for conversion to conventional full sternotomy when required.

ID: **77**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

EFFICACY OF POSTERIOR PERICARDIOTOMY IN PREVENTION OF ATRIAL FIBRILLATION AND PERICARDIAL EFFUSION AFTER AORTIC VALVE REPLACEMENT: A RANDOMIZED CONTROLLED TRIAL

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BACKGROUND

Postoperative AFib is one of the most frequent complications in cardiac surgery. Previously posterior pericardiotomy was shown to be an effective method for prevention of postoperative AFib in patients undergoing isolated CABG. The aim of this trial was to evaluate the effectiveness of posterior pericardiotomy in the prevention of postoperative AFib and pericardial effusion in patients undergoing isolated primary aortic valve replacement.

METHODS

The trial was approved by the local ethics committee. It included adult patients under 70 y.o. who had signed the informed consent for participation in the study and who were planned to undergo isolated primary aortic valve replacement. Exclusion criteria were a history of AFib, hyperthyroidism, amiodarone intake, severe chronic obstructive pulmonary disease, left ventricle ejection fraction less than 30%, the size of the left atrium exceeding 50 mm, active infective endocarditis, the presence of adhesions in the pericardium and/or left pleural cavity and mini-sternotomy. From October 2013 to April 2015 607 patients in our clinic underwent different aortic valve procedures. 507 patients were excluded from the study because of the inclusion and exclusion criteria. The remaining 100 patients were randomized into two groups: 49 patients underwent posterior pericardiotomy and 51 patients made up the control group. In both groups the frequency of postoperative AFib, pericardial effusion greater than 5 mm, surgery-discharge time, as well as posterior-pericardiotomy-related complications were studied.

RESULTS

There were no deaths, stroke or cardiac tamponade during the postoperative stay. Neither were there any complications associated with the performance of posterior pericardiotomy. The incidence of AFib, pericardial effusion and average duration of the postoperative stay were similar in both groups: 16% in posterior pericardiotomy group vs. 14% in the control group ($p = 0.71$), 10% in posterior pericardiotomy group vs. 12% in the control group ($p = 0.80$) and 12.4±4.3 days in posterior pericardiotomy group vs. 11.9±4.1 days in the control group ($p = 0.27$), respectively.

CONCLUSIONS

The trial did not confirm the effectiveness of posterior pericardiotomy in preventing postoperative AFib and pericardial effusion during the in-hospital period after isolated primary aortic valve replacement in low risk patients. However, further investigations are needed.

ID: **36**

Topic: **Cardiovascular Surgery » Heart Valve Repair**

Presentation Type: **Oral**

PRECISE MOULDED AUTOLOGOUS PERICARDIAL CONFIGURATION FOR AORTIC CUSP RECONSTRUCTION

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Abstract

BACKGROUND: In order to facilitate surgical repair of complex aortic cusp deformities and restoration of aortic valve competence, new moulds were developed to shape the glutaraldehyde-treated autologous pericardium into precise cusp-like configurations that can be used in aortic cusp reconstruction

METHODS: The new moulds embodied the natural geometry of single aortic cusps, and a series of moulds were made available to correspond with all potential aortic cusp sizes. Aortic valve reconstruction using moulded autologous pericardial cusps was performed in 2 patients (both males, aged 14 and 19 years) with large outlet-type ventricular septal defects, extensive deformation of prolapsed right coronary cusps and severe aortic valve insufficiency. In each patient, the diseased right aortic cusp was excised and was replaced by a moulded autologous pericardial cusp that equaled the size of adjacent undiseased native cusps.

RESULTS: Excellent coaptation with adjoining native aortic cusps could be readily observed and intraoperative transoesophageal echocardiography confirmed satisfactory aortic valve repair (aortic insufficiency <1+ and low transvalvular gradients). Follow-up transthoracic echocardiography confirmed that aortic valve function remained stable in both patients 2 years postoperatively.

CONCLUSIONS: Initial clinical experience indicated that constructing geometrically perfect cusp-like configurations was uncomplicated and implantation of the moulded autologous pericardial cusps restored adequate aortic valve competence. We believe that the simplicity and reproducibility of this approach may assist in the dissemination of aortic cusp reconstruction procedures.

Figure 2: Anterior view of a cusp mould in the open position.

Table 1: Dimensions of the aortic root and aortic valve in the computational 3D model (mm)

d	h	m	c	f	i
Aortic root diameter	Aortic root height	Commissural height	Coaptation height	Cusp free-edge length	Cusp insertion line length
19	13.3	6.65	3.49	22.44	38
21	14.7	7.35	3.85	24.80	42
23	16.1	8.05	4.23	27.16	46
25	17.5	8.95	4.60	29.52	50
27	18.9	9.45	4.96	31.90	54
29	20.3	10.15	5.33	34.26	58
31	21.7	10.85	5.69	36.62	62

ID: **417**

Topic: **Cardiovascular Surgery » Heart Valve Repair**

Presentation Type: **Oral**

REVERSED L-TYPE UPPER PARTIAL STERNOTOMY IN AORTIC VALVE REPLACEMENT: AN INITIAL SERIES OF FIVE PATIENTS

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BACKGROUND: Mini Sternotomy Aortic Valve Replacement is a replacement of Aortic Valve through reversed L-type upper partial sternotomy. The aim is to improve postoperative convalescence without compromising respiratory function, to decrease bleeding and reduce post-op ventilation time and ICU stay. These advantages decrease cost during the hospital stay by reducing ICU stay, respiration time, bleeding and using blood products, pain killers and shortening hospital stay. The esthetic effect is also a considerable result of this method

METHODS: Short skin incision was done (7cm long) and partial sternotomy starting from jugular notch down to 4th intercostal forming upper partial reversed L-shape sternotomy. Inverted T-shaped pericardiotomy followed. Cannulation was performed by flexible Medtronic EOPA Aortic canula No 24, and Right atrium and Superior Vena Cava with Medtronic venous vire-reinforced cannulas No 22, and CPB were instituted. The cardioplegic arrest was introduced via antegrade cardioplegia. LV venting was obtained by vent cannula placed in through the right upper superior pulmonary vein.

Aortic Valve excision and AVR were followed with Blalock Aortotomy two line-sewing in standard fashion with Prolen 4.0 stitch. The retrosternal drain was placed through the subxiphoid incision and retrosternal plain, made by blunt digital dissection. The sternotomy was closed in standard fashion. Patients were transferred to the ICU for early convalescence and awaking by standard anesthesiology procedure.

RESULTS: Initially 5 patients were operated on, three male and two female patients. All of them had angina as leading and 4 of them had dyspnea as accompanying symptoms. The average time of surgery was 306 minutes, CPB time 198.2 minutes, and cross-clamp time 180.4 minutes. The most implanted valve was 23 in size. Most patients stay one day in the ICU. The average hospital stay was 16 days. One out of five patients died in ICU second day after surgery due to diastolic dysfunction of the hypertrophied LV.

CONCLUSIONS: Given that the incidence of postoperative complications, the duration of the ICU and hospital stays, and early survival it can be concluded that the minimally invasive advanced cardiac surgery procedures can be performed safely in small centers, by paying meticulous attention to the surgical techniques and patient selection.

Keywords: Partial, Sternotomy, Reversed, L-Type, Aortic, Valve, Replacement

ID: **354**

Topic: **Cardiovascular Surgery » Heart Valve Repair**

Presentation Type: **Oral**

AORTIC VALVE REPAIR WITH ITS AGE BASED STRATEGY FOR CONGENITAL DISEASE IN THE VARIOUS AGE SPECTRUM: A 15-YEAR SINGLE-CENTRE EXPERIENCE

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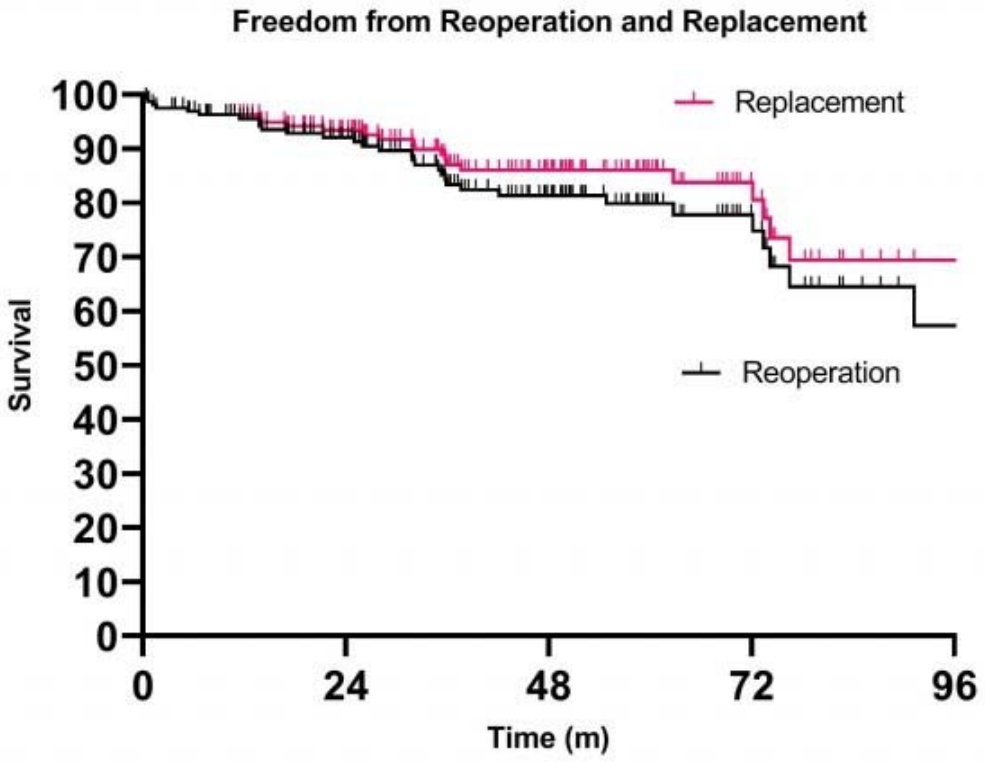
BACKGROUND: To retrospectively analyse aortic valve (AV) repair effectiveness across the whole age spectrum of patients, ruling out neonates and AV disease secondary to congenital heart disease. Primary end-points were overall survival, freedom from AV reoperation, replacement and recurrent moderate and greater aortic regurgitation, stenosis.

METHODS: 163 consecutive patients, operated on from 2004 to 2019 in our institution, were included. The mean age was 9,58±9,3 years (38,7% <1 year); 31 (19%) had a preceding balloon valvuloplasty. The indications for the procedure were stenotic, regurgitant or mixed in 80 (49,1%), 38 (23,3%), and 45 (27,6%), respectively. The procedures performed were commissurotomy (n=83; 51%), decalcification (n=79; 48,5%), raphe resection (n=41; 25,1%), Trusler technique (n=26; 16%), raphe shaving (n=28; 17,1%), free margin plication (n=22; 13,5%), leaflet replacement (n=11; 6,7%), leaflet extension (n=15; 9,2%), subcommissural annuloplasty (n=9; 5,5%) and neocuspidization (n=10; 6,1%). Post-repair geometry was tricuspid in 61 (37,4%) patients. 41 simultaneous procedures were carried out, subaortic stenosis resection, reduction aortoplasty, VSD closure, mitral valve repair being the most frequent (13, 8, 7 and 5 patients). All data were obtained from patients' medical, out-patient follow-up records, operative reports.

RESULTS: In terms of El Khoury's functional classification, among 62 patients with some degree of regurgitation there were type 1c 39 (62,9%), 39 (62,9%) type II and 36 (58,1%) type III. The 10-year survival rate was 99,4%. Freedom from reoperation, replacement and recurrent moderate aortic regurgitation, stenosis and greater at 7 years was, respectively, 65% (95% confidence interval, 55-74) and 70% (95% confidence interval, 61-78), 42% (95% confidence interval, 34-51). In multivariate analysis (95% confidence interval; p=,014), Trusler technique (HR=5,83 (1,61-21,03); p=,007), leaflet extension (HR= 6,09 (1,64-22,57); p=,007), use of patch (HR= 7,47 (1,00-55,70); p=,013), leaflet retraction of the stenotic aortic valve (HR= 0,324 (0,10-1,04); p=,05), moderate and greater LV dilatation (HR= 6,31 (1,41-28,28); p=,016) were predictors for reoperation. After a mean follow-up period of 43,2±21,6 months (range, 1 to 150 months) 116 (71%) patients had a preserved native valve, with undisturbed valve function (peak gradient <40 mmHg, regurgitation < mild) in 67 (41%).

CONCLUSIONS: Aortic valve repair in different age groups is safe and reasonable in delaying the timing for more definitive complex surgery with precluding its several drawbacks. In this setting, an age based individualized surgical strategy should be undertaken. Avoidance of the abovementioned predictors may benefit protective effect.


Freedom from Reoperation and Replacement
Replacement
Reoperation
Survival
100
90
80
70
60
50
40
30
20
10
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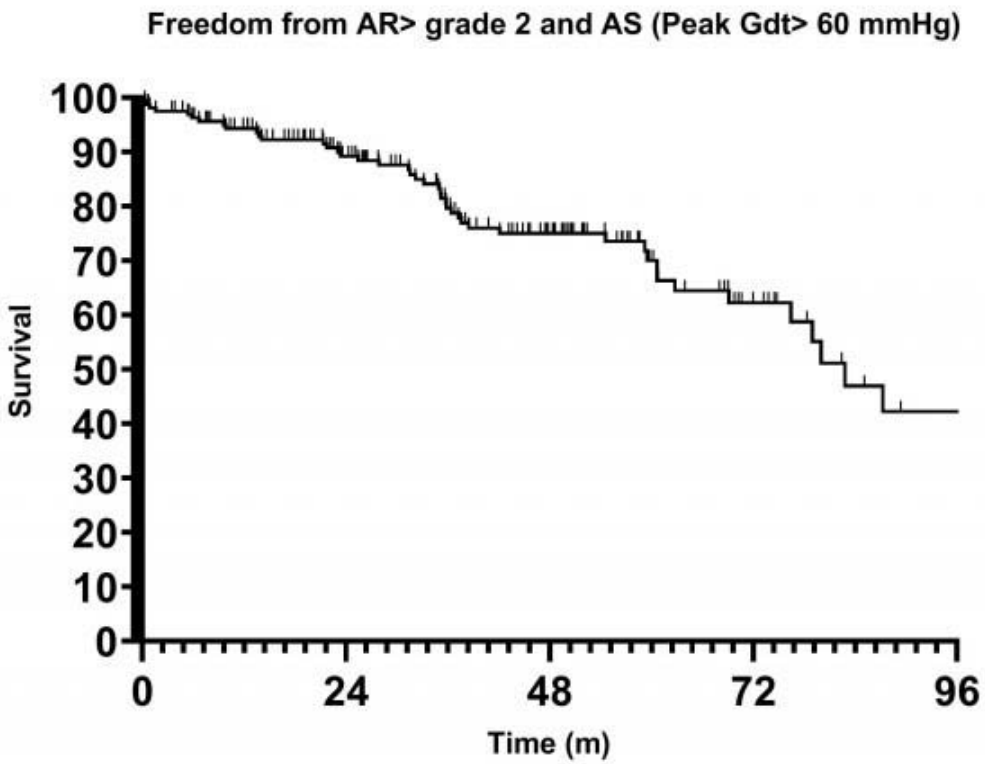
24
48
72
96
Time (m)


Freedom from AR> grade 2 and AS (Peak Gdt> 60 mmHg)
Survival
100
90
80
70
60
50
40
30
20
10
0
0
24
48
72
96
Time (m)

ID: **119**

Topic: **Cardiovascular Surgery » Heart Valve Repair**

Presentation Type: **Oral**

A NOVEL TECHNIQUE FOR REDUCING THE COMPLETE HEART BLOCK AND PERMANENT PACEMAKER IMPLANTATION AFTER AORTIC VALVE REPLACEMENT

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Objective:

Aortic valve replacement (AVR) may complicate further conduction abnormalities and necessitate for permanent pacemaker (PPM) implantation. Currently, the development of new techniques that reduce this challenge can reveal new approaches. Here we want to introduce a new technique for AVR with focus on its advantages over the standard AVR (SAVR) method. We aimed to investigate the contemporary incidence for early postoperative PPM in patients undergoing isolated AVR with SAVR or the "classic" surgical technique versus novel suture AVR technique.

Methods:

Clinical data were analyzed from 354 patients operated due to isolated AVR disease during a 4-year period from various referral cardiac units in Tabriz, Iran. Patients with preoperative significant conduction abnormalities were excluded from the study. In-hospital mortality, post-operative PPM implantation and stays in the intensive care unit (ICU) after surgery were evaluated in study patients.

Results:

The mean age of the patients was 52.46± 16.13 years. 183 (51.7%) of patients were operated with novel suture AVR technique. In-hospital mortality was lower in this group compared with those patients undergone the "classic" surgical technique (3.8% vs. 5.9%). PPM implantation was required in 3 (0.8%) patients after novel suture AVR technique compared with 12 (3.4%) patients in other group (p=0.024).

Conclusions:

Permanent complete AV block is a serious complication after AVR surgery. Introducing new techniques with reduced PPM requirement may be amenable for applying to cardiac surgery procedures.
Key words: Aortic valve replacement, permanent pacemaker implantation

Oral Presentation Session

Peripheral Vascular Disease: Diagnosis and Treatment

Date: 31.10.2020 Time: 10:30 – 11:30 Hall: 4

ID: **366**

Topic: **Cardiology » Diseases of aorta**

Presentation Type: **Oral**

THE CORRELATION BETWEEN HIGH SENSIVITY CRP AND PURE ASCENDING AORTIC ANEURYSM

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Objective: Ascending aortic aneurysm (AscAA) is a common cardiovascular disease and is associated with aortic wall inflammation and cystic degeneration. In this study, we aimed to investigate the relationship between hsCRP and AscAA.

Method: Ninty-five consecutive patients with AscAA diagnosed by transthoracic echocardiography were prospectively recruited and were compared to 40 age-gender- matched subjects with normal aortic diameters. All patient groups underwent thoracoabdominal CT to determine the aortic diameter. In both groups, blood sample were analyzed for hsCRP.

Results: High-sensitive Creactive protein (hs-CRP) (median 2.21±1,81...., IQR vs. median ..4,01±.2,44..., IQR mg/L, p<0.001..) levels were significantly higher in the AscAA group compared to the control group.

The comparisons of baseline characteristic and laboratory findings of groups were demonstrated in Table 1. In patients with AscAA, the prevalence of gender and age, creatinine, HsCRP low-density lipoprotein cholesterol (LDL-C), HDL, WBC, RDW, MPV, PLATELET, MHR levels were higher than in the control group ($p < 0.05$).
In univariate analysis identified the following variables which were significantly associated with AAA patients: age, gender, creatinine, HsCRP, LDL, HDL, WBC, RDW, MPV,platelet, MHR(monocyte HDL ratio) (Table 2).

In multivariable analysis, presence of HsCRP (OR 1.527, 95% CI 1.117 to 2.086, p=0.008), MPV (OR 0.381,95% CI 0.250 to 0.582, p<0.001), platelet (OR 0.980, 95% CI 0.968 to 0.993, p=0.002) remained to be the independent predictors of AscAA (Table 3).

In ROC analysis, a cut-off value of 2.15 HsCRP had a 68% sensitivity and a 60% specificity for prediction of AscAA patients (AUC: 0.723, p<0.001).

Conclusion: In the present study, there were higher levels of hs-CRP in patients with pure an AscAA than in controls. which may indicate the role of inflammation in the pathogenesis of AscAA. There was an inverse correlation between MPV, Platelet and AscAA which needs further studies with a larger group of patients to confirm the results of the present.

Table 1. Baseline Characteristics and Laboratory Findings

	AscAA (+)	AscAA(-)	P
AGE	57,0±7,3	54,2±6,8	**0.04**
CREATİNİNE	0,86±0,13	0,81±0,12	**0.043**
GENDER(MALE)	%80	%20	**0,006**
ANTİHYPERTENSİVE DRUG USAGE	%71,6	%28,4	0,549
B BLOKER USAGE	%73,6	%26,4	0,511
HYPERLİPİDEMİA	%71,2	%28,8	0,812
CORONARY ARTERY DİSEASE	%63,2	%36,8	0,458
HYPERTENSİON	%71,4	%28,6	0,699
DİABETES MELLİTUS	%70,4	%29,6	1,000
Hs-CRP(mg/L)	4,0±2,4	2,2±1,8	**<0,001**
FASTİNG GLUCOSE (mg/dL)	101,9±18,4	99,1±13,7	0,518
HbA1c(%)	5,7±0,4	5,7±0,3	0,754
TOTAL CHOLESTEROL(mg/dL)	205,99±39,11	205,78±43,95	0,978
LDL CHOLESTEROL(mg/dL)	132,15±34,08	128,55±34,98	0,579
HDL(mg/dL)	42,2±7,2	50,4±11,9	**<0,001**
TRİGLYCERİDES	169±86	147±70	0,112
ALT(U/L)	27,43±20,3	25,0±11,6	0,687
AST(U/L)	24,27±9,63	25,38±11,22	0,979
GGT(U/L)	25,89±9,82	25,35±9,48	0,767
URİC ACİD(mg/dL)	5,51±1,25	5,17±1,17	0,148
WBC(10^3/µL)	7,0±1,6	6,3±1,2	**0,014**
HEMOGLOBİN(g/dL)	14,21±1,43	13,95±1,63	0,361
RDW(%)	12,22±1,68	12,74±0,94	**0,012**
MCV(fL)	86,49±3,98	86,47±4,13	0,972
NEUTROPHİL(10^3/µL)	3,9±1,2	3,5±0,9	0,09
LYMPHOCYTE(10^3/µL)	2,3±0,6	2,1±0,5	0,374
NEUTROPHİL/ LYMPHOCYTE RATİO	1,8±0,6	1,7±0,5	0,591
MPV(fL)	7,89±1,55	9,99±1,54	**<0,001**
PLATELET(10^3/µL)	246±62	274±66	**0,019**
MHR	13,1±3,96	9,69±3,88	**<0,001**

Data are given as mean ±SD, median (interquartile range) or n (%).

AscAA (Ascending Aortic Aneurysm), ALT (Alanin aminotransferaz), AST (Aspartat Aminotransferaz), HbA1c (Hemoglobin A1C), HDL (High Density Lipoprotein Cholesterol), Hs-CRP (High Sensitive C Reactive Protein), LDL (Low Density Lipoprotein Cholesterol) MCV (Mean Corpuscular Volume), MHR (Monocyte HDL ratio)MPV (Mean Platelet Volume), RDW (Red Cell Distribution Width), WBC (White Blood Cell),

Table 2. Univariate logistic regression analysis

	OR	95% CI	p-value
AGE	1.053	1.001-1.107	**0.047**
CREATİNİNE	1,202	1,05-1.606	**0.046**
GENDER	0.35	0.163-0.751	**0.007**
HDL (mg/dL)	0.905	0.862-0.951	**<0.001**
HsCRP(mg/L)	1.467	1.202-1.790	**<0.001**
MHR	1.276	1.132-1.438	**<0.001**
MPV(fL)	0.458	0.344-0.610	**<0.001**
RDW(%)	0.746	0.547-1017	**0.063**
PLATELET(10^3/µL)	0.993	0.988-0.999	**0.025**
WBC(10^3/µL)	1.397	1.069-1.826	**0.014**

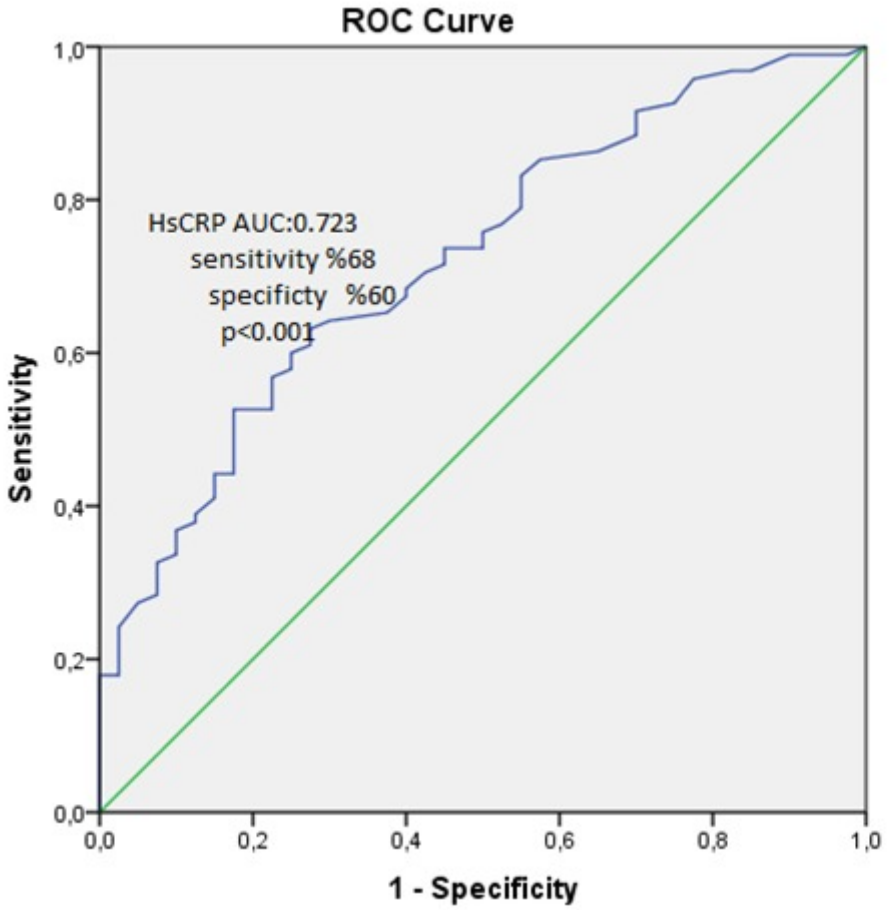
Hs-CRP (High Sensitive C Reactive Protein HDL(High Density Lipoprotein Cholesterol) RDW(Red Cell Distribution Width) MPV(Mean Platelet Volume) WBC(White Blood Cell)

Table 3. Predictors of AscAA in multivariate logistic regression analyses

	OR	95% CI	p-value
HsCRP(mg/L)	1.527	1.117-2.086	**0.008**
MPV(fL)	0.381	0.250-0.582	**<0.001**
PLATELET(10^3/µL)	0.980	0.968-0.993	**0.002**

OR: odds ratio, CI: confidence interval

AscAA (Ascending Aortic Aneurysm), MPV (Mean Platelet Volume)



ID: **271**

Topic: **Cardiology » Diseases of aorta**

Presentation Type: **Oral**

THE CLINICAL USEFULNESS OF ANTIAGGREGANT OR ANTICOAGULANT THERAPY UPON THE ABDOMINAL AORTIC ANEURSYM

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Objective:

Abdominal aortic aneurysm (AAA) is a degenerative vascular pathology resulting in morbidity and mortality in older patients due to rupture and sudden death. Established guidelines don't recommend which pharmacological therapies is the best for the prevention of AAA progression or rupture. Most AAA contain mural thrombus. In some study, it was shown AAA containing mural thrombus was protected against the enlargement or rupture. Therefore, the aim of this study is to investigate the effect of anticoagulant and antiaggregant therapy on the mural thrombus size, aneurysmal progression and the clinical endpoints.

Method:

Three hundred fifty-seven patients whose were diagnosed AAA by the computer tomography between 2012 and 2019 were collected from the archive of the hospital. We divided them into groups (group 1 no therapy n:18, group 2 ASA therapy n:145, group 3 clopidogrel therapy n:83, group 4 antiaggregant and anticoagulant therapy n:25, group 5 NOAK therapy n:45, group 6 varfarin therapy n:41). All biochemical parameters, thrombus measurements and abdominal diameters were analysed in patients. The results were evaluated by using statistical methods.

Results:

Demographic and biochemical characteristics of the examined groups were similar. The difference of mural thrombus diameter after therapy was highest in group 6 (group 1; 2,89±4,71, group 2; -2,04±6,56, group 3;- 3,46±5,27; group 4; -5,72±5,78, group 5; -7,11±4,79; group 6; -10,51±7.9; p=0.001). The increasing of the abdominal aortic diameters after therapy was similar in all groups (group 1; 3,44±4,57, group 2; 2,1±3,12, group 3; 1,74±1,56; group 4; 2,60±3,21, group 5; 1,34±1,62; group 6; 1,25±1,37; p=0.37). The correlation was insignificant between decreasing of mural thrombus diameter and increasing of abdominal aortic diameter. The clinical endpoints was similar in all groups (operation, group 1 n:2, group 2 n:41, group 3 n:24, group 4 n:4, group 5 n:10, group 6 n:5; rupture or dissection group 2 n:5, group 3 :2, group 4 n:1; peripheric emboli group 1 n:1, group 2 n:16, group 3 n:5, group 4 n:2, group 5 n:1, group 6:2; death group 1 n:4, group 2 n:21, group 3 n: 20, group 4 n:6, group 5 n:9, group 6 n: 11, p>0.05)

Conclusion:

Anticoagulant therapy especially varfarin decreased the amount of mural thrombus. However, the decreasing of the mural thrombus does not affect the clinical status and the abdominal aortic diameter.

ID: **483**

Topic: **Cardiovascular Surgery » Peripheral Arterial Disease**

Presentation Type: **Oral**

INHERITED RISK FACTORS IN PERIPHERAL ARTERIAL DISEASE

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[2]*19 mayıs Üniversitesi Tıp Fakültesi, Samsun, Turkey*

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Objective: We aimed in this study to examine the presence and frequency of genetic polymorphisms in individuals with lower extremity peripheral arterial disease and to report on their association with this disease.

Material and methods: This cross-sectional study included a total of 38 peripheral arterial disease patients who had lower extremity peripheral arterial occlusive lesions as documented by a computed tomography angiography and had a complete set of thrombophilia marker and genetic risk factor analysis.

Results: A total of 38 patients (mean age: 49.81±4,8 years) were investigated for genetic risk factors and thrombophilia markers. Of the 38 patients; 8 had factor V Leiden mutation and 14 had methylenetetrahydrofolate reductase C677T gene mutation.
Conclusion: Due to the presence of an association between risk factors for thrombophilia and occlusive events, which lead to increased failure rates in revascularization procedures for peripheral arterial disease, we believe that thrombophilic markers and genetic risk factors should certainly be assessed particularly in younger patients or patients undergoing revascularization procedures to improve success and patency rates and to minimize occlusive complications.

Keywords: revascularization peripheral arterial disease, thrombophilia

ID: **518**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Oral**

ADMINISTERING SYSTEMIC ANTICOAGULATION (HEPARIN) IS A GOLD STANDARD MANAGEMENT DURING VASCULAR ACCESS SURGERY; IS IT A DILEMMA?

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Purpose: Although administering heparin is being a routine management during vascular access procedure in patients need for a hemodialysis, the result of this treatment is controversy. It has been shown that heparin treatment results postoperative bleeding but it has not any effective support for postoperative AVF duration in literature. Conversely it has been shown that administering heparin during vascular access procedure significantly acts positively to the AVF duration in some of the literature. Because of this dilemma, the aim of this study was to evaluate the effect of the heparin on the patency of the arteriovenous fistula and postoperative complications in patients with undergoing AVF access procedure.

Method: The study was carried out retrospectively on patients admitted to Van Yuzuncu Yıl University Hospital for permanent vascular access placement since April 2017 through September 2019. 253 patients were enrolled in the study. All patients were operated on by a single surgeon by a standardized surgical procedure. 87 patients (Group I) were assigned to receive 100units/kg of heparin after dissection prior to anastomosis while the other 166 (Group II) received no intraoperative heparin injection. In sub-group analysis two another group was consisted as the patients with predialysis and preparative for AVF (Group Ia and IIa) and currently taking a hemodialysis treatment (Group Ib and Group IIb). Auscultation of bruit and palpation of thrill was used to assess arteriovenous fistula patency in the first 2 weeks and 1 month after AVF placement. All the necessary data has been gathered from the hospital records.

Results: Depending on the demographic data's both of the groups were similar. Postoperative bleeding (incision line bleeding and subcutaneous hematoma) was significantly high in Group I than Group II (17 (19.5%) vs 4 (4.8%) ($p<0,001$). The sub-group analysis of the study revealed that the bleeding was statistically high in patients with currently undergoing hemodialysis ($p<0,05$). The AVF patency was similar in both groups but the sub-group analysis was revealed that both Group Ib and Group IIb had the highest patency rates than the other two sub-groups.

Conclusion: Our results show that systemic anticoagulation with heparin increase the bleeding complications during the AVF access procedure, especially in patients whom currently undergoing an hemodialysis treatment. Although systemic heparin administration may be considered as an effective option in preventing early vascular access failure, it has a limited effect to the late patency of AVF. However, considering the contradictory data on the usefulness of heparin injection, larger trials are needed to evaluate efficacy and adverse effects of systemic intraoperative anticoagulation in currently undergoing hemodialysis patients before qualifying it as a method of increasing AVF patency in these patients.

ID: **31**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Oral**

TRANSPOSITION OF BASILIC VEIN IN FOREARM FOR ARTERIOVENOUS FISTULA CREATION: OUR MID-TERM RESULTS

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Background: In this study, we aimed to present our mid-term results of basilic vein transposition in the forearm to create an arteriovenous fistula.

Methods: Between January 2015 and October 2017, a total of 21 patients (13 males, 8 females; mean age 54.2±11.3 years; range, 32 to 74 years) with an adequate basilic vein and radial arterial systems who underwent basilic vein transposition in the forearm were retrospectively analyzed. All operations were performed under local anesthesia and mild sedation. The basilic vein was harvested using a single incision from elbow joint to wrist as an in situ vein graft. If the harvested basilic vein did not extend easily to the radial artery in the wrist region, the saphenous vein was harvested to extend arteriovenous fistula tract.

Results: The mean follow-up was 25.3±9.8 (range, 2 to 32) months. All patients underwent arteriovenous access surgery using transposed basilic vein in the forearm. In all patients, except for two, transposed basilic vein in the forearm stayed patent during follow-up with a patency rate of 90.5%. The mean fistula maturation time was 45.2±10.7 (range, 28 to 59) days.

Conclusion: If cephalic vein diameters are too small for arteriovenous fistula creation, basilic vein system in the medial surface of the forearm may be considered a favorable option.

ID: **560**

Topic: **Cardiology » Preventive cardiology**

Presentation Type: **Oral**

OSCILLOMETRIC EVALUATION OF THE EFFECTS OF CARDIOTOXIC CHEMOTHERAPEUTIC AGENTS ON VASCULAR STIFFNESS

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Objective:

It was shown in many clinical trials that arterial stiffness is an early predictor of cardiovascular events. Since cancer patients who have been treated with cardiotoxic chemotherapeutic agents experience an increased risk of cardiovascular events, we aimed to evaluate the arterial stiffness in cancer patients taking cardiotoxic chemotherapeutic agents.

Method:

Our study was a prospective, case-control study involving 70 participants. 30 of the participants were newly diagnosed cancer patients, and 40 were age- and sex-matched healthy individuals. Their ages were between 18 and 50 years. Hypertension, diabetes mellitus, known cardiac diseases, obesity, smoking, and alcoholism were the exclusion criterias. We measured baseline oscillometric arterial stiffness parameters (pulse wave velocity, augmentation index, total vascular resistance, and blood pressures) of all participants with Mobil-O-Graph 24 h ABPM NG® (Stolberg, Germany) device. In addition, we evaluated transthoracic echocardiographic parameters for aortic stiffness (aortic stiffness index, elastic modulus, aortic distensibility, and aortic strain). For cancer patients, the measurements were repeated one month after completion of the chemotherapy protocol. This study was funded by the Ondokuz Mayıs University, Samsun, Turkey (Project Number: PYO.TIP.1904.18.020).

Results:
Mean age of the cancer group was 41.4±5.9 years and that of the control group was 39.6± 6.6 years (p=0.258). 29 patients of the cancer group were women and 38 subjects of the control group were women (p=1.0). 28 patients had breast cancer, one had lung cancer, and one had diffuse B-cell lymphoma. Before chemotherapy, cancer patients had similar values for stiffness parameters as the control group. However, oscillometric pulse wave velocity parameter differed significantly in cancer patients after chemotherapy (p<0.0002). In addition, systolic blood pressure and central systolic blood pressure values increased significantly in cancer patients after chemotherapy (p=0.033 for both). Augmentation index increased in cancer patients after chemotherapy as compared to the controls (p=0.013). On the other hand, echocardiographic stiffness parameters were not different in cancer patients before and after completion of the chemotherapy protocol.

Conclusion:
After administration of cardiotoxic chemotherapeutic agents, we observed significant deteriorations at oscillometric pulse wave velocity and augmentation index parameters which are early predictors of cardiovascular events.

Table: Comparison of arterial and aortic stiffness parameters of the study groups

Parameter	Control Group (n=40)	Cancer Patients Before Treatment (n=30)	Cancer Patients After Treatment (n=30)	p	p*	p**
Pulse Wave Velocity (m/sec)	5,96 ± 0,71	6,23 ± 0,83	6,5 ± 0,81	0,144	**0,004**	**<0,002**
Augmentation Index (%)	24,45±8,8	28,17 ± 9,66	29,67 ± 8,08	0,098	**0,013**	0,293
Total Vascular Resistance (sec*mmHg/ml)	1,22± 0,13	1,23 ± 0,11	1,22 ± 0,12	0,642	0,912	0,407
Systolic Blood Pressure (mmHg)	120,28± 13,29	121,27 ± 14,84	125,67 ± 16,66	0,77	0,137	**0,033**
Diastolic Blood Pressure (mmHg)	75,25±10,42	77,53 ± 11,78	80,1 ± 13,5	0,394	0,094	0,187
Mean Arterial Pressure (mmHg)	96,08±10,67	97,67 ± 12,74	100,97 ± 14,43	0,572	0,107	0,075
Pulse Pressure (mmHg)	44,73±9,33	43,9 ± 7,99	45,6 ± 8,59	0,699	0,689	0,177
Central Systolic Blood Pressure (mmHg)	110,03±11,68	111,33 ± 12,52	115,57 ± 15,85	0,654	0,097	**0,033**
Central Diastolic Blood Pressure (mmHg)	77,23±10,36	79,07 ± 11,96	81,73 ± 13,62	0,493	0,12	0,165
Aortic Strain (%)	7,31 ± 2,98	7,43 ± 2,27	7,21 ± 2,5	0,855	0,875	0,581
Aortic Stiffness Index	3,36 ± 1,66	2,94 ± 1,22	3,21 ± 1,61	0,247	0,706	0,287
Aortic Distensibility ($cm^2.dyn^{-1}.10^{-6}$)	0,34 ± 0,16	0,35 ± 0,13	0,33 ± 0,13	0,749	0,719	0,336
Aortic Elastic Modulus ($dyn.cm^{-2}.10^6$)	7,42 ± 3,82	6,67 ± 3,12	7,36 ± 3,71	0,378	0,944	0,193

p: Between control group and before treatment group
p*: Between control group and after treatment group
p**: Between before treatment and after treatment groups

ID: **759**

Topic: **Cardiovascular Surgery » Abdominal Aortic Aneurism**

Presentation Type: **Oral**

EMERGENCY POPLITEAL ARTERY SURGERIES FOR ANEURYSMS

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Objective: Popliteal artery aneurysms have clinical manifestations usually due to compression symptoms, intermittent claudication or arterial stenosis. We evaluated the results of the patients operated in emergency conditions in our clinic.

Methods: Between January 2012 and January 2017, 7 patients were operated due to popliteal aneurysm in our clinic in emergency. All patients were male and the mean age of the patients was 58.2 ±12.1. There was concomittant femoral artery aneurysm in one patient, also femoral and iliac artery aneurysm accompanying in another patient. From the emergent cases one had bilateral aneurysm with unilateral rupture, one had acute arterial stenosis with a chronical basis, one was a patient who had a supragenicular pulsatile mass with necrotic foot wound and the two of them were acute arterial occlusion.
Results: The aneurysm was diagnosed by doppler ultrasonography in 3 of the patients and by magnetic resonance angiography in 2 of them. Of the patients four were operated under general anesthesia and one under combined epidural+spinal anesthesia. Aneurysmectomy / Ligation + PTFE/ reverse saphenous vein/in situ saphenous vein bypass surgery was performed. All patients were heparinized postoperatively.

No mortality was observed in the early postoperative period. Distal pedal arterial pulses were palpabl in two patients and two of the patients had doppler flow distally. Only one patient had no distal flow in foot postoperatively who had an ischemic motor and sensitive deficit initially. Postoperatively above the knee amputation was performed to this patient.

Conclusion: Popliteal aneurysms have emergency manifestations such as thrombosis and rupture clinically. Prompt diagnosis should be considered before complications develop for elective approach.

ID: **816**

Topic: **Cardiovascular Surgery » Peripheral Arterial Disease**

Presentation Type: **Oral**

SUCCESSFUL ENDOVASCULAR TREATMENT OF PERFORATED HEPATIC ARTERY WITH A NOVEL TECHNIQUE: SELECTIVE EMBOLIZATİON WITH CUT-INLATED-DEFLATED BALLOON

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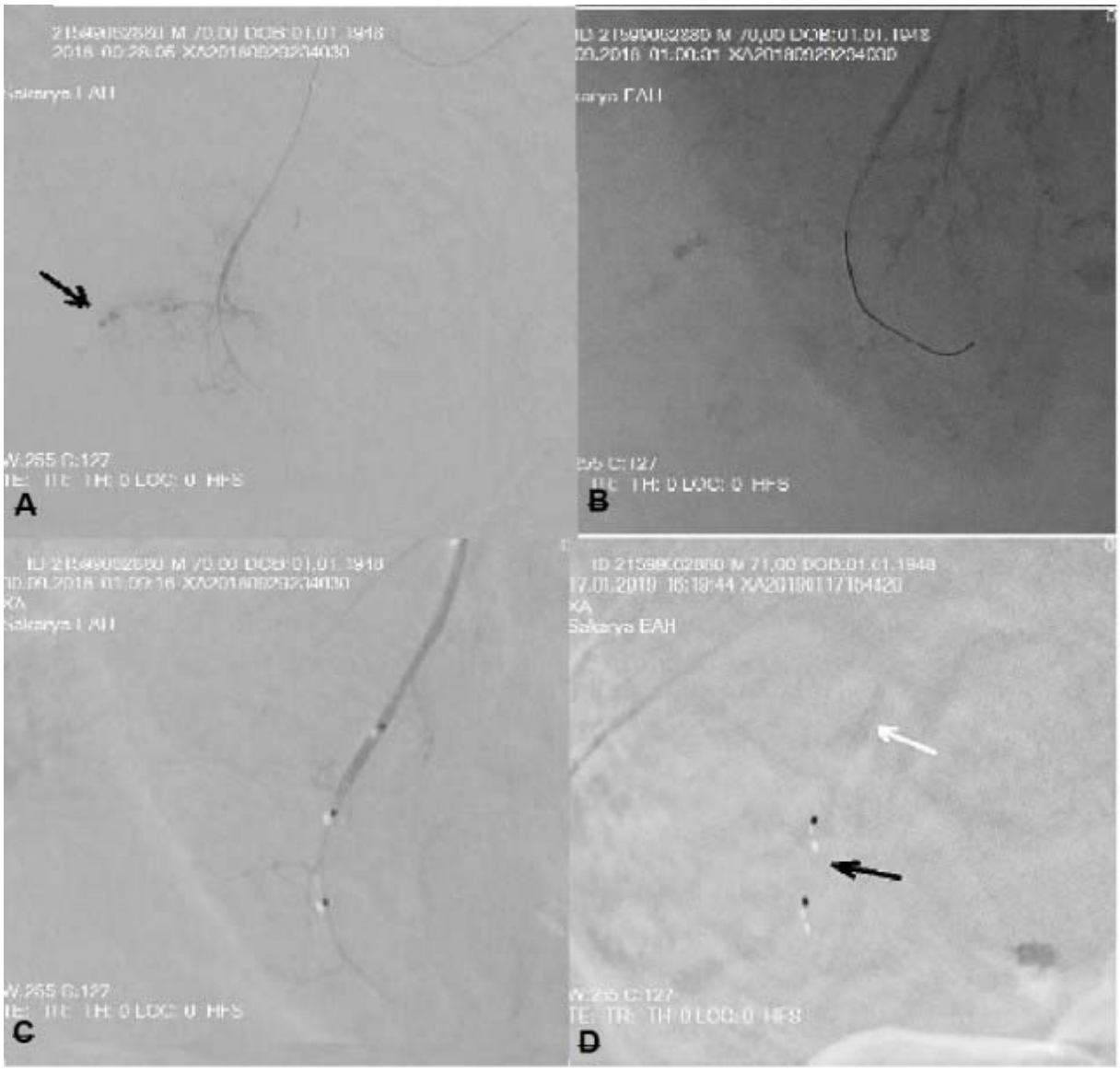
Hepatic artery hemorrhages can be traumatic, iatrogenic, or spontaneous. Spontaneous hepatic artery hemorrhage is observed in cases such as tumor, aneurysm, pseudoaneurism, metastatic diseases, and arteriovenous malformation. The use of endovascular treatment methods in spontaneous hepatic artery hemorrhage is on the rise. Here, we present a case of spontaneous hepatic artery hemorrhage, where we performed embolization using the cut-inflated-deflated balloon technique. A 71-year-old male patient was admitted to the emergency service with complaints of abdominal pain, nausea and vomiting. During the physical examination of the patient with a history of coronary artery disease, hypertension, diabetes mellitus and liver cancer, blood pressure was 70/40 mmHg, and heart rate was 115/min. Hemoglobin was 9.3 gr/dl, and hemotocrit was 29.9. Control hemoglobin was 6.6 gr/dl, and control hemotocrit was 19.7. Contrast abdominal CT showed an extravasation in the peritoneal cavity. An endovascular intervention was planned, then a 6-Fr sheath was placed into the femoral artery, and a 6-Fr right Judkins guiding catheter was used to engage the celiac artery ostium. Celiac artery angiography revealed a contrast extravasation and 8-Fr sheath was placed into the femoral artery. Then, a 7-Fr RDC guiding catheter was used to engage the celiac artery ostium. The lesion was successfully passed with a 0.014 wire under fluoroscopic guidance. After crossing the perforated segment with a floppy guidewire of 2.5x16 mm, a Graftmaster graft-covered stent was implanted. However, this maneuver was unsuccessful due to the stent placed in proximal of extravasation. Then, the inflated-deflated balloon catheter was cut with a scissor. The cut-inflated-deflated balloon catheter was advanced into the extravasation segment with another balloon catheter. After delivering the cut-inflated-deflated balloon, the contrast extravasation was disappeared. The patient was discharged two weeks later. The reported incidence of spontaneous rupture of hepatatocellular carcinoma is in the range of 5-10%. The mortality rate is approximately 25-75% during the acute phase of rupture, and it is the third most common cause of death after the progression of cancer and liver failure. Hepatic hemorrhages are treated with surgical and endovascular approaches. Different embolic materials and graft-covered stents and their combinations may be used as an endovascular treatment. Covered stents are preferred for larger vessel structures and non-convoluted vessels, whereas embolic materials are more preferred for thin and convoluted vessels. Due to the absence of the coil and embolic agents and the continuing hemorrhage, embolization was performed with the cut-inflated balloon technique. This technique is inexpensive and can be easily applied in small vessels so should be considered at centers with limited facilities.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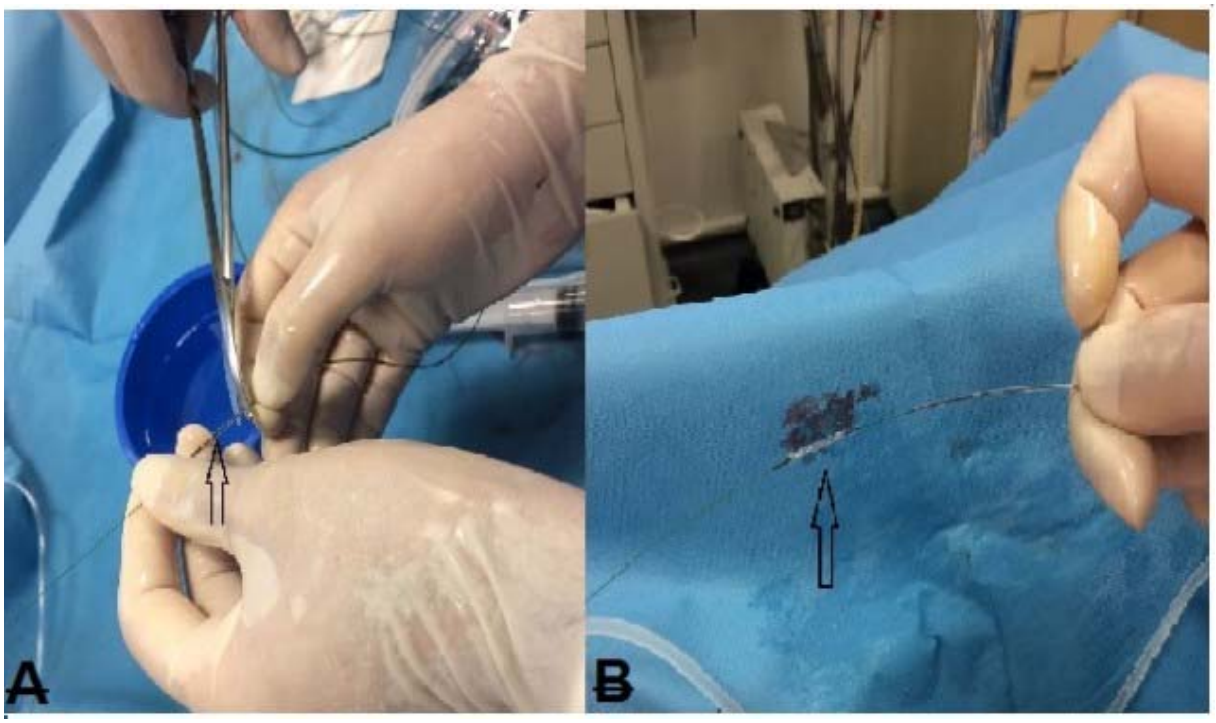
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Oral Presentation Session

New Techniques in Coronary Surgery

Date: 31.10.2020 Time: 10:30 – 11:45 Hall: 5

ID: **410**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

THE IMPROVEMENT OF CARDIAC FUNCTION AFTER CORONARY ARTERY BYPASS GRAFT IN LOW PREOPERATIVE EJECTION FRACTION

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Background

Preoperative left ventricle function is an important factor to predict the outcome of coronary artery bypass surgery. Dysfunction of left ventricle increase the risk factor of postoperative complication and mortality. This study aimed to analyze the effect of preoperative left ventricle ejection fraction (LVEF) after on-pump coronary artery bypass graft.

Method

A retrospective study was conducted in single institution using clinical data of patients undergoing elective on-pump CABG in 2018-2019. Exclusion criteria was patients underwent combined surgery, history of cardiovascular surgery and percutaneous coronary intervention (PCI), and re-operation procedure. Total sample was 660 patients were classified into two group, based on preoperative left ventricle ejection fraction (< 35% and > 35%). The primary endpoints were postoperative ejection fraction, postoperative ventilatory support, length of stay in intensive care unit (ICU), complications and mortality.

Results

In this study, 72 patients had preoperative left ventricle ejection fraction $\leq$ 35% (group A) while 588 patients ejection fraction ware > 35% (group B). The mean of age in group A was significantly lower than group B ($p<0.001$. Among both group, duration of cardiopulmonary bypass (CPB) and aortic clamp (AxC) were not significantly difference. There was significantly difference of duration in ICU (74.48$\pm$113.28 vs 34.11$\pm$64.82, $p<0.001$) and postoperative ventilatory support in group A and group B (25.82$\pm$44.27 vs 16.42$\pm$46.26, $p<0.008$). In group A, the change of preoperative into post-operative LVEF was significantly difference (27.85+5.48 to 30.76+10.39, $p<0.001$). In contrast, postoperative LVEF change in group B pointed no significantly difference. Postoperative complications were significantly higher in group A than group B including transient neurologic deficit (2.8% vs 0.5%, respectively, $p=0.036$), prolonged ventilation (5.6% vs 1%, $p=0.003$), pulmonary embolism (1.4% vs 0%, $p=0.004$), anticoagulant complications (4.2% vs 0.2%, $p=0.002$). Postoperative mortality rate was significantly higher in group A than group B (11.2% vs 2.8%, $p=0.013$]. No significant data difference was found in both groups regarding other post-operative complication including perioperative myocardial infarction, stroke, renal failure and cardiac arrest.

Conclusion

Preoperative LVEF is the important determinant to predict the change LV function following coronary artery bypass surgery. Low preoperative LVEF had an improvement in LV systolic function after surgery. This study was widening the existing knowledge on LVEF changes in patient undergoing on-pump CABG surgery.

ID: **334**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

INTRA-AORTIC BALLON PUMP IN LEFT MAIN DISEASE WITH LOW LEFT VENTRICLE EJECTION FRACTION: THE CONTRIBUTING FACTOR OF THE POSTOPERATIVE OUTCOMES AND MORTALITY IN CORONARY ARTERY BYPASS GRAFT SURGERY

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Background

Intra-aortic balloon pump (IABP) have generally been used for patients undergoing high-risk mechanical coronary revascularization This study aimed to evaluate the difference between revascularization with and without intraoperative IABP in patients with low left ventricle ejection fraction (LVEF) and left main disease > 50% on early outcomes and mortality after elective on-pump coronary artery bypass surgery.

Method

A retrospective study was conducted in single institution using clinical data of patients undergoing elective on-pump CABG in 2018-2019. Exclusion criteria was patients underwent combined surgery, history of percutaneous coronary intervention (PCI), re-operation procedure and preoperative LVEF >40%. Total sample was 46 patients with left main disease > 50% and low preoperative LVEF were classified into two group, based on with and without intraoperative IABP. The primary endpoints were postoperative ventilatory support, length of stay in intensive care unit (ICU), complications and mortality.

Results

In this study, 12 patients with intraoperative IABP and 34 patients without intraoperative IABP. Among group of patients with intraoperative IABP than without intraoperative IABP, duration of cardiopulmonary bypass (CPB) (108 vs 83 minutes, IQR=49–164, p>0.05) and aortic cross clamp (AxC) time (52 vs 45 minutes, IQR=49–142, p>0.05) were not significantly difference. Preoperative ejection fraction in patients with intraoperative IABP was significantly lower than in group without intraoperative IABP (33% vs 36%, IQR=7.4–16, p=0.01). Notably, there was significantly difference of length of stay in ICU in patients with intraoperative IABP (96 vs 23 hours, IQR=20–116, p=0.017). Meanwhile, duration of postoperative ventilatory support in both groups was not significantly difference (18 vs 11 hours, IQR=8–48 hours, p>0.05). Postoperative re-operative bleeding rate were significantly higher in patients with intraoperative IABP [16.7% vs 0%, p<0.014]. Postoperative mortality rate was not significantly difference in both group [25% vs 5.7%, p=0.072]. No significant data difference was found in both groups regarding other post-operative complication including perioperative myocardial infarction, stroke, renal failure and cardiac arrest.

Conclusion

Intraoperative IABP in patients with left main disease >50% and low preoperative LVEF did not decrease mortality or improve the outcome of the surgery. Rigorous criteria and additional sample for further study should be applied to the use of IABP.

ID: **88**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

EMERGENCY SURGICAL CORONARY REVASCULARIZATION IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION

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Abstract

Coronary heart disease (CHD) is the most common cause of death worldwide. Acute myocardial infarction (AMI) - the most serious complication of ischemic heart disease, resulting in an acute or progressive heart failure or serious arrhythmias. The most common and direct cause of death in patients with AMI is a ventricular fibrillation [1].

Undoubtedly, invasive treatment of AMI is more effective than non-invasive. As a consequence, coronary angiography is performed in an increasing number of patients with AMI , and thus increases the proportion of patients on whom , for whatever reason, cannot be performed stenting.

Keywords: coronary heart disease , acute myocardial infarction , emergency coronary artery bypass grafting

Methods and results

In the period from January 2015 to January 2018 in the "Institute of the Heart" of ministry of Health of Ukraine were urgently operated 129 patients with acute myocardial infarction (29 (22.5%) - without ST-segment elevation (NSTEMI), 100 (77.5 %) - with ST-segment elevation (STEMI). In all cases the values of troponin I were positive. On all patients were performed emergency coronary artery bypass surgery within 6 hours after coronary angiography. Ratio of men to women was 87 (67.4%) and 42 (32.6%), respectively. Mean patient age - 62 ± 12,5 years. In the analyzed group of patients 3- vessel disease of the coronary vessels were detected in 114 (88.3 %) cases , obstruction of the main trunk of the left coronary artery - in 89 (69 %) patients , isolated lesion of left main in 5 (7 %) , cardiogenic shock was in 13 (12.1%) patients , pre-and postoperative intraaortic balloon contrapulsation was used in 35 (27.2%) patients. Average ejection fraction (EF) of the left ventricle was 35 % or higher in 84 (65 %) patients,below 35 % in 36 (28 %) and below 25 % in 9 (7%).

In most cases, CABG , we used venous grafts .In 20 patients with stable hemodynamics Left anterior descending artery(LAD) was shunted using the left internal thoracic artery(LITA) .In 31 (24.1%) patients for distal anastomoses were used intracoronary shunts . Complete revascularization (shunted at least 3 of the arteries) is achieved in 105 (81.4 %) patients. In 15 (11.7 %) patients, preoperative stents implanted in the infarct - related artery, but because of the inefficiency of this procedure, patients were operated. Total number of grafts on per patient was 2,7 ± 0,4. The average duration of cardiopulmonary bypass was 61 ± 2,6 min. Hospital mortality in patients was 12.4% (16 patients died, all with ST-segment elevation).

Conclusions:

1. Our own experience has demonstrated the feasibility and effectiveness of emergency revascularization in AMI patients with unstable cardiac hemodynamics or cardiogenic shock, when thrombolysis or interventional procedures are unsuccessful.

2. CABG technique of using an artificial heart fibrillation with periodical clamping of the aorta and hypothermia is safe in patients with AMI and allows to reach a satisfactory level of mortality, comparable with the results of leading cardiac clinics.

ID: **138**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

EARLY TERM RESULTS OF EARLY CORONARY ARTERY BYPASS GRAFT OPERATION IN PATIENTS INITIALLY TREATED BY PRIMARY PERCUTANEOUS CORONARY INTERVENTION DUE TO ACUTE CORONARY SYNDROME

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Objective: Primary Percutaneous Coronary Intervention (PCI) is being more frequently performed after ACS. Most of the patients who were scheduled for CABG operation had underwent several PCIs. The aim of this study is to investigate the early results of the CABG operation after the recent previous PCI targeting the responsible coronary lesion of the ACS.

Methods: Patients who underwent CABG between January 2011 and December 2014 were divided into two groups. Patients who hospitalized for ACS and underwent early CABG after a recent previous PCI was named as Group 1. The control group, Group 2, is consisted of the patients who underwent elective CABG after an elective coronary angiography. There were 102 patients in group 1 and 105 in group 2 with a total number of 207. The demographic features, preoperative risk factors and postoperative early outcomes were compared between the two groups.

Results: There were no statistically significant difference between the groups in terms of demographic features and preoperative risk factors. Preoperative usage of ACEI drugs and Levosimendan were significantly higher in group 1 when compared with group 2. (ACEI usage Group 1 vs. Group 2: 95 (%93.1) vs 89 (%84.7) p=0.026; Levosimendan usage Group1 vs. Group 2: 21 (%20.5) vs 11 (10.4) p=.039) The operative variables were similar between two groups whereas the postoperative mean drainage amounts were significantly higher in group 1 (546.3±172 cc vs 424.2±183cc p<0.001). Postoperative blood and blood product demand were significantly higher in group 1 than group 2 (3.3 ± 1.8 units) and (1.7 ± 0.9 units); p<0.001). The in-hospital mortality rates were similar between the two groups (5 (%4.9) vs 4 (%3.7); p=0.470).

Conclusion: Early CABG operation after ACS is a safely applicable process with acceptable early mortality and morbidity rates.

ID: **530**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

ULTRASTRUCTURAL EXAMINATION OF LEFT INTERNAL MAMMARY ARTERY UNDER ELECTRON MICROSCOPY IN PATIENTS WITH CHRONIC KIDNEY DISEASE WHO UNDERWENT CORONARY BYPASS SURGERY

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Background: The aim of this study was to investigate the vascular damage of internal mammary artery graft with electron microscope secondary to chronic renal failure transmission in who patients underwent coronary artery bypass grafting surgery.

Methods: A total of 30 patients (10 patients with chronic renal failure and 20 patients without chronic renal failure) who underwent coronary artery bypass graft surgery were included in this prospective study. Left internal mammary artery graft was harvested as conventional fashion with no touch technique. Samples were prepared and then examined with the transmission electron microscope. Every arterial sample was individually examined ultrastructurally, and the changes were recorded. Then the samples of the control group and chronic renal failure group were compared.

Results: There were no significant differences between chronic renal failure group and the control group in terms of demographics, comorbidities, intraoperative data and postoperative outcomes, and the groups were statistically similar ($p<0.05$). Moreover, no statistically significance was detected in terms of structure and ultrastructure between the groups.

Conclusion: The results of our study revealed that no ultrastructural changes were observed in the structure of IMA, suggesting that this graft would provide a good graft patency.

Key words: Coronary artery bypass grafting; chronic renal failure; internal mammary artery; electron microscope.

ID: **478**

Topic: **Cardiology » Coronary Artery Disease - CABG Surgery**

Presentation Type: **Oral**

BILATERAL VERSUS UNILATERAL INTERNAL THORACIC ARTERY REVASCULARIZATION IN PATIENTS WITH MULTIVESSEL CORONARY ARTERY DISEASE

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Abstract

Objective: The bilateral internal thoracic artery (BITA) use for revascularization in patients with multivessel coronary artery disease showed advantages over single left internal thoracic artery (LITA) with saphenous vein grafts (SVG) use for coronary artery bypass grafting in such a complicated group of patients. However harvesting BITA can be associated with higher incidence of blood-loss, wound complications and major cardiac events (such as perioperative myocardial infarction, stroke and all cause death) in early postoperative period. We aimed to compare incidence of bleeding, wound complications and major cardiac events among patients underwent coronary artery bypass grafting procedure using BITA vs LITA harvesting.

Materials and methods: The study included 43 patients who underwent surgery in the department of cardiac surgery from October 2016 to December 2019 at the Republican Research Center for Emergency Medicine. All patients were divided into 2 groups: the first group consisted of 25 patients who underwent coronary bypass with the use of the left internal thoracic artery and venous grafts (LITA+SVG), the second group – 18 patients underwent CABG using both internal thoracic arteries for myocardial revascularization (BITA+SVG). The age of the patients ranged from 47 to 66 years (the average - 55 years). In both groups, all patients were male.

Results: In the first group, 14 patients had stable angina, the remaining 11 patients had unstable angina. In the BITA+SVG group, all patients had unstable angina. All patients had also history of previous myocardial infarction. On coronary angio –18 patients had - 3x vascular lesion, and 7 had - stenosis of the left main and the right coronary artery (LITA+SVG). Among BITA+SVG patients 15 patients had - 3 vessel disease and 3 patients had a left and right main stem stenosis. The revascularization index was 3.1 for the patients of LITA+SVG group and 3.1 for the BITA+SVG group. In the early postoperative period, acute myocardial infarction, stroke and mortality were not observed in any case. The average blood-loss in drainage tube during first postoperative day was 280 ± 15 ml and 305 ± 23 ml for the LITA+SVG and BITA+SVG groups, respectively. It should be noted that in the first and second groups, were not observed any wound related complications.

Conclusion: this comparative study showed that BITA and LITA harvesting doesn't influence early postoperative period. Both methods accompanied by satisfactory results regarding to bleeding, wound healing and major cardio-cerebral events in patients with multivessel coronary artery disease.

ID: **172**

Topic: **Cardiovascular Surgery » Hybrid Cardiovascular Surgery**

Presentation Type: **Oral**

HYBRID CORONARY REVASCULARIZATION WITH ENDO-CABG

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BACKGROUND
Coronary revascularization is becoming more and more minimal invasive. The hybrid approach, combining PCI with endoscopic CABG (endo-CABG), might be a valuable option for treatment of multivessel coronary disease. Hybrid coronary revascularization (HCR), combining endo-CABG to the anterior and/or lateral wall with PCI of the right coronary artery or a marginal branch, offers the potential advantages of both worlds. Hereby we describe our series of patients undergoing hybrid coronary revascularization with endo-CABG.

METHODS
From March 2013 till August 2019, 219 patients (181 males, mean age: 66.8 ± 10.8 years) underwent hybrid coronary revascularization. Patients with multivessel disease suitable for hybrid approach were accepted at the heart team. The PCI was prior or after endo-CABG. There was no discontinuation of dual platelet therapy. Endo-CABG consisted of using uni- or bilateral internal mammary artery (IMA) harvesting through three 5mm endoscopic ports. Cardiopulmonary bypass was instituted by femoral cannulation using a minimal invasive extracorporeal circulation (MiECC). Transthoracic aortic cross-clamping was followed by antegrade administration of a single shot of cold mixed blood cardioplegia. Anastomosis were made under direct vision through an utility port of three centimeter.

RESULTS
Endo-CABG was successful in all patients, requiring no conversion. There were 58 patients (26,5%) who received PCI before surgery. Mean cross-clamping and cardiopulmonary bypass times were 42.8 ± 26.5 and 86.5 ± 34.9 minutes respectively, with a mean of 2.04 ± 0.9 bypasses for each patient. The median ICU and hospital stay were 63.4± 41.4 hours and 9.2± 4.7 days. Average postoperative blood loss over 24 hours was 501.24 ± 768.5 ml. There were 3 re-interventions on the target vessels (1.37 %) and 2 patients suffered from a stroke (0.91%). The 30-day mortality was 0.91%.

CONCLUSIONS
Hybrid coronary revascularization with endo-CABG is a good minimal invasive alternative in patients with multivessel coronary artery disease. This technique is safe and provides good postoperative results without compromising operative morbidity.

ID: **397**

Topic: **Cardiovascular Surgery » Hybrid Cardiovascular Surgery**

Presentation Type: **Oral**

ADVANTAGES OF HYBRID CORONARY REVASCULARIZATION IN CORONARY ARTERY DISEASE WITH INTERMEDIATE-HIGH SYNTAX SCORE

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Background: Hybrid coronary revascularization (HCR), combining minimally invasive off-pump coronary artery bypass grafting (OPCAB) and percutaneous coronary intervention (PCI), attracts a rising interest in modern coronary surgery, especially in patients with intermediate-high SYNTAX Score as minimizing operative trauma. The objective of the study: to assess early outcomes after HCR in comparison with conventional OPCAB in patients with multi-vessel coronary artery disease (CAD).

Materials and methods: 75 patients with intermediate-high SYNTAX Score were included to our prospective Study from consecutive patients with CAD admitted to cardiac surgery department of our Center during period of 2018-2019. Patients were divided into 2 groups: 1st group - 50 patients underwent OPCAB resulting in 2-3 grafts through a full sternotomy; 2nd group - 25 patients with performed HCR. HCR consisted of 2 stages: minimally invasive direct coronary artery bypass grafting and PCI stage on the 3d day postoperatively was performed. Outcomes in postoperative hospital period were analyzed using statistical package SPSS.

Results: Two groups had no significant differences in age, sex, BMI, diabetus mellitus prevalence, LVEF, Euroscore, Syntax Score, high-sensitive troponin I level. There were no hospital deaths in both groups. In HCR group there was no need in conversion to cardiac-pulmonary bypass because of hemodynamic instability, early postoperative reoperation due to graft failure, no cerebrovascular accident was seen. The dose of cardiotonic support in intra and early postoperative period was significantly lower in HCR group in comparison with OPCAB group. There were significant lower values in the doses of cardiotonic support in intra and early postoperative period ($p<0,01$), intraoperative ($p<0,001$) and post-operative blood loss ($p<0,01$), intubation time ($p<0,001$) in HCR group in comparison with OPCAB group. The level of post-operative high-sensitive troponin I was significantly lower in 12 ($p<0,001$) and 24 hours ($p<0,01$). Treatment in ICU after operation was significantly longer in OPCAB group ($p<0,05$) as well as hospital stay before discharge ($p<0,05$).

Conclusions: Hybrid coronary revascularization in group of patients with intermediate-high SYNTAX Score can offer better outcome in early post-operative period minimizing surgical trauma and myocardial damage as compared with conventional coronary surgery. Long-term outcomes should be analyzed to determine cut-off points for surgical strategy.

ID: **733**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

ANEMIA BEFORE ISOLATED CORONARY ARTERY BYPASS SURGERY: IS IT A RISK FACTOR FOR POSTOPERATIVE NEWLY DEVELOPED ATRIAL FIBRILLATION?

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Objective: The relation of newly developed atrial fibrillation (AF) after isolated coronary artery bypass surgery (CABG) with preoperative anemia is not clear. However, it is suggested that it causes postoperative AF by causing myocardial damage, especially with the combination of hypovolemia and hypoxia. We investigated whether there is a clinically significant relationship between preoperative anemia and postoperative newly formed AF in CABG patients in our hospital.

Methods: Patients who underwent isolated CABG between 2017 and 2020 were retrospectively analyzed. 360 patients who underwent isolated CABG with or without preoperative anemia were included in the study. Patients were divided into two groups. Group 1 was defined as 180 patients with pre-operative anemia and Group 2 as 180 patients without preoperative anemia. Preoperative Anemia was accepted as hemoglobin <13g / dl in men and <12g / dl in women.

Results: When the patients were evaluated postoperatively, AF was observed in 42 (23%) patients in Group 1 and 12 (6.6%) patients in Group 2. When the postoperative groups were evaluated in terms of blood and blood product needs, an average of 2.1 units (2-5 u) of erythrocyte suspension (ES) was used in the patients in Group 1, while in Group 2, an average of 1.3 units (1-3u) ES was used. While fresh frozen plasma was used in Group 1, an average of 2.7u (2-4u) was used, while in Group 2, 1.8u (1-2u) FFP was used.

Conclusions: In our study, preoperative anemia was determined as a risk factor for newly developing AF in patients who underwent Isolated CABG. Preoperative anemia is thought to be the cause of postoperative AF by causing myocardial damage, especially in association with hypovolemia and hypoxia. Preoperative anemia was not found to increase mortality in patients with AF.

Oral Presentation Session

Achievements in Percutaneous Coronary Interventions

Date: 31.10.2020 Time: 11:45 - 12:45 Hall: 4

ID: **543**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Oral**

CULPRIT CORONARY ATHEROSCLEROTIC PLAQUE CHARACTERISTICS IN YOUNG PATIENTS WITH ACUTE MYOCARDIAL INFARCTION: A VOLUMETRIC INTRAVASCULAR ULTRASOUND STUDY

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Objective
To demonstrate the culprit coronary plaque characteristics in young patients less than 45-year-old presenting with an acute myocardial infarctionby using a three-dimensional (3D) intravascular ultrasound (IVUS).

Methods
Between September 2005 and May 2016, 75 patients with ST-elevation myocardial infarction (STEMI) less than 45 years were evaluated for the study. All IVUS studies were performed just prior any intervention (coronary balloon and stenting) to all patients with successful reperfusion by thrombolytic agents or thrombectomy catheters. All IVUS imaging and analysis were performed with 40-MHz mechanical IVUS catheter (Boston Scientific,USA). Qualitative and quantitative analyses were performed according to criteria of the clinical expert consensus document on IVUS. While culprit lesion characteristics in the participant young MI patient were presented with mean and standard deviation, clinical characteristics of them were presented with mean, standard deviation, frequency and percentage based on the type of variable. Univariate linear regression model with enter method was used to determine independent variables with statistically significant relationships, multivariate linear regression model with stepwise method was used for hypothesis analysis. Additionally, One-way Anova Test was conducted to present mean differences among the groups along with the Tukey test. $p<0.05$ was accepted as statistically significant.

Results
The mean age of patients was 41.32 (±4.34), 81.3% were male. Of culprit lesion of the young MI patients, mean lesion external elastic membrane (EEM) area was 14.64 mm2, mean lesion lumen area was 4.16 mm2 (±2.40), mean lumen area stenosis (%) was 0,67 (±0,15). Additionally, mean plaque volume was 118,41 (±71.81), mean lesion length (mm) was 15.12 mm (±5.77) and mean of remodeling index was 1,14 (±0.24).

BMI (β=0,275, p<0,001), diabetes mellitus (β=0,329, p<0,001) and LDL (β=0,276, p=0,010) were found to have statistically positive effects on plaque volume (F:29.979, p<0.001). Additionally, lesion length was found affected statistically positive by BMI (β=0,306, p<0,001) and LDL (β=0,260, p<0,001), diabetes mellitus (β=0,207, p=0,031) and statistically negative by HDL (β=-0,213, p=0,033) (F:26,606, p<0.001). It was also seen that remodeling index was found affected statistically negative by HDL (β=-0,339, p=0,003) (F:9,468, p=0.003). Furthermore, mean HDL 34.15 (±7.99) of positive remodeling index group was statistically lower than HDL mean of intermediate remodeling index group 43.26 (±10.12) (F:6.346, p=0.003) (Table 1).

Conclusions
It can be said that BMI, LDL, HDL and diabetes mellitus are important effecting factors for culprit lesion characteristics, including the length of lesions of young MI patients. Additionally, HDL is a independent variables of remodeling index which is a major characteristic of acute coronary syndrome.

Key Words: intravascular ultrasound, young myocardial infarction, remodeling index

Table 1. Multivariate Linear Regression Findings of Relationships Between Culprit Lesion and Clinical Characteristics

Dependent Variable: Plaque Volume*						
Independent Variables	**R**	**R^2**	**β**	**R^2 Change**	**F Change**	**F ChangeSignificance**
BMI	0,622	0,387	0,273	0,387	49,163	**<0,001**
DM	0,704	0,496	0,329	0,109	15,558	**<0,001**
LDL	0,736	0,542	0,276	0,045	7,049	**0,010**
Dependent Variable: Lesion Length*						
Independent Variables	**R**	**R^2**	**β**	**R^2 Change**	**F Change**	**F Change Significance**
BMI	0,667	0,445	0,306	0,445	58,636	**<0,001**
LDL	0,736	0,542	0,260	0,097	15,238	**<0,001**
HDL	0,759	0,576	-0,213	0,033	5,590	**0,021**
DM	0,777	0,603	0,207	0,028	4,854	**0,031**
Dependent Variable: Remodeling Index*						
Independent Variables	**R**	**R^2**	**β**	**R^2 Change**	**F Change**	**F Change Significance**
HDL	0,339	0,115	-0,339	0,115	9,468	**0,003**

**Multivariate Linear Regression Analysis with stepwise method*

ID: **3**

Topic: **Cardiology » Percutaneous coronary interventions**

Presentation Type: **Oral**

CORONARY ARTERY PATTERNS AND VOLUME OF ENDOVASCULAR REVASCULARIZATION OF THE MYOCARDIUM IN PATIENTS YOUNGER 40 YEARS OF AGE WITH CONCOMITANT DIABETES MELLITUS

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Background: The aim of study was to present coronary artery patterns, and volume of endovascular revascularization in young adults (≤40years of age) with concomitant diabetes mellitus (DM).

Material: In cohort of 208 patients (≤40years of age) with coronary artery disease concomitant DM comprised 7.2% (n=15). 40% (n=6) patients with diabetes admitted with acute coronary syndrome (ACS); 60% (n=9) - with stable angina.
ACS group included 4 patients with acute myocardial infarction (one patient with STEMI; three patients with NSTEMI), and 2 patients with unstable angina. Three (33.3%) patients with stable angina were in II FC (CCS); 2(22.2%) - in III FC (CCS); 4(44.5%) patients - in IV FC (CCS).
Early myocardial infarction from anamnesis verified in 40% (n=6) patients.
First-time hospitalization noted in 12(80%) patients; second hospitalization - in 3(20%) patients follow early endovascular or surgical revascularization of the myocardium.
11(73.3) young patients with DM underwent endovascular intervention, of them 8 patients - primary revascularization; 3 patients underwent second -, and third - time revascularization. 4(26.7%) patients underwent coronary artery bypass grafting (CABG).

Results: Diabetes dominated with ratio 3:1 in young female rather male patients with coronary artery disease ($p<0.01$).
80% young adults with diabetes manifested with two-three vessels disease dominated in ACS group rather stable angina group, with ratio 2:1($p<0.05$). One-vessel disease revealed in 20% patients, with prevalence in ACS group, rather stable angina, with ratio 3:1($p<0.01$).
Left arterial descending artery lesion noted in 80% (n=12) patients; Right coronary artery in 73.4% (n=11) patients; Left Circumflex artery in 60% (n=9) patients. Concomitant Left Main lesion was verified in 13.4% (n=2) in patients with stable angina only.
ACS group featured with equal rate of right coronary artery, and left arterial descending artery lesion. Patients with acute coronary syndrome differed also with prevalence of Left Circumflex artery lesion, rather stable angina patients, with ratio1.2:1 ($p=0.04$).
Patients with stable angina manifested with left arterial descending artery lesion, rather right coronary artery, with ratio 1.2:1($p=0.04$).
Discrete stenosis of proximal / mid segments of coronary arteries revealed in 53.3% patients; diffuse lesion - in 26.7%; total occlusion of vessels - in 20% patients.

Conclusion: In patients ≤40years of age with diabetes endovascular procedures comprised 73.3% with revascularization of one-two coronary arteries in 72.7% and 27.3%, accordingly. Full-volume revascularization in patients with three vessels disease was restricted due to mild stenosis in one of three vessels, either diffuse lesion of coronary arteries with left main involvement. Endovascular to surgical revascularization ratio in young adults with DM comprised 2.7:1($p<0.01$).
Indication for CABG, performed in 4 (26.7%) young adults with concomitant DM. was diffuse lesion of coronary arteries with left main involvement. All these patients suffered stable angina IV FC (CCS).

ID: **342**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Oral**

ANGIOGRAPHIC PERFUSION SCORE TO IDENTIFY 30-DAY RISK OF MAJOR ADVERSE CARDIAC EVENTS IN PATIENTS WITH ST ELEVATED MYOCARDIAL INFARCTION FOLLOWING PERCUTANEOUS CORONARY INTERVENTION

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Background: Prediction of major adverse cardiac events (MACE) following percutaneous coronary intervention (PCI) among patients with ST-segment elevation myocardial infarction (STEMI) is of great clinical importance to identify the patients in risk of adverse outcomes to guide the management. An angiographic perfusion score (APS) is a combination of thrombolysis in myocardial infarction flow grades (TFG) and myocardial perfusion grades (TMPG) before and after PCI, estimates the reperfusion better than those grades alone. This study was conducted to estimate the association of APS with the MACE among STEMI patients who undergone PCI.

Methods: In this Cross-sectional observational study APS was calculated in 205 STEMI patients within 30 days of receiving PCI without thrombolytic pretreatment, who have been selected purposively in the Department of Cardiology, University Cardiac Center, Bangabandhu Sheikh Mujib Medical University, Shahbag, Dhaka from July 2017 to June 2018. The score ranged from 0-12, where, reperfusion was defined as failed with the score of 0-3, partial: 4-9, and full: 10-12. Along with the ethical clearance from the correspondent authority, respondents were recruited who met the eligibility criteria for the study.

Results: With 7.8% incidence of MACE following PCI, the APS among the MACE patient groups was recorded as partial among 5.6% of them and as failed in 2.2%. No MACE was recorded among the full perfusion group. These differences of adverse outcomes among the groups of perfusion status were statistically highly significant ($p<0.05$).

Conclusion: An APS assesses the reperfusion status of both epicardial and myocardial perfusion and thus better predicts the risk of major adverse cardiac events following treatment.

ID: **200**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Oral**

THE IMPACT OF ADMISSION MEAN PLATELET VOLUME ON LVEF IN STEMI PATIENTS UNDERGOING PRIMARY PCI

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Aim of the work:
The aim of this study is to analyze the relationship between MPV on admission and left ventricular function in anterior STEMI patients undergoing primary PCI.

BACKGROUND:
MPV is a parameter showing platelet activation and function. Elevated mean platelet volume in patients with MI is an important risk factor for recurrent infarction and death. MPV is a strong, independent predictor for angiographic reperfusion and in-hospital mortality in patients underwent primary PTCA. Impact of admission MPV on LVEF after primary PCI in STEMI patients is still a debatable issue.

METHODS:
A total of 50 anterior STEMI patients who underwent successful primary PCI were included in this prospective cohort study conducted between January 2016 and December 2016. For all patients, admission MPV was recorded and transthoracic echocardiography was done before discharge. The study population was divided into two groups according to MPV, group I with normal MPV, n=22 patients and group II, with high MPV, n=28 patients. Informed consent obtained from every patient.
Group (I): 17 patients (77.3 %) had normal Left Ventricular (LV) systolic function by Echo (EF ≥ 50%) and 5 patients (22.7 %) had LV systolic dysfunction (EF < 50%).
Group (II): 9 patients (32.1%) had normal Left Ventricular (LV) systolic function by Echo (EF ≥ 50%) and 19 patients (67.9 %) had LV systolic dysfunction (EF < 50%).

RESULT:
There was a significant statistical difference between the two groups regarding the left ventricular function by Echo (p value = 0.002). There was no significant statistical difference between the two groups regarding major cardiac events during hospital stay (P value = 0.56). Regarding 6months follow up, there was no significant statistical difference between the two groups regarding CVS (P value = 0.17), but there was statistically significant difference regarding re-infarction , re-hospitalization and highly significant difference regarding HF (P:<0.001), in favor of group II characterized by high MPV.

CONCLUSION:
In our study, we observed a negative relation between admission MPV and subsequent EF. Compatible with previous studies, there was a significant relation between high white blood cells (WBC) count on admission and left ventricular EF. These findings, although do not prove a direct relation, may suggest an indirect role of MPV in LV remodeling. For this reason, in acute anterior STEMI patients, a high MPV may play an alerting role for possible LV dysfunction. Consequently, patients admitting to the Emergency Department with an acute anterior MI and a high MPV, are more likely to develop a ventricular dysfunction and therefore the role of more aggressive antithrombotic therapy in this patient group should be evaluated.

ID: **80**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Oral**

BODY MASS INDEX AND "OBESITY PARADOX" IN PATIENTS WITH MYOCARDIAL INFARCTION WHO UNDERWENT PERCUTANEOUS CORONARY INTERVENTION AFTER CARDIAC ARREST

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Objectives

The data on the association between body mass index (BMI) and survival in patients resuscitated following myocardial infarction are scarce, inconclusive and partly contradictive, especially regarding the "obesity paradox". The data on long-term survival in these patients are missing. We aimed to assess the possible impact of BMI on the hospital and long-term outcomes in patients with MI undergoing PCI who were resuscitated before hospitalization or immediately after admission but prior to PCI.

Methods

Data on 7343 patients with MI, 439 (6.0%) with out-of-hospital cardiac arrest or arrest immediately after admission before PCI, were retrospectively analyzed. The patients were divided into five groups (quintiles) according to their BMI and the groups were compared. The hospital and long-term mortality were determined. Data were analyzed using descriptive statistics.

Results

The rates of death in hospital were similar in all BMI quintiles. In the 1st, 2nd, 3rd, 4th, and 5th BMI quintiles 21.3%, 28.7%, 21.5%, 22.5%, and 23.0% patients died, respectively; p=0.72. After adjustment for confounders, cardiogenic shock (adjusted OR 2.94; 95% CI 1.73 to 5.03;p<0.0001), mechanical ventilation (adjusted OR 2.54; 95% CI 1.44 to 4.18;p=0.001), renal dysfunction (adjusted OR 2.34; 95% CI 1.34 to 4.10;p=0.003), but not BMI (adjusted OR 0.94; 95% CI 0.78 to 1.13) predicted hospital mortality. During the observation period, 237 (54%) patients died. During the mean follow-up of 5.6±3.0 years, the mortality rate was similar in all BMI quintiles (57.3%, 51.9%, 46.8% ,61.8%, and 51.4% patients died in the 1st,2nd,3rd ,4th, and in the highest) quintile, respectively; p=0.33).

Cox regression analysis identified age (HR 1.02; 95% CI 1.01–1.04; p<0.0001), cardiogenic shock (HR 1.64; 95% CI 1.22–2.19; p=0.001), hyperlipidemia (HR 1.80; 95% CI 1.20–2.68; p=0.004), renal dysfunction (HR 1.40; 95% CI 1.03–1.90; p=0.034), but not BMI (HR 0.98; 95% CI 0.89–1.08) as independent prognostic factors for follow-up mortality.

Conclusion

Neither hospital nor long-term mortality was associated with BMI in the patients with MI undergoing PCI who were resuscitated before hospitalization or immediately after admission but prior to PCI. Furthermore, no "obesity paradox" was observed in these patients. Cardiogenic shock and renal dysfunction predicted both hospital and long-term mortality. Additionally, mechanical ventilation predicted hospital mortality and age and hyperlipidemia predicted long-term mortality.

ID: **6**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Oral**

THE PROGNOSTIC VALUE OF GRACE SCORE FOR ACUTE KIDNEY INJURY IN ST ELEVATION MYOCARDIAL INFARCTION PATIENTS COMPLICATED WITH CARDIOGENIC SHOCK

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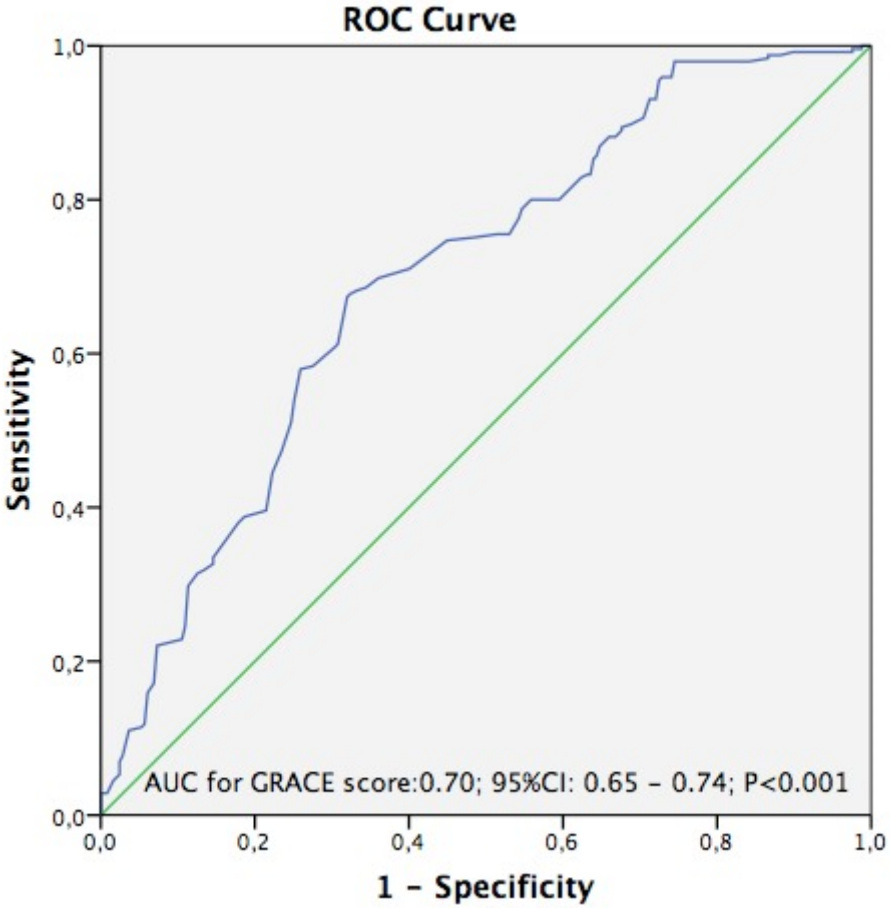
Introduction: The GRACE (Global Registry of Acute Coronary Events) risk score has been proposed in predicting short-term death in patients who are diagnosed with acute coronary syndrome. In this study, we investigated the significance of the GRACE score for acute kidney injury (AKI) in cardiogenic shock (CS)-ST elevation myocardial infarction (STEMI) patients who were treated with primary percutaneous coronary intervention (PPCI).

Methods: We retrospectively examined a total of 492 consecutive CS-STEMI patients who had undergone PPCI. The GRACE score was calculated for each patient. Patients were stratified by tertiles (T1, T2, and T3) according to the GRACE score and the incidence of AKI was compared between the groups.

Results: In univariate analysis, the incidence of AKI was significantly higher for patients allocated into the T3 group, as compared to patients in the T1 group (Odds ratio (OR): 2.8, 95% confidence interval (CI): 1.8–4.1, p<0.001). Following including all confounding variables, participants in the T3 group had a 3.1-fold higher incidence of AKI (OR: 3.1, 95% CI: 1.9–5.4, p<0.001). In a receiver operating curve analysis, the GRACE's score of the area under curve value for AKI was 0.70 (p<0.001, 95% CI: 0.65-0.74) with 69.2% sensitivity and 68.8% specificity.

Conclusion: The GRACE score provides an independent prognostic marker of AKI in CS patients related with STEMI. Based on our data, we propose that the GRACE score is a simple and clinically applicable directive tool for rapid risk stratification of AKI in STEMI patients complicated with CS.

Figure 1 A ROC curve analysis showed that the area under curve value of the GRACE score for acute kidney injury was 0.70 (p<0.001, 95% CI: 0.65-0.74).



Abbreviations: ROC; Receiver Operating Characteristic, GRACE; Global Registry of Acute Coronary Events

Table 1 In-hospital event rates and multivariate logistic regression models for in-hospital mortality and AKI by GRACE score tertiles

	GRACE score		
	T1	T2	T3
In-hospital mortality			
Number of deaths	57	74	90
Mortality, %	34.8	45.1	54.9
Mortality, OR (%95 CI)			
Model I:unadjusted	1[Reference]	1.5 (0.9–2.4)	1.8 (1.2–2.6)
Model II: adjusted for all covariates[a]	1[Reference]	1.9 (1.0–3.5)	2.1 (1.3–3.5)
Acute kidney injury			
Number of events	52	84	109
Events, %	31.7	51.2	66.5
Events, OR (%95 CI)			
Model I:unadjusted	1[Reference]	2.3 (1.4–3.5)	2.8 (1.8–4.1)
Model II: adjusted for all covariates[a]	1[Reference]	2.5 (1.5–4.1)	3.1 (1.9–5.4)

OR, Odds Ratio; CI, Confidence Interval

[a]Includes gender; hypertension; diabetes mellitus; hyperlipidemia; current smoking; chronic renal failure; previous cerebrovascular accident; previous myocardial infarction; previous percutaneous coronary intervention; peripheral artery disease; chronic obstructive lung disease; atrial fibrillation; anterior myocardial infarction; percutaneous coronary transluminal angioplasty; culprit artery; drug-eluting stent; multivessel intervention; thrombus aspiration; the first measurement during hospitalization of the following laboratory values including baseline serum creatinine, blood urea nitrogen, hemoglobin; the left ventricle ejection fraction; left ventricle diastolic diameter; the left ventricular systolic diameter; pulmonary artery systolic pressure; and tricuspid annular plane systolic excursion.

Abbreviations: AKI, Acute Kidney Injury; GRACE, Global Registry of Acute Coronary Events.

ID: **437**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

INFLATE OR NOT INFLATE - THE EFFECT OF PRE-DILATATION ON THE INCIDENCE OF THE NO/ SLOW-REFLOW PHENOMENON IN PATIENTS WITH STEMI (STUDY NORST)

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Background: Currently, there are various studies comparing the survival of patients with STEMI depending on the pre-dilatation. However, the probability of the development of the no-slow reflow phenomenon was not taken into account. It is estimated that in patients with no/slow-reflow, a decrease in the cardiac output fraction, dilatation of the heart cavities, ventricular arrhythmias, and left ventricular aneurysm more often registered and, most importantly, the risk of death increases. We concentrated to assess the effect of balloon pre-dilatation on the incidence of no/slow-reflow complication during percutaneous coronary intervention (PCI) in patients diagnosed ST-elevation myocardial infarction (STEMI).

Methods: We analyzed the experience of the department of endovascular diagnostic and treatment methods of the Stavropol Regional Clinical Hospital for endovascular surgical treatment of patients with STEMI, including after thrombolytic therapy (TLT). The study included 757 patients admitted to the hospital within the first 48 hours from the moment of the first contact with a medical staff. For the study, patients were divided into 2 comparable groups according to the number of patients by their gender, age, and other characteristics. The basic difference between the groups was the blood flow for infarct-related artery (IRA) according to the gradation scale TIMI (Thrombolysis in myocardial infarction). Each of the groups had 2 subgroups that were also comparable among themselves by the number of patients by their gender, age, and other characteristics. This groups were divided by performing pre-treatment.

Results: The lowest frequency of no/slow-reflow phenomenon was in the groups in which pre-dilatation was not performed before stent implantation.

Conclusion: The most preferred in PCI is not to perform pre-dilatation if there is an appropriate technical feasibility. In patients with a blood flow level TIMI 0 is recommended to make balloon sliding and tracking over the occlusion place. After this manipulation antegrade blood flow may be achieved.

ID: **712**

Topic: **Cardiology » Percutaneous coronary interventions**

Presentation Type: **Oral**

IS SERUM BASELINE MMP-9 LEVEL REALLY ASSOCIATED WITH IN-STENT RESTENOSIS?

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Objective —In-stent restenosis (ISR) is an inflammatory response to procedural trauma such as coronary stenting. Matrix metalloproteinase-9 (MMP-9) plays an important role in pathological vascular remodelling processes. We aimed to investigate whether basal serum MMP-9 antigen levels are associated with ISR in patients undergoing stent placement for de novo lesions.

Methods: This was a prospective-case controlled study. 170 consecutive patients who underwent elective percutaneous coronary intervention (PCI) constituted the study population. PCIs were performed by a team of experienced operators and control coronary angiography was performed in all patients enrolled in the study 6-12 months after the index intervention. Primary endpoint was a angiographically in-stent restenosis, defined as the presence of ≥ 50% diameter narrowing either within the stent or within 5 mm proximally or distally to the stent margin. Fasting venous blood samples were taken directly from the antecubital vein before to PCI to determine MMP-9 levels, serum high-sensitivity C-reactive protein (hs-CRP), and other biochemical parameters (fasting blood glucose, serum creatinine, etc.).

Results: The median follow-up time was 7.17 months (±2.01) and the during the follow-up period, 6 patients with stable angina pectoris and 7 patients with acute coronary syndrome had coronary angiographies earlier than scheduled but the remaining 152 patients underwent the planned control coronary angiography. Sixty seven patients (40%) had restenosis. Table 1 and table 2 show the baseline characteristics of patients with and without restenosis. The serum basal MMP-9 levels were median 68.9 [33.7-157] ng/ml and 73.3 [33.7-157] ng/ml respectively, in patients with and without restenosis. There was no significant association between the serum basal MMP-9 concentrations and ISR (P = 0.91). Patients with ISR had higher h-CRP concentrations compared to those without ISR (median 3.8 [3.4-14.4] mg/L and 3.4 [3.4-5.3] mg/L) but there was no an association between hs-CRP levels and ISR (P = 0.17). When the interventional and angiographic factors were evaluated, type of stent, reference vessel diameter, and final vessel diameter were found to be associated with ISR (Table 2). ISR was significantly lower in DES implanted patients compared to BMS group (23% vs 43%, P = 0.03). Multivariant analysis showed that stent type and final vessel diameter significantly predicted ISR (respectively, P = 0.04, P = 0.02) (Table 3).

Conclusions: Basal inflammatory status as represented by hsCRP and basal MMP-9 levels are not predictive for ISR in patients undergoing elective PCI for de novo lesions in contrast to previously reported series. Final vessel diameter and stent type were found to be strong predictors for ISR.

* multivariate cox-regression analysis with the results reported as the odds ratios (OR) and 95% confidence intervals (CI) by using Enter method.

Variables	Multivariate OR (95% CI)	p
Type of stent	2.426 (1.013-5.808)	0.04
Final vessel diameter	0.409 (0.172-0.987)	0.02
Matrix metalloproteinase 9	1.000 (0.994-1.006)	0.92

ID: **767**

Topic: **Cardiology » Percutaneous coronary interventions**

Presentation Type: **Oral**

THE FREQUENCY OF ASPIRIN AND CLOPIDOGREL RESISTANCE AND RELATED FACTORS IN TURKISH PATIENTS WHO UNDERWENT PERCUTANEOUS CORONARY INTERVENTION

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Objectives: Cardiovascular diseases are the number one cause of mortality and morbidity globally. Platelets play a major role in the physiopathology of atherosclerotic cardiovascular disease thus antiplatelet therapy is the key component in the treatment and prevention of acute and chronic coronary syndromes. This study aimed to determine the frequency of aspirin and clopidogrel resistance (insufficient aggregation inhibition) and related factors in Turkish patients undergoing elective PCI for stable CAD.

Methods: The patients data were obtained from 2007 Jan to 2009 May, as during that period all PCI patients had a routine aggregation inhibition test 24 hours after the intervention and the treating doctor made dose/medication changes according to test results. All patients who underwent an elective PCI with an available aggregation inhibition test result were included in the study.

Results: Totally 470 patients with aggregation inhibition test results (all 470 for clopidogrel and 464 for aspirin) were included in the study. 368 of them were male (78, %3). Overall there were 164 patients with single (either aspirin or clopidogrel) and 16 patients were double resistance (both aspirin and clopidogrel). Aspirin resistant patients have significantly higher levels of blood urea, LDL-cholesterol, CRP and platelets Negative correlation was detected between aspirin aggregation levels and fasting blood glucose; while C-reactive protein (CRP), leucocyte count and platelet count had positive correlation. Female gender, DM, HL and family history for Ischemic heart disease were significantly more frequent among clopidogrel resistant patients whereas smoking rate was higher among normal responders. body mass indeks (BMI), waist circumference , leucocyte count and Hb levels were significantly higher among clopidogrel resistant group as well as nitrate and statin use. Independent predictors of clopidogrel resistance were HL, gender and leucocyte count.
Conclusions: There is insufficient evidence for routine screening for aspirin and clopidogrel resistance in the clinical practice; however platelet function testing may be considered in determining dual antiplatelet strategy in patients with a history of stent thrombosis and in patients prior to undergoing high-risk PCI.

Keywords: Aspirin, Clopidogrel, Resistance, Angiography

ID: **808**

Topic: **Cardiology » Percutaneous coronary interventions**

Presentation Type: **Oral**

A YOUNG PATIENT WITH MYOCARDIAL BRIDGE CAUSING SEVERE ISCHEMIA

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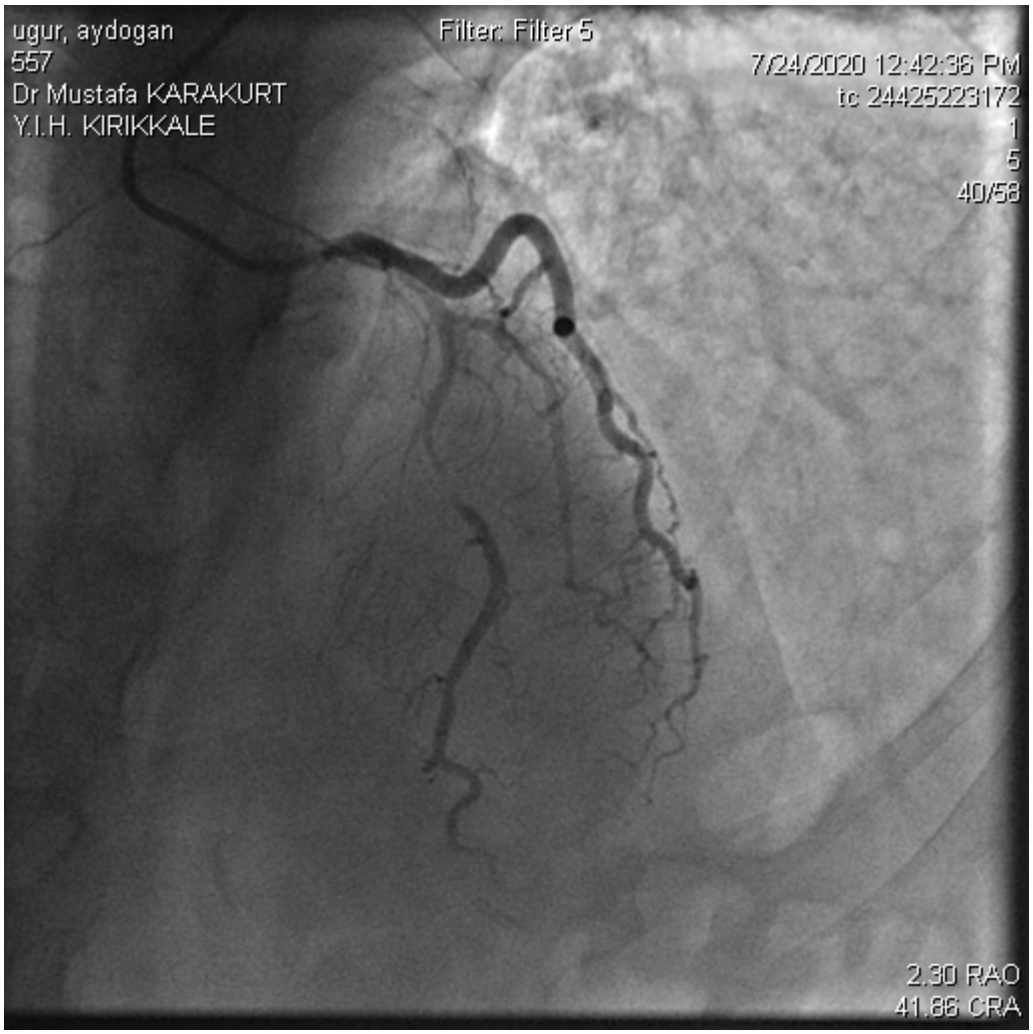
Background: Myocardial bridging is the compression of a segment of a coronary artery by the overlying myocardial tissue during systole. Myocardial bridges are commonly localized in the middle segment of the left anterior descending coronary artery. Although that coronary anomaly is generally benign, it can be complicated by myocardial ischemia, acute coronary syndromes, coronary spasm, exercise-induced dysrhythmias, myocardial stunning, transient ventricular dysfunction, syncope, or even sudden death. We report patient with significant myocardial bridge causing myocardial ischemia.

Case: A 45-year old male patient presented to the cardiology clinic because of severe chest pain, sweating and shortness of breath during exercise. His complains had continued for a year but worsened for a week. Smoking habit was present as a risk factor for atherosclerosis, but he had no previous cardiovascular and family history. His general and systemic examination was unremarkable. His heart rate was noted as 95 beats per minute.Electrocardiogram (ECG) showed 1 mm depression in chest derivations V1-V6. Creatinine kinase (CK), CK-MB, troponin I, D-dimer levels and the rest of hematological parameters were within normal range. He had normal echocardiography findings. Coronary angiography revealed %90 luminal narrowing by systolic compression in the mid segment of the left anterior descending coronary artery causing coronary slow-flow phenomenon.There were atherosclerothic changes in first diagonal branch and right coronary artery (RCA). He improved symptomatically with beta-blockers, antiplatelets, statins and the case was treated as unstable angina due to coronary artery muscle bridge.

Conclusion: Although it is common in the community and usually has a benign course, muscular bridge is a condition that requires close monitoring. Although medical treatment is the first option, surgery can be planned for patients who do not respond to medical treatment during follow-up.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ID: **787**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Oral**

COEXISTENCE OF ACUTE CORONARY SYNDROME AND COVID-19: A CASE REPORT

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Acute coronary syndrome (ACS) is an emergency that occurs within minutes and hours, with symptoms and clinical findings due to myocardial ischemia. The COVID-19 pandemic, which started in Wuhan in December 2019 and affected the whole world, also significantly affected the ACS diagnosis and treatment protocol. In the recommendations of the European Society of Cardiology regarding STEMI patients in the post-COVID-19 pandemic guide for diagnosis and treatment, all patients should be accepted as positive, since the results of the SARS-CoV-2 test will take time. In this case, we aimed to examine a COVID-19 patient who underwent percutaneous coronary intervention (PCI) for ACS and immediately after it with fever.

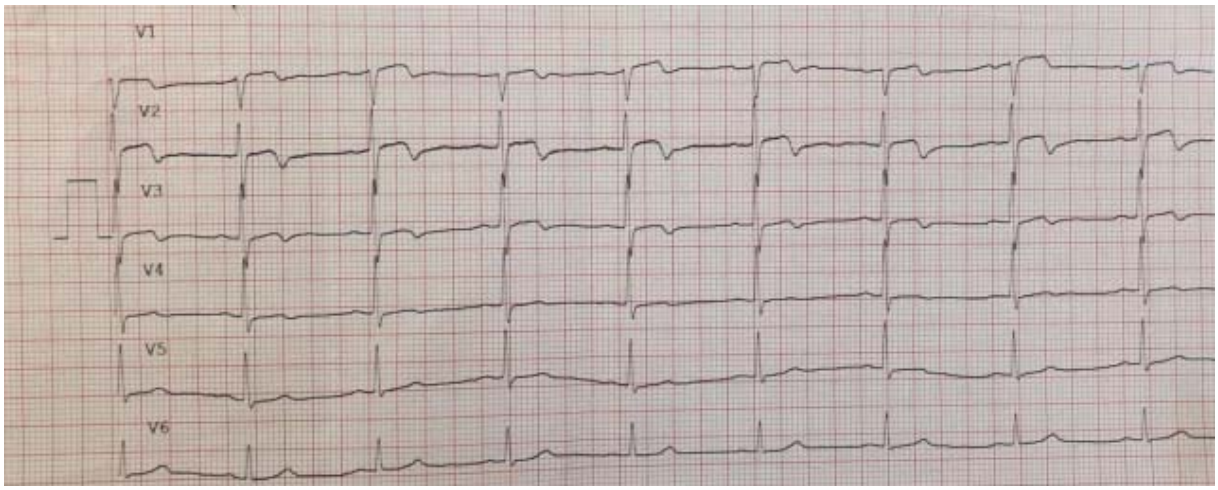
Case

A 43-year-old male patient with a history of operation due to known intracranial neoplasia presented to us with typical pressure-like chest pain. The patient did not have a family history of smoking or coronary artery disease, and his blood pressure was 130 / 90mmHg and fever was 37.5 ° C in the physical examination in the emergency department. Due to the suspicion of COVID-19, routine blood tests, chest radiography and PCR samples were taken. ECG: sinus rhythm, V1-V2 T negativity, V3-V5 biphasic T wave were found compatible with the Wellens syndrome (Figure 1). The patient was urgently taken to coronary angiography after wearing protective equipment because his chest pain continued. 180 mg ticagrelor and 300 mg ASA were given orally to the patient. Coronary angiography revealed thrombotic subtotal stenosis in the LAD mid-segment. A 3.0x33 mm DES stent was implanted in the culprit lesion in LAD (Figure 2,3). The patient was taken to the coronary intensive care unit in an isolated state for follow-up purposes. On the first day of follow-up, the patient's temperature was measured as 38.5 ° C and the patient developed a cough symptom. PCR test taken at the time of admission in the emergency department was found to be positive. The patient's cardiovascular medical treatment was arranged and he was directed to a pandemic hospital where he could receive appropriate treatment for COVID-19 disease.

Discussion

In the management of patients admitted to the emergency department with suspicion of ACS; In line with the recommendations of the European Society of Cardiology, the patient was evaluated without delay and reperfusion strategies were applied immediately. COVID-19 is a clinical condition manifested by hyperinflammation, cytokine storm and elevation of cardiac biomarkers; Patients infected with COVID-19 can present to the emergency department in a spectrum that can start from asymptomatic or minimally symptomatic clinic and reach pneumonia and severe acute respiratory failure. COVID-19; It is associated with cardiovascular complications including acute myocardial injury, myocarditis, arrhythmias and venous thromboembolism. There are many cases of ACS reported after the diagnosis of COVID-19. Also, myocardial damage and ACS diagnoses caused by COVID-19 can also be confused.

Although there are different recommendations regarding the approach to ACS patients during the COVID-19 pandemic period, it should be aimed to minimize ischemia and myocardial damage in these patients by using protective equipment. If the patient is in a center with 24/7 PPKG opportunity, interventional treatment should be preferred as the primary reperfusion strategy, provided that the angiography team and other patients are protected.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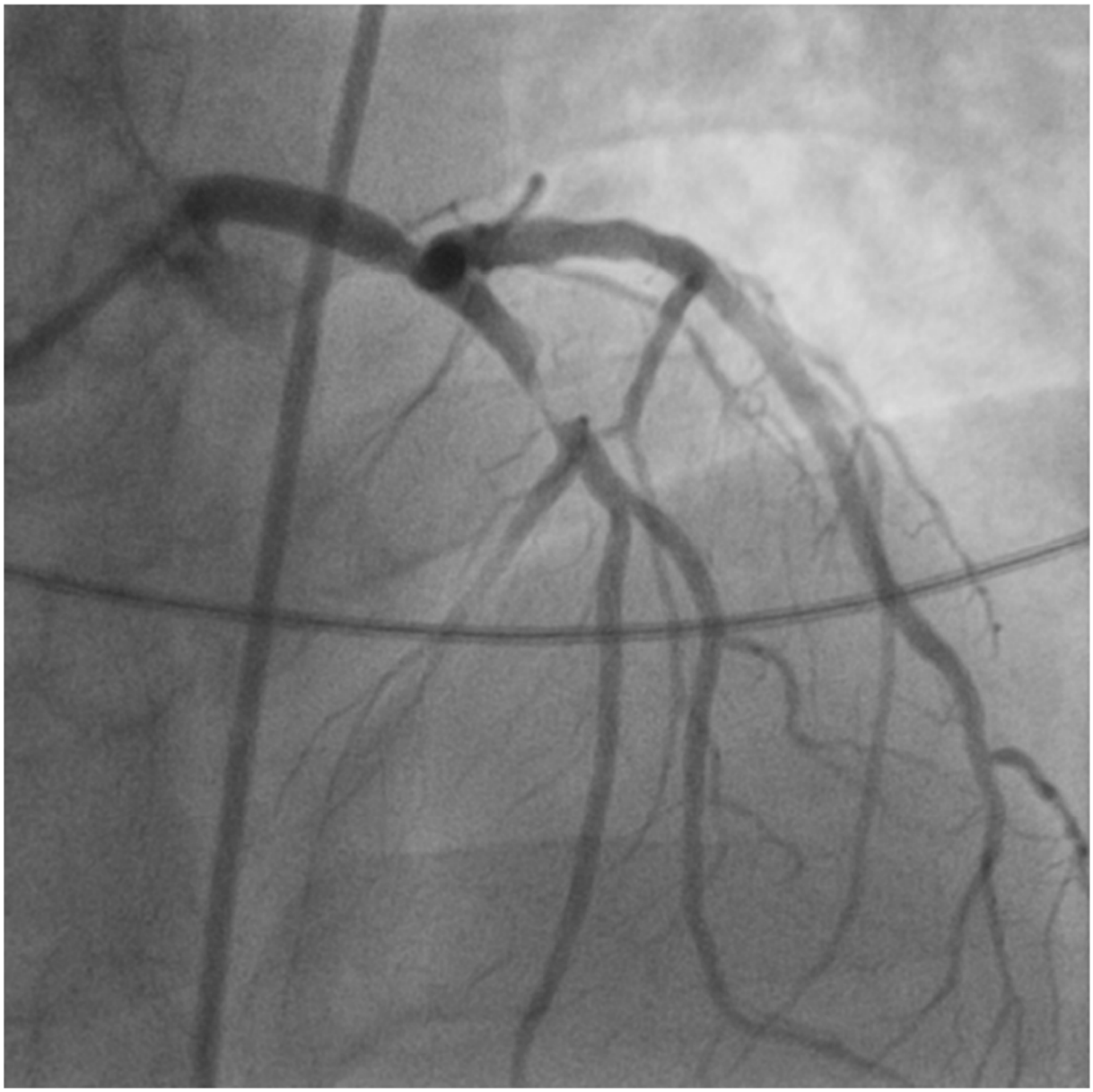

Oral Presentation Session

Advanced Techniques in Vascular Surgery

Date: 31.10.2020 Time: 12:00 – 13:30 Hall: 5

ID: **53**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Oral**

ARE ENDOVASCULAR INTERVENTIONS IN ABDOMINAL AORTIC PATHOLOGIES AS SAFE AS WE HOPED?

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Aim: With the widespread use of aortic endovascular therapy for the treatment of abdominal aortic pathologies, complications due to aortic endografts are increasingly being reported. In this study, we investigated the complications of aortic endografts in patients who underwent abdominal endovascular aortic repair in our clinic.

Materials and Methods: A total of 130 patients who underwent elective or emergency endovascular aortic repair for abdominal aortic pathologies between September 2014 and June 2019 in Sakarya University Training and Research Hospital, Cardiovascular Surgery Department were retrospectively analyzed. Demographic information, repair data, mortality and complication status were analyzed.

Results: 93% of the patients were male (n = 121) and 7% (n = 9) were female. The mean age was 69.3 ± 7.9 years. Twenty-nine (22.3%) patients underwent emergency surgery for aneurysm rupture, and 101 (77.7%) patients underwent elective surgery. A total of 12 mortality rates were observed in the early period (first 30 days) of the patients, two of whom were elective. The overall mortality rate was 5.1% (n = 6). In the early postoperative period two (1.5%) patients developed acute renal failure requiring dialysis, while 11 (8.5%) patients developed respiratory complications. Endoleak was observed in five patients, graft migration in two patients, and thrombosis of the graft leg in five patients. Two patients underwent cross-femoral bypass, one patient underwent proximal extension and two patients underwent distal extension.

Conclusion: Endovascular aortic repair may be an alternative treatment with satisfactory outcomes in elderly and high-risk patients. Complications and secondary intervention rates in enovascular treatment can be reduced by the development of stent graft technology, experience of the center and selection of patients with appropriate anatomy.

ID: **432**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Oral**

NOVEL SHELLAC CONTAINING PACLITAXEL-COATED BALLOON ANGIOPLASTY CATHETER FOR LOWER EXTREMITY PERIPHERAL ARTERY DISEASE: A PILOT STUDY

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BACKGROUND: To report our preliminary results and real-world experiences regarding the use of a novel paclitaxel-coated balloon catheter in a cohort of patients with lower extremity peripheral artery disease at different stages.

METHODS: A prospective cohort pilot study was conducted and the study group was made up of a total of 20 patients with peripheral artery disease who underwent endovascular balloon angioplasty with BioPath™ 014 or 035 which is a novel paclitaxel-coated and shellac containing balloon catheter. Eleven patients had a total of 13 TASC II-A lesions, 6 patients had a total of 7 TASC II-B lesions, 2 patients had TASC II-C lesions and 2 patients had TASC II-D lesions.

RESULTS: In 13 patients, a single attempt with BioPathTM catheter was adequate to treat a total of 20 target lesions whereas in 7 patients more than one attempt with a different sized BioPath™ catheter was necessary. In 5 patients, total or near-total occlusion in the target vessel was initially treated with an appropriately sized chronic total occlusion catheter. Thirteen patients (65%) had at least one categorical improvement in Fontaine classification and none had symptomatic worsening.

CONCLUSIONS: BioPathTM paclitaxel-coated balloon catheter seems to offer a useful alternative to the similar devices for treatment of femoral-popliteal artery disease. These preliminary results warrant confirmation with further research to reveal the safety and efficacy of the device.

ID: **302**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Oral**

HYBRID ENDOVASCULAR ILIAC ANGIOPLASTY AND FEMORODISATL BYPASS FOR PATIENTS WITH CRITICAL LOWER LIMB ISCHEMIA

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Background: We reported our local experience of the hybrid ipsilateral endovascular iliac balloon angioplasty and /or intra-arterial stenting in addition to femorodistal surgical revascularization for the management of patients with critical lower limb ischemia (CLI) presented with iliac and infrapopliteal arterial occlusive lesions.

Methods: Between January 2013 and December 2018, 154 lower extremity hybrid procedures were performed in 154 limbs. Of these hybrid procedures, 103 (66%) were performed for patients presented with rest pain. However, the remaining 51 patients (34%) were presented with non-healing ulcers and gangrene in 23 (15%) and 28 (19%) patients respectively. Balloon angioplasty of the iliac artery was performed in 69% of patients (n = 107). While balloon angioplasty and intra-arterial iliac stenting was performed for the remaining 31% (n = 47). This was followed in the same setting by infrapopliteal bypass surgery using reversed saphenous vein graft in 83% of patients (n = 128). While the remaining 17% (n = 26) were revascularized using in-situ saphenous vein graft.

Results: Complete revascularization (CR) was defined as achieving inline flow to the pedal arches through at least one patent infrapopliteal artery. Clinical success was achieved in 95.5% of patients (n = 147) after 6 months of follow up. Hemodynamic results were observed in 74.9% of patients. As the mean postoperative Ankle/Brachial Pressure Index (ABI) remains elevated to (1.03 ± 0.1) and (1.07 ± 0.12) after three and six months respectively.

Conclusions: Combined vascular therapy may be used effectively in patients with chronic extremity ischemia due to multiple levels of arterial occlusion and should be performed with good results. Technical success and early patency rates are excellent. The patient's symptoms are improved and resistant ischemic ulcers healed within a short period of time.

ID: **315**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Oral**

MID TERM OUTCOMES OF ENDOVASCULAR TREATMENT FOR TASC C AND D AORTA- ILIAC LESIONS

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BACKGROUND: Endovascular treatment modalities are widely used for high-grade aorta-iliac lesions (Trans-Atlantic Inter-Society Consensus- TASC C and D) by cardiovascular surgeons. Our aim was to evaluate the procedural success, mortality, morbidity, complications and mid-term patency rates of these interventions.

METHODS: Between June 2016 and September 2019, 22 patients, 34 limbs were treated with endovascular interventions for aorto-iliac occlusions or severe stenosis. Data of these patients were retrospectively reviewed and included to our study.

RESULTS: The same surgical team treated 22 patients, consisting of 16 males and 6 females. Fourteen patients were with total occlusions and 13 of them have bilateral disease. Balloon-expandable covered stents were used in 6 patients, balloon expandable bare metal stents in 2, self-expandable covered stents in 3 and self-expandable bare metal stents were used in 12 patients alone or in combinations. Bilateral lesions were treated with kissing stent technique in 10 patients and CERAB in 3 patients. Four patients required additional surgical operations including; 2 femoro-femoral bypasses because only unilateral endovascular intervention was possible, 1 aorta-femoral bypass, 1 embolectomy for SFA graft and iliac stent in the early postoperative period. There were no mortalities were reported. Mean follow-up time is 15,64 (SD±12,37) months. All patients were evaluated clinically with pulse examination and claudication distance. None of the patients have symptoms of ischemia.

CONCLUSIONS: Our results reveal that using endovascular procedures for TASC C and D (severe) aorta-iliac lesions are safe and effective with lower mortality and morbidity, which were consistent with clinical guidelines.

ID: **427**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Oral**

PERCUTANEOUS REVASCULARIZATION AS A FEASIBLE OPTION FOR COMPLEX AORTOILIAC OCCLUSIVE DISEASE WITH FAIR 1-YEAR OUTCOME

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Background
Aortoiliac arterial occlusive disease (AIOD) is one of the commonest patterns of systemic atherosclerosis with a spectrum of chronic symptoms from intermittent claudication to critical limb ischemia, which is a common therapeutic challenge. A meaningful shift has evolved in treating symptomatic AIOD from open to endovascular repair, which are becoming an attractive treatment option even in complex lesions, especially in patients with considerable risk.

Aim
The aim of this study was to assess the feasibility, that is, technical success rates, primary patency, and safety outcome for Trans-Atlantic Inter-Society Consensus (TASC) D lesions treated endovascularly with analysis of outcome of stent graft versus bare metal stent in patients with advanced Leriche syndrome.

Patients and methods
A prospective case series study: over 30 months, our case study was conducted on 22 patients with TASC D lesion morphology undergoing treatment for symptomatic chronic AIOD. The patients were enrolled from April 2015 until October 2016 with a 12-month follow-up period from the last patient enrolled.

Results
Our study had a technical success rate of 95.5% in crossing TASC D lesion with immediate angiographic success (91%). The 12-month primary patency rate was 85% for TASC D lesions with a target lesion revascularization of 15%. Stent grafts had a higher 1-year patency rate (91.7%) versus bare metal stent (75%). The total procedure-related complications rate was 18.1 % and 30 days procedure-related mortality was 4.7%.

Conclusion
Our study shows that technical success of endovascular therapy for TASC D lesions was 95.5% with a 1-year primary patency of 85% and a complication rate of 22.7% in TASC D lesions. Utilizing more than one access with antegrade crossing the lesion through brachial access was paramount for technical success. Long-term follow-up is mandatory to support the durability of the procedure.

ID: **484**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Oral**

MULTICENTER TRIAL FOR ELECTIVE ENDOVASCULARLY TREATED IFU COMPATIBLE INFRARENAL ABDOMINAL AORTIC ANEURYSMS VIA LIFETECH ANKURA ENDOGREFT

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ABSTRACT

Aim: There
has been many endografts commercially available around the world, all having their own speciliaties and CE or FDA trademarks. We organised a multicenter study via Lifetech Ankura™ endogreft among the centers, performing over 10 endovascular patients annually. All the patients were suitable for the instructions for use. Early and postoperative first year results were evaluated for the efficacy and durability of the endograft.

Methods:
Lifetech Ankura™
endograft is in Turkish market since 2018, and 100 consecutive patients with elective infrarenal abdominal aortic aneurysms from four centers were retrospectively evaluated. Lifetech Ankura™ endograft material is E-PTFE film supported by a nitinol stent. E-PTFE dual membrane provides low permeability and high biocompatibility. Self expanding nitinol stent offers stable radial force and smaller waves on the main body improving the flexibility. All the patients were compatible to instructions for use, all having the completion angiography, first month computerized tomography and postoperative one year follow up. The average age of the patients were 71,5±9,3 years. The average diameter of the infrarenal abdominal aortic aneurysms were 62,3±8,8 cm (52-71 cm).

Results: There was no early mortality or conversion to open surgery. Technical success was 100%. Procedure time was 126 minutes (including anesthesia), and fluoroscopy time was 12,4 minutes in average. Type of anesthesia was 70% general anesthesia, only 30 patient with ASA III-IV was performed under locoregional anesthesia. Average amount of opaque solution was 45 cc. Length of stay was 3,2±1,9 days and intensive care unit period was 2,3 hours. There was one type Ib endoleak for native iliac artery dilatation and 3 type II endoleaks. Sac regression for a mean follow up of 8,4±4,5 months was 61,5±7,8 mm from the preprocedural 62,3±8,8 cm (52-71 cm).

Conclusion: For IFU compatible patients, Lifetech Ankura™ Endograft has successful results, effective for early period and durable for the first postoperative year. Nevertheless, longer term results are mandatory for further comment.

ID: **386**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Oral**

RETROGRADE TRANSPEDAL ACCESS FOR REVASCULARIZATION OF INFRAINGUINAL ARTERIAL OCCLUSIVE DISEASE IN PATIENTS WITH CRITICAL LIMB ISCHEMIA

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Objective: Retrograde arterial access (RA) of the popliteal, tibial, or pedal arteries is an alternative treatment strategy for patients who have failed to respond to antegrade endovascular intervention in patients with critical limb ischemia (CLI). We assess the safety and efficacy of this technique.

Materials and Methods: This was a retrospective single-center review of retrograde endovascular intervention (REI) from 2017 to 2018. We identified 22 patients with endovascular infrainguinal revascularization in whom a transfemoral approach had failed and transpedal access had been attempted. The dorsal pedal (n = 3) or posterior tibial (n = 19) artery was accessed using a dedicated access set and ultrasound guidance. Demographics, comorbidities, procedural characteristics, and outcomes were analyzed. Technical failure was defined as the inability to complete the procedure because of failed access or unsuccessful recanalization.
Patency rates were calculated for technically successful interventions.

Results: Diabetes, coronary artery disease and hypertension were present in 17 patients (77.2 %), The mean diameter was 1.84 +/- 0.23mm.
The success rate for achieving retrograde access was 100 %. Retrograde crossing was successful in 20/22 patients (90.9 %). There were no instances of distal embolization, perforation, or loss of distal target with retrograde access. Minor complications occurred in 3/22 patients (13.6 %). The primary patency rates at 1 year (77.2%). Major amputations after revascularization occurred in 4/22 patients (18.1 %).

Conclusion: Retrograde transpedal access represents a viable and safe option for revascularization when standard antegrade access (SA)fails. Although outcomes are poorer than SA this approach appears to be safe and offers high technical and acceptable clinical success rates.

ID: **152**

Topic: **Cardiovascular Surgery » Abdominal Aortic Aneurism**

Presentation Type: **Oral**

RADIAL ARTERY PSEUDOANEURISMA DUE TO UNINTENTIONAL ARTERIAL PUNCTURE DURING CEPHALIC VEIN CANNULATION: A RARE CASE REPORT

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Background: radial artery pseudoaneurysm is considered as an extremely rare and serious complication that usually follows after cardiac catherizations with incidence of less than 0.05%, but in lesser frequency with arterial cannulation, trauma, and inflammation or hemodialysis therapy. On the other hand venous access is clinically important, as it allows for blood sampling, administration of medications, fluids, nutrition, and chemotherapy. But its usage was associated with complications like catheter-associated infections, injuries to peripheral nerves, along with thrombosis and phlebitis of the vessel involved as well as arterial injury

Clinical presentation: In this report, we present a 67 years old healthy non-smoking male patient of proximal radial artery pseudoaneurysm following several attempts of cephalic vein cannulation for intravenous access.

Conclusion: radial artery pseudoaneurysm can occur after attempts of cephalic vein cannulation and patients can be successfully managed with surgical removal of the false aneurism and radial arteriography.

CASE REPORT

A 67 years old healthy non smoking male patient presented to our vascular clinic with complaint of pulsitile mass at the volar aspect of his right forearm just below the anticubital fossa for three months.

The swelling was associated with pain for one month, each of the symptoms were increasing gradually over time. Patient had history of hypertension for 6 year and was hospitalized 4months prior to his visit due to transient ischemic attack where he undergone several venous cannulation same site of the effected arm and was taking aspirin afterwards. He denied any history of surgery or trauma at the site.

On physical examination, a pulsitile mass of 5.0m by 5.0cm was present at the volar aspect of his right forearm just below the anticubital fossa. Arterial bruit was easily detectible over the mass on auscultation. There were no any scars or skin changes and other arterial examination revealed negative. Allen's test result was bilaterally negative. Performed CT angiography showed the presence of 5 by 5 radial artery pseudoaneurysm just below its origin. Examination of other arteries with Doppler ultrasound showed the absence of un-noticed arterial aneurisms.

After discussion with the patient for the pain and possibility of rupture, decision was made for surgical treatment. Under axillary nerve block, an 8 cm longitudinal incision above the aneurysm was done; the pseudoaneurysm was dissected out circumferentially as well as the proximal and distal segments of the radial artery. Each of the proximal and distal segments of the radial artery was controlled using vessel loops. Clamping the proximal aspect of the radial artery, Doppler examination showed positive signals over the thumb and digital arteries, then a ligation of proximal and distal aspects of the radial artery was followed with aneurism resection. Patient was discharge after 2 days of hospital stay without complication and 3 weeks later had resumed normal daily activities.

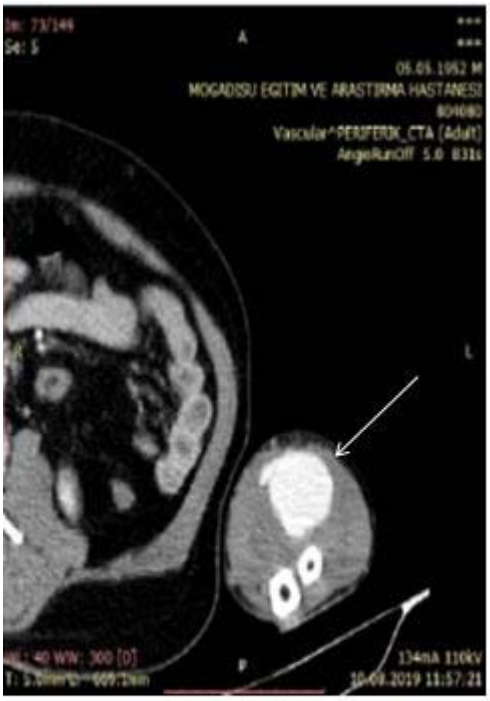

FIGURE 1. Combuted tomography angiography on transverse view Showing Proximal Radial artery pseudoaneurism.

FIGURE 2. CT-angiography with 3D-reconstruction demonstrating Radial artery pseudoaneurism.

ID: **446**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Oral**

ENDOVASCULAR OR SURGICAL TREATMENT OF POPLITEAL ARTERY P1 ZONE LESIONS? WHICH IS MORE ACCURATE?

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Objective: The role of endovascular treatment in peripheral arterial disease is indisputable. However, long-term patency rates are still superior to surgical treatment. When the endovascular procedure is performed in young patients, we believe that the anastomosis areas that will be needed during the future surgical treatment should be protected without stenting.

Case: A 54-year-old male patient with a known hyperlipidemia and 70 pack / year smoking history presented to our outpatient clinic with complaints of coldness, numbness and claudication (Rutherford category 3) in his left leg. Popliteal and pedal pulses of the left lower extremity could not be obtained. MR angiography showed thrombosis of the left superficial femoral artery (SFA) along the 11 cm segment and there was collateral filling in the popliteal artery. Endovascular treatment was planned and hospitalized. The patient underwent mechanical atherectomy (RotarexS) and paclitaxel-releasing balloon angioplasty (PRBA). When the dissection area was seen distal to the SFA, 5.0 × 60-mm self-opening Nitinol (Supera) stent was applied to the dissected area. The critical lesion at the level of the popliteal artery was preserved only with PRBA to preserve the possible anastamosis line. 80% clearance was achieved. After the procedure, the patient completely recovered. The patient was admitted to our outpatient clinic with the same complaints after 14 days and was re-hospitalized. Intra-stent thrombus was observed. Thereupon, the patient underwent surgery and underwent embolectomy with a fogarthy catheter guided over the hydrophilic wire with DSA. A 70% residual lesion was seen proximal to the popliteal artery. The popliteal artery was reached by supragenicular-medial incision. The stent was excised through the vessel. Endarterectomy was performed to the popliteal artery. A saphenous vein graft was removed from the contralateral leg and femoro-popliteal bypass was performed. The patient was discharged on the postoperative 2nd day with ASA, clopidogrel and statin treatment.

Conclusion: The popliteal artery is divided into three segments: P1 (upper adductor channel-patella), P2 (upper patella-joint midline) and P3 (joint midline-anterior tibial artery onset). We believe that avoiding stenting in the P1 segment, especially in young patients, is important for the surgeon to reach a solid anastomosis line in the future when surgical treatment is needed and for the success of surgical intervention.

ID: **713**

Topic: **Cardiovascular Surgery » Abdominal Aortic Aneurism**

Presentation Type: **Oral**

INCIDENCE OF INCIDENTAL ABDOMINAL AORTIC ANEURYSMS IN OUR HOSPITAL

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OBJECTIVE

In this study, we aimed to determine the prevalence and relevance of incidental abdominal aort aneurysm on routine abdominal CT which were performed for in many other diseases such as abdominal pain, malignancy, kidney diseases.

METHODS

Computed tomography images, demographic characteristics, comorbidities, older the age of 18 who were admitted to our hospital for various reasons and did not have aortic disease before analyzed by scanning the hospital automation system. We defined abdominal aorta aneurysm as an abnormal dilation of the abdominal aorta with a maximal diameter of at least 30 mm. Patients with aortic aneurysm and patients without aneurysm were statistically compared.

RESULTS

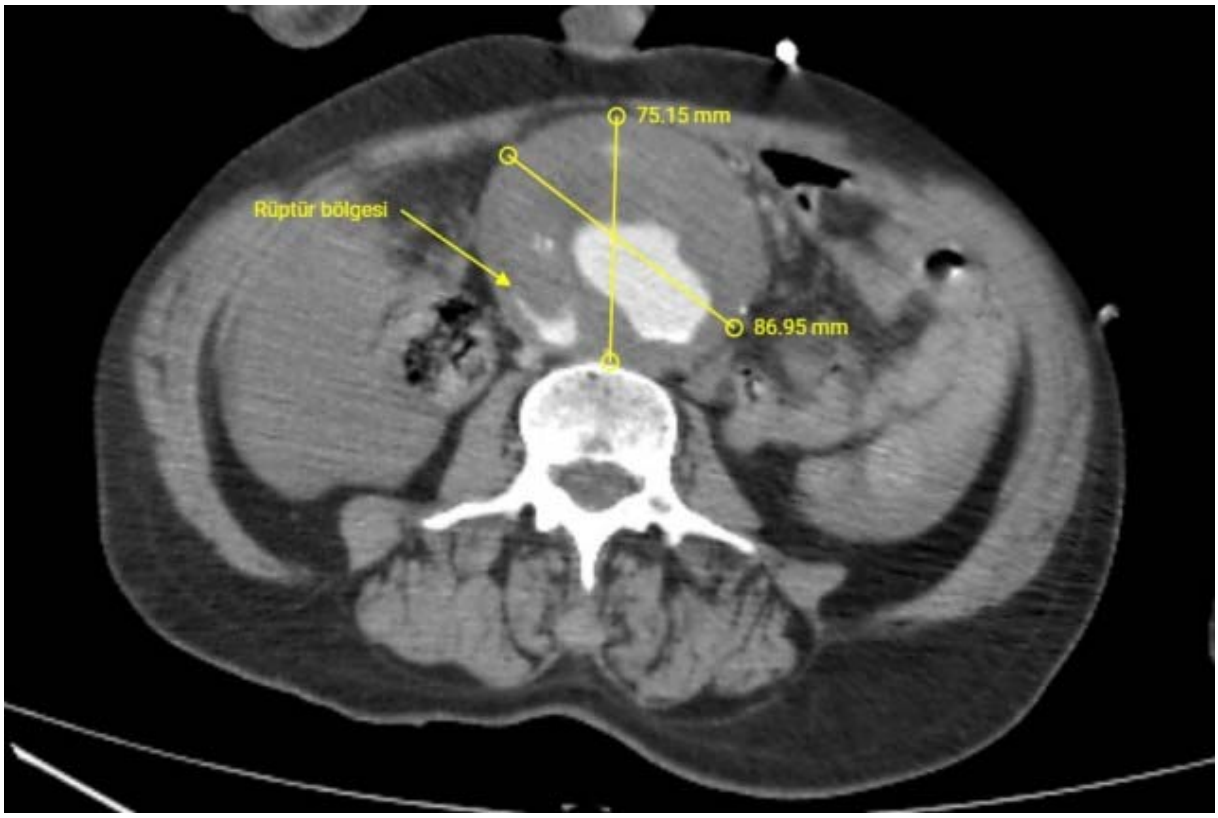
There were 1562 patients (744 male,47.63%) with a mean age at the time of scanning of 54.01 ± 17.09 years.The most common reason for computed tomography was abdominal pain and it was detected in 574 (36.74%) of the patients.Among other reasons, it was found that 490 (31.37%) of the patients had malignancy, 122 (7.81%) due to shortness of breath, and 120 (7.68%) patients had abdominal computed tomography due to renal diseases.In 28 of the patients (1.79%), the abdominal aortic diameter was found to be over 30 mm, and in two of these patients the aorta was found above the surgical margin of 55 mm.

Aortic aneurysm treatment was applied to both patients with endovascular intervention and complete success was achieved.

In statistical analyzes, advanced age, high creatine, presence of hypertension, presence of chronic artery disease, presence of chronic obstructive pulmonary disease were found to be significant compared to patients without aneurysm ($p < 0.001$), gender, reason for admission, use of statins, presence of hyperlipidemia, presence of diabetes mellitus was not different.

CONCLUSIONS

Aortic aneurysms are often asymptomatic, but can lead to fatal conditions. Early intervention is extremely important in the diagnosis and treatment of these diseases.For this purpose, aortic pathologies, especially aortic aneurysms, should be considered in imaging methods to be performed in patients with no symptoms and should be evaluated carefully.


75.15 mm
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ID: **820**

Topic: **Cardiovascular Surgery » Abdominal Aortic Aneurism**

Presentation Type: **Oral**

COMPARISON OF OPEN SURGERY AND ENDOVASCULAR AORTIC REPLACEMENT THERAPY IN ABDOMINAL AORTIC ANEURYSMS, EVALUATION OF EARLY AND LATE COMPLICATIONS

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OBJECTIVE: Abdominal aortic aneurysm (AAA) is defined as 1,5 fold localized dilation of aorta. Nowadays open surgery is accepted as the golden standard treatment modality. However in the last ten years, endovascular aneurysm repair (EVAR) is widely used and becomes an alternative intervention to open surgery. In this study, open surgery versus EVAR will be compared and early/ late complications of these treatments will be analysed.
METHODS: This study covers 77 cases who were treated in the department of cardiovascular surgery for infrarenal AAA. Datas and computed tomographic images for all cases are examined retrospectively and ealry/ late complications are compared.

RESULTS: Open surgery group included 29 cases whose average age were 65.4 ± 7.5, with an average aneurysm radius of 64.3 ± 11.9 mm. Mortality ratio was calculated as 10.3 % with a 89.7% one year survival rate. EVAR group included 48 cases whose average age were 71.3 ± 10.7, with an average aneursym radius of 62.1 ± 10.2 mm. Mortality ratio was calculated as 8.3% with a 93.7% one year survival rate. 30 days mortality ratio for open surgery was 6.9% whereas EVAR group had a 2.1% mortality rate. In open surgery group; proximal pseudoaneurysm (n=1, 3.4%), limb ischemia (n=1, 3.4%), myocardial infarction (n=2, 6.9%), impotance (n=1, 3.4%), paraplegia (n=1, 3.4%) and in EVAR group ; femoral pseudoaneurysm (n=1, 2.1 %), endoleak (n=2, 4.2 %), Access arterial injury (n=2, 4.2 %), acute renal failure (n=1, 2.1 %), graft thrombosis (n=1, 2.1 %), iliac rupture (n=1, 2.1 %) were observed.

CONCLUSION: There are two different treatment modality for AAA. Each group has different advantages and disadvantages. Randomized researches conclude that open surgeries have higher mortality rates for 30 days compared to EVAR, however 1 year survival rate are similar. Complications for these two treatment modalities differ with a same complication rates. In conclusion, open surgery is stil the golden treatment of AAA.

ID: **793**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Oral**

LONG-TERM RESULTS OF DRUG-COATED BALLOON IN THE TREATMENT OF JUXTA-ANASTOMOTIC STENOSIS OF ARTERIOVENOUS FISTULA

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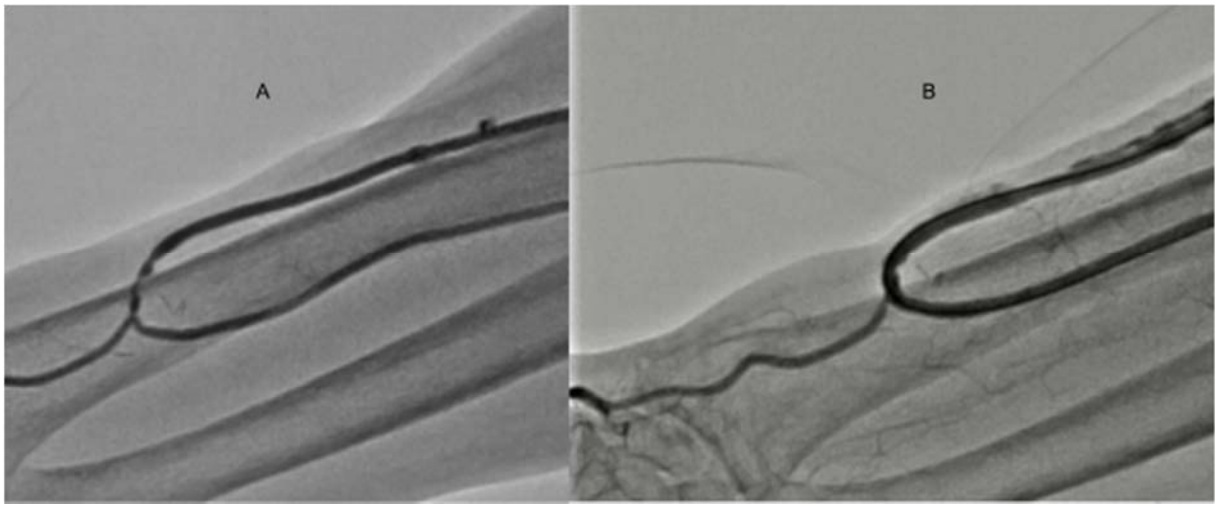
Objective : Juxta-anastomotic stenosis is a common issue of arteriovenous fistulas. We aimed to evaluate the 2 years results of percutaneous transluminal angioplasty with drug-coated balloon for the treatment of juxta-anastomotic stenoses of mature but failing arteriovenous fistulas.

Methods : Results 48 of 61 patients who had ineffective hemodialysis due to juxta-anastomotic stenosis between June 2015 and February 2018 were retrospectively analyzed. 48 patients with successful percutaneous balloon angioplasty were included. In all patients, percutaneous access was achieved retrograde via the draining vein of the fistula. Following standard plain balloon angioplasty, drug coated balloon was performed. Patients who underwent arterial access puncture, required high-pressure balloon, had concomitant stenosis and failed to access were excluded. Functional primary patency rates at 6th, 12th, and 24th months were calculated. Patients with restenosis at follow-up underwent repeat angioplasty.

Results : Of all included patients 34 (70.8%) had radiocephalic, 14 (29.2%) had brachiocephalic arteriovenous fistula. 48 patients received a total of 62 percutaneous transluminal angioplasty procedures. Primary patency rates for 6, 12 and 24 months were 91.6% , 81.2% and 68.7% respectively. Assistant primary patency rates 6, 12 and 24 months were 95.8% , 89.5% and 81.2% respectively. No complications were observed.

Conclusions : Our study results suggest that the use of drug-coated balloon is an effective treatment for juxta-anastomotic stenosis of mature but failing arteriovenous fistulas. Repeat balloon angioplasty interventions for arteriovenous fistula may improve assistant primary patency rate.



Oral Presentation Session

Risk Scores and Laboratory Assessments in Acute Coronary Syndromes

Date: 31.10.2020 Time: 13:00 – 14:00 Hall: 4

ID: **35**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

PROGNOSTIC VALUE OF THE ACUTE-TO-CHRONIC GLYCEMIC RATIO FOR IN-HOSPITAL OUTCOMES IN PATIENTS WITH NON-ST ELEVATION MYOCARDIAL INFARCTION

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Objective

Some previous studies have found an association between high glucose levels and increased mortality in patients with cardiovascular diseases. Acute-to-chronic glycemic ratio (ABG/eAG) has been found to be a predictor of stress-induced hyperglycemia in ST elevation myocardial infarction (STEMI) patients better than admission glucose. In addition, in a recently published study, ABG/eAG ratio has been found to be more useful in demonstrating in-hospital events compared to the admission glucose. In this study, we aimed to test the prognostic value of ABG /eAG for in-hospital outcomes in patients with non-ST elevation myocardial infarction (Non-STEMI).

Methods

In total, 373 consecutive diabetic Non-STEMI patients were included in the study. Patients were divided into two groups according to median value of ABG/eAG ratio. We prospectively collected admission glycaemia value and estimated average chronic glucose levels (mg/dL) using the following formula: [(28.7 × glycosylated hemoglobin %) - 46.7], and calculated the ABG/eAG ratio of all patients. The primary end point was in hospital all-cause mortality.

Results

Patients with higher ABG/eAG ratio had significantly elevated incidence of acute cardiogenic shock, acute pulmonary edema, and in-hospital mortality [5.4% (n=10 patients) vs. 1.6% (n=3 patients); p<0.005, respectively]. The optimal value of ABG/eAG ratio for prediction of in-hospital mortality was >1.11 with a sensitivity of 77.0% and a specificity of 62.0% [area under curve (AUC): 0.67, 95%CI: 0.55-0.79, p=0.003]

Conclusion

We found that ABG/eAG ratio may be a better parameter in predicting in-hospital adverse outcomes and mortality of Non-STEMI patients with diabetes than the admission glucose.

Keywords: Non-ST segment elevation myocardial infarction; acute-to chronic glycemic ratio; in-hospital outcomes

Table 1 Baseline characteristics and clinical outcomes of all patients

Parameters	Group 1 Below median ABG/eAG N:188	Group 2 Above median ABG/eAG N:185	P value
Age, years	65±10	67±11	0.239
Female gender, n (%)	83(44.1)	88(47.6)	0.288
Hypertension, n (%)	147(78.2)	154(83.2)	0.135
Hyperlipidemia, n (%)	57(30.3)	57(30.8)	0.504
Renal failure, n (%)	34(18.1)	39(21.1)	0.275
Prior MI, n (%)	72(38.3)	83(44.9)	0.119
Smoking, n (%)	105(55.9)	84(45.4)	**0.028**
LVEF,%	50(40-60)	48(35-58)	0.078
Killip class	1.12±0.5	1.22±0.6	0.090
Laboratory parameters			
ABG, mg/dl	123(104-155)	238(188-308)	**<0.001**
eAG	160(137-200)	171(140-214)	0.124
HbA1C	7.2(6.4-8.6)	7.6(6.5-9.1)	0.122
ABG/eAG	0.81(0.69-0.88)	1.29(1.13-1.56)	**<0.001**
Creatinine, mg /dl	0.92(0.78-1.19)	1.02(0.81-1.3)	**0.001**
Hemoglobin, g/dL	12.9(11.4-14.2)	13.2(11.8-14.4)	0.184
WBC, cells/mL	8.9(7.5-11)	10.1(8.1-12.7)	**<0.001**
Peak troponin I, ng /dL	0.17(0.04-1.1)	0.42(0.8-2.1)	**0.005**
Total cholesterol, mg/dL	178(149-219)	180(140-210)	0.549
Triglyceride, mg/dL	161(115-230)	171(111-227)	0.834
HDL cholesterol, mg /dL	35(28-40)	34(27.5-39.5)	0.152
LDL cholesterol, mg /dL	105(83-135)	112(75-136)	0.825
Treatment strategy			
PCI, n (%)	70(37.2)	59(31.9)	**<0.001**
CABG, n (%)	29(15.4)	12(6.5)	**<0.001**
Conservative, n (%)	89(47.3)	114(61.6)	**<0.001**
In hospital outcomes			
All cause death, n (%)	3(1.6)	10(5.4)	**0.040**
Cardiogenic shock, n (%)	2(1.1)	9(4.9)	**0.029**
Acute pulmonary edema, n (%)	14(7.4)	26(14.1)	**0.029**
In hospital hemorrhagic stroke, n (%)	1(0.5)	0(0)	**0.513***
In hospital ischemic stroke	1(0.5)	2(1.1)	
In hospital AF, n (%)	6 (3.2)	7(3.8)	0.488
Bleeding needed blood transfusion, n (%)	4(2.1)	4(2.2)	0.629
Renal failure needed hemodialysis, n (%)	4(2.1)	8(4.3)	0.182

*p value for all stroke types

ABG: admission blood glucose, eAG: estimated average glucose

ID: **19**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

PREVALENCE AND MORTALITY OF MYOCARDIAL INFARCTION WITH NONOBSTRUCTIVE CORONARY ARTERY DISEASE

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OBJECTIVE: There are a number of patients diagnosed with AMI but no-obstructive lesions on coronary angiography. This group of patients is termed as MINOCA. The purpose of this study is to compare the prevalence, clinical characteristics and mortality rates of MINOCA with MICAD (Myocardial Infarction with Coronary Artery Disease).

METHODS: Our study was planned retrospectively in a single-center. All patients were evaluated with angiograms and the patients who had at least 50% in any major epicardial coronary artery were included in this evaluation and the patients who did not have MICAD, were included in the MINOCA group. After that, the clinical features, in-hospital and out-of-hospital mortality of both groups were compared.

RESULTS: 857 patients were included in the study. 98 of them had MINOCA and 759 of them had MICAD. Cardiovascular risk factors were found to be less in MINOCA. Most MINOCA patients had NSTE-ACS. In-hospital mortality rate was 1% and out-of-hospital rate was 7.1% in the MINOCA-group. The corresponding rates for the MICAD-group were 5.1% and 13.1%, respectively. On the other hand, in order to minimize the effect of risk factors which are thought to be contributing to mortality, the paired MICAD-group was formed and the mortality was found to be similar in both groups when compared to the MINOCA-group.

CONCLUSIONS: MINOCA patients have differences frequency of cardiovascular risk factors compared to patients with MICAD. Although the survival of the MINOCA-group seems to be better at a first glance, it was observed that the mortality of MINOCA was not different from MICAD when patients with similar clinical features were compared.

ID: **476**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Oral**

THE ASSOCIATION OF SERUM OSMOLARITY AND INFLAMMATORY STATUS WITH CONTRAST INDUCED NEPHROPATHY IN NON-ST ELEVATION MYOCARDIAL INFARCTION PATIENTS UNDERGOING PERCUTANEOUS CORONARY INTERVENTIONS

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OBJECTIVE: Contrast induced nephropathy (CIN) is a life-threatening complication that can be seen after percutaneous coronary intervention (PCI). A strong relationship between CIN and adverse events in patients with nonST-segment elevation myocardial infarction (NSTEMI) has been shown. The association between serum osmolality and renal disease has been well understood but relation among inflammation, osmolality and CIN in patients with NSTEMI undergoing PCI needs to be elucidated.

METHODS: Serum osmolarity on admission was calculated. The study population was divided into 2 groups according to CIN development, and both groups were compared according to clinical, laboratory, and demographic features, including the serum osmolarity. We evaluated the predictive value of serum osmolarity (SO), inflammatory and oxidative parameters including High sensitive C reactive protein (Hs-CRP), uric acid (UA) and gamma glutamyl- transferase (GGT) for CIN development in patients with NSTEMI (n = 628) undergoing pPCI.

RESULTS: Serum osmolarity, Hs-CRP, UA, GGT was significantly higher in patients with CIN than in those without CIN. Additionally, serum creatinine, glucose, blood urea nitrogen, potassium and peak creatinine kinase myocardial bundle (CK-MB) levels were higher in patients with CIN than in those without CIN on admission. Patients with CIN have higher rates of diabetes mellitus, hypertension and female gender than patients without CIN (Table 1).

CONCLUSIONS: Serum osmolality on admission and inflammatory and oxidative parameters can be useful to define patients with NSTEMI undergoing PCI who are more likely to develop CIN.

	Contrast induced nepropathy (-) (n=500)	Contrast induced nepropathy (+) (n=128)	P value
Diabetes Mellitus n,%	120 (24.0)	40 (31.3)	0.06
Hypertension n,%	190 (38.0)	88 (68.8)	< 0.001
Hyperlipidemia n,%	120 (24.0)	26 (20.3)	0.224
Smoking n,%	328 (65.6)	60 (46.9)	< 0.001
Obesity n,%	180 (36.0)	50 (39.1)	0.294
Female Gender n,%	78 (15.6)	48 (37.5)	< 0.001
Serum osmolarity	291.28± 15.7	297.31±9.4	< 0.001
Age (years)	61.2±12.3	66.7±13.7	< 0.001
Heart rate (bpm)	77.7±17.8	74.6±19.7	0.08
Diastolic blood pressure (mmhg)	73.5±14.9	69.3±17.9	0.006
Sistolic blood pressure (mmhg)	123.08±26.7	115.10±31.5	0.004
Weight (kg)	74.5±12.01	76.9±17.2	0.06
Height (cm)	166.85±7.2	164.2±8.4	< 0.001
Body mass index	26.3±3.7	27.9±4.8	< 0.001
Waist circumference (cm)	92.1±7.4	95.2± 10.02	< 0.001
Peak CK MB (mg/dl)	201.42±153	256.52±181	0.001
Peak Troponin (u/L)	5.3±7.6	5.7±4.7	0.511
Hemoglobin (mg/dl)	14.3±1.8	13.9±3.4	0.02
Glucose (mg/dl)	160.58±77.1	224.17±122.17	< 0.001
Creatinin (mg/dl)	1.0±0.2	1.2±0.3	< 0.001
Blood urea nitrogen	18.2±6.2	23.5±9.3	< 0.001
Total cholesterol (mg/dl)	177.5±42.1	172.04±44.1	0.193
Triglyceride (mg/dl)	144.8±118.8	133.7±71.5	0.314
HDL- Cholesterol (mg/dl)	41.0±9.4	40.3±7.0	0.419
LDL- Cholesterol (mg/dl)	108.53±35.4	104.3 ±36.2	0.233
Hs-CRP (mg/dl)	22.5±26.01	56.9±35.5	< 0.001
GGT (mg/dl)	31.8±23.2	47.3±52.9	< 0.001
Sodium (mg/dl)	137.91±7.4	138.23±3.8	0.636
Potassium (mg/dl)	4.3±0.5	4.6±0.6	< 0.001
LV ejection fraction (%)	45.4±9.2	38.2±10.4	< 0.001

Table 1 Demographic, Clinical and Laboratory of All Patients and Patients With and Without CIN With P Value.

Advanced age; high peak CK-MB, glucose, creatinine, HS-CRP, UA levels, presence of hypertension, low left ventricular ejection fraction and serum osmolality were found to be independent predictors of CIN (Table 2).

	Unadjusted Odds Ratio	Confidence interval	P value	Adjusted Odds Ratio	Confidence interval	P value
Age	1.03	1.01-1.05	< 0.001	2.96	1.17-7.48	0.02
Diastolic blood pressure	0.983	0.971-0.995	0.007			
Systolic blood pressure	0.99	0.98-0.99	0.004			
Height	0.95	0.93-0.98	0.001	1.05	1.00-1.11	0.03
Peak CK-MB	1.002	1.001-1.003	0.001	1.00	1.00-1.003	
Glucose	1.006	1.004-1.008	< 0.001	1.004	1.001-1.007	0.005
Creatinine	12.4	6.1-25.0	< 0.001	7.09	2.45-20.47	< 0.001
BUN	1.098	1.06-1.12	< 0.001			
Hs-CRP	1.03	1.02-1.03	< 0.001	1.024	1.015-1.033	< 0.001
GGT	1.01	1.00-1.01	< 0.001			
Uric acid	1.84	1.59-2.14	< 0.001	1.24	1.025-1.509	0.02
Potassium	2.44	1.71-3.45	< 0.001			
LV ejection fraction	0.92	0.90-0.94	< 0.001	0.96	0.93-0.99	0.03
Diabetes Mellitus	1.43	0.94-2.20	0.09			
Hypertension	3.58	2.37-5.43	< 0.001	1.86	1.05-3.28	0.03
Female Gender	3.24	2.10-4.99	< 0.001			
Serum osmolarity	1.06	1.03-1.08	< 0.001	1.02	1.01-1.03	0.01

Table 2. Univariate and Multivariate Logistic Regression Analysis of Demographic, Clinical and Laboratory Characteristics for CIN Prediction.

ID: **186**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Oral**

EVALUATION OF THE RELATIONSHIP OF COPEPTIN LEVELS WITH CLINICAL AND ANGIOGRAPHIC SCORING SYSTEMS IN UNSTABLE ANGINA PATIENTS

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Objective

To identify the serum copeptin levels in patients diagnosed with UA and evaluate the relationship of these levels with the clinical and angiographic severity of patients.

Subjects and Methods

Out of the 335 patients that were primarily included; 200 patients who were diagnosed with UA and underwent coronary angiography (CAG) have been included in the study after exclusion. Each patient underwent a clinical evaluation which included 12-lead ECG, echocardiographic evaluation and standard laboratory tests (blood count, sodium, potassium, creatinine, glomerular filtration rate, HbA1c, high sensitive Troponin-c level (hscTn), creatine kinase myocardial bound (CK-MB) and copeptin levels) and GRACE 1.0 risk score calculation at the time of admission. hscTn and CK-MB levels have been re-evaluated at the 6th hour. SYNTAX score was calculated after CAG.

Results

Patients were divided into two groups according to their coronary angiography results and they have been categorized as patients with non-critical or normal coronary angiography (Group-1, n: 105) and patients with critical CAD (Group-2, n: 95). The rate of cases with a GRACE score higher than 140 in group-2 were significantly higher than group-1 ($p<0.001$). The SYNTAX score and Copeptin levels were significantly higher in the group-2 than the group-1 ($p<0.001$ for both data). When the correlation between serum copeptin levels and CAD severity was examined, a high level of positive correlation has been found between copeptin levels and SYNTAX scoring. (Rho: 0.944 with Spearman correlation analysis and p value <0.001). When the serum copeptin level was determined as the threshold at 18 pmol/l as a predictor of high SYNTAX score, the diagnostic sensitivity has been found to be 98.9%, the specificity has been found to be 100%, the positive predictive value has been found to be 100%, the negative predictive value has been found to be 99.1%, and the area under the curve (AUC) has been found to be 1.0.

Conclusion

In conclusion our study revealed that intended for the identification of high-risk patients among UA cases, using both conventional scoring systems and the serum copeptin level could have beneficial effects to detect the right group of patients for the early invasive strategy.

ID: **513**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

THE ASSOCIATION OF SERUM OSMOLALITY AND INFLAMMATORY STATUS WITH NEW ONSET ATRIAL FIBRILLATION FOLLOWING NON-ST ELEVATION MYOCARDIAL INFARCTION PATIENTS UNDERGOING PERCUTANEOUS CORONARY INTERVENTIONS

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OBJECTIVE: Atrial fibrillation (AF) is the most common supraventricular arrhythmia following non ST elevation myocardial infarction (NSTEMI). Serum osmolality (SO) have been associated with several cardiovascular diseases. Its usefulness in predicting AF in the development of AF in patients presenting with STEMI is unknown.

METHODS: Serum osmolarity was calculated on admission. The study population was divided into 2 groups according to AF development, and both groups were compared according to clinical, laboratory, and demographic features, including the SO. We evaluated the predictive value of SO, inflammatory and oxidative parameters including High sensitive C reactive protein (Hs-CRP), uric acid (UA) and gamma glutamyl- transferase (GGT) for AF development in patients with NSTEMI (n = 656) undergoing pPCI.

RESULTS: Serum osmolarity, Hs-CRP, UA, GGT was significantly higher in patients with AF than in those without AF. Additionally, serum creatinine, glucose, blood urea nitrogen, potassium and peak creatinine kinase myocardial bundle (CK-MB) levels were higher in patients with AF than in those without AF on admission. Patients with AF have higher rates of diabetes mellitus, hypertension and female gender than patients without CIN (Table 1).

CONCLUSIONS: Serum osmolality on admission and inflammatory and oxidative parameters can be useful to define patients with NSTEMI undergoing PCI who are more likely to develop AF.

	Atrial fibrillation (-) (n=520)	Atrial fibrillation (+) (n=136)	P value
Diabetes Mellitus n,%	122 (23.5)	48 (35.3)	0.004
Hypertension n,%	202 (38.8)	98 (72.1)	< 0.001
Hyperlipidemia n,%	118 (22.7)	32 (23.5)	0.458
Smoking n,%	342 (65.8)	60 (44.1)	< 0.001
Obesity n,%	178 (34.2)	64 (47.1)	0.004
Female Gender n,%	80 (15.4)	58 (42.6)	< 0.001
Age (years)	61.1±12.7	68.2±11.7	< 0.001
Heart rate (bpm)	76.8±17.1	77.6±22.7	0.660
Diastolic blood pressure (mmhg)	74.2±12.0	64.8±19.2	< 0.001
Sistolic blood pressure (mmhg)	123.9±26.9	109.25±30.9	< 0.001
Weight (kg)	74.2±12.01	78.8±18.7	< 0.001
Height (cm)	167.22±6.9	161.9±9.1	< 0.001
Body mass index	26.0±3.6	29.4±5.1	< 0.001
Waist circumference (cm)	91.6±7.3	98.0± 9.8	< 0.001
Peak CK MB (mg/dl)	204.49±158.47	255.38±168.63	0.001
Peak Troponin (u/L)	5.3±7.6	5.6±3.7	0.733
Hemoglobin (mg/dl)	14.5±2.0	13.1±2.7	< 0.001
Glucose (mg/dl)	163.89±84.8	224.02±112.14	< 0.001
Creatinin (mg/dl)	1.08±0.2	1.2±0.3	< 0.001
Blood urea nitrogen	18.7±7.4	22.4±6.1	< 0.001
Total cholesterol (mg/dl)	178.93±42.28	165.19±43.11	0.001
Triglyceride (mg/dl)	147.83±119.6	119.70±41.5	< 0.001
HDL- Cholesterol (mg/dl)	41.02±9.1	40.3±7.7	0.413
LDL- Cholesterol (mg/dl)	109.26±35.6	100.4 ±35.87	0.01
Hs-CRP (mg/dl)	23.4±27.13	62.72±33.59	< 0.001
GGT (mg/dl)	31.8±26.0	52.26±53.6	< 0.001
Uric acid (mg/dl)	5.99±1.4	7.9±1.1	< 0.001
Sodium (mg/dl)	137.9±7.3	138.4±3.8	0.382
Potassium (mg/dl)	4.3±0.5	4.7±0.6	< 0.001
LV ejection fraction (%)	45.0±9.5	37.9±10.2	< 0.001
Left Atrial Diameter (mm)	39.4±3.3	42.3±2.6	< 0.001
Serum osmolarity	291.62±15.7	297.39±8.9	< 0.001

Table 1 Demographic, Clinical and Laboratory of All Patients and Patients With and Without AF With P Value.

Glucose, HS-CRP, UA levels, female gender, low blood pressure, high heart rate, low hemoglobin level, left atrial diameter and serum osmolality were found to be independent predictors of CIN (Table 2).

	Atrial fibrillation (-) (n=520)	Atrial fibrillation (+) (n=136)	P value
Diabetes Mellitus n,%	122 (23.5)	48 (35.3)	0.004
Hypertension n,%	202 (38.8)	98 (72.1)	< 0.001
Hyperlipidemia n,%	118 (22.7)	32 (23.5)	0.458
Smoking n,%	342 (65.8)	60 (44.1)	< 0.001
Obesity n,%	178 (34.2)	64 (47.1)	0.004
Female Gender n,%	80 (15.4)	58 (42.6)	< 0.001
Age (years)	61.1±12.7	68.2±11.7	< 0.001
Heart rate (bpm)	76.8±17.1	77.6±22.7	0.660
Diastolic blood pressure (mmhg)	74.2±12.0	64.8±19.2	< 0.001
Sistolic blood pressure (mmhg)	123.9±26.9	109.25±30.9	< 0.001
Weight (kg)	74.2±12.01	78.8±18.7	< 0.001
Height (cm)	167.22±6.9	161.9±9.1	< 0.001
Body mass index	26.0±3.6	29.4±5.1	< 0.001
Waist circumference (cm)	91.6±7.3	98.0± 9.8	< 0.001
Peak CK MB (mg/dl)	204.49±158.47	255.38±168.63	0.001
Peak Troponin (u/L)	5.3±7.6	5.6±3.7	0.733
Hemoglobin (mg/dl)	14.5±2.0	13.1±2.7	< 0.001
Glucose (mg/dl)	163.89±84.8	224.02±112.14	< 0.001
Creatinin (mg/dl)	1.08±0.2	1.2±0.3	< 0.001
Blood urea nitrogen	18.7±7.4	22.4±6.1	< 0.001
Total cholesterol (mg/dl)	178.93±42.28	165.19±43.11	0.001
Triglyceride (mg/dl)	147.83±119.6	119.70±41.5	< 0.001
HDL- Cholesterol (mg/dl)	41.02±9.1	40.3±7.7	0.413
LDL- Cholesterol (mg/dl)	109.26±35.6	100.4 ±35.87	0.01
Hs-CRP (mg/dl)	23.4±27.13	62.72±33.59	< 0.001
GGT (mg/dl)	31.8±26.0	52.26±53.6	< 0.001
Uric acid (mg/dl)	5.99±1.4	7.9±1.1	< 0.001
Sodium (mg/dl)	137.9±7.3	138.4±3.8	0.382
Potassium (mg/dl)	4.3±0.5	4.7±0.6	< 0.001
LV ejection fraction (%)	45.0±9.5	37.9±10.2	< 0.001
Left Atrial Diameter (mm)	39.4±3.3	42.3±2.6	< 0.001
Serum osmolarity	291.62±15.7	297.39±8.9	< 0.001

Table 1 Demographic, Clinical and Laboratory of All Patients and Patients With and Without AF With P Value.

	P value	OR	CI
Serum osmolarity	<0.001	2.54	2.00-4.55
Female Gender	0.007	2.822	1.33-5.97
Systolic Blood Pressure	<0.001	0.973	0.96-0.98
Heart rate	<0.001	1.034	1.01-1,051
BMI	0.077	1.086	0.99-1.18
Hemoglobin	0.049	0.874	0.76-0.99
Glucose	0.006	1.006	1.002-1.010
HS-CRP	<0.001	1.022	1.013-1.031
Uric Acid	<0.001	2.155	1.65-2.80
LA Diameter	<0.001	1.341	1.19-1.50

Table 2 Independent predictors of atrial fibrillation in multivariate analysis

ID: **495**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

THE RELATIONSHIP BETWEEN FREE TESTOSTERONE LEVEL AND THE EXTENT OF CORONARY ARTERY DISEASE IN MALE PATIENTS WITH NON-ST ELEVATED MYOCARDIAL INFARCTION

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Background: Syntax score (SS) is an angiographic scoring system for determining the extent of CAD using features such as number of lesions, location and functional significance of the lesion. High SS and low testosterone levels are associated with poor cardiac events in patients with coronary artery disease. In this study, we aimed to investigate the relationship between free testosterone and SS in male patients Non ST-Elevation Myocardial Infarction (NSTEMI).

Material and Method: The study included 98 male patients with NSTEMI who underwent coronary angiography. Syntax score was evaluated using the version downloaded from http://www.syntaxscore.com. Patients with SS <22 were defined as group 1, while patients with SS ≥22 were defined as group 2. SS and serum free testosterone level were compared between two groups.

Results: The clinical characteristics of the study population are presented in Table 1. When both groups were compared, in group 2 patients had significantly lower levels total testosterone (32 ±23 vs. 23±17; P=0.032) and free testosterone (10 [4 -16]) vs. 8 [4-12], P= 0.011). In correlation analysis, SS and total testosterone, free testosterone level were negatively correlated (respectively, r = -0.480, p = 0.001), (r = -0.733, p = 0.001). Multivariate logistic regression analysis demonstrated that free testosterone was an independent predictor of high SS (odds ratio, 0.906; 95% confidence interval, 0.838-0.980, P<0.014) (Figure 1).

Conclusion: Low free testosterone level is independently associated with high SS in male patients NSTEMI

09

Keywords: Syntax score, free testestorone, Non ST-Elevation myocardial infarction

Table 1. Basic and biochemical characteristics of the study population.

Variables	**Group 1 n=57**	**Group 2 n=41**	**P**
Age	58± 11	56 ±10	0.962
Body mass index (kg/m2)	25 ±5	24±3	0.910
Hypertension (%)	21 (37)	22 (54)	0.100
Hyperlipidemia (%)	21 (37)	15 (37)	0.979
Smoking (%) 21 (46) 16 (39) 0.518			
Diabetes mellitus (%)	13 (23)	11(27)	0.650
Syntax score	16(10-21)	27(13-39)	0.001
EF (%)	56 (45-60)	48 (40-61)	0.127

Leukocyte (103/µL)	10 ± 3.4	11 ± 5	0.407
Erythrocyte sedimentation rate (mm/h)	18(10-25)	21(14-35)	0.172
Total cholesterol (mg/dl)	177 (144-177)	198(169-227)	0.038
Low density Cholesterol (mg/dl)	106 (74-130)	124 (98-157)	0.025
High desity Cholesterol (mg/dl)	29 ±10	30 ± 9	0.818
Triglyceride (mg/dl)	156 (106-193)	140 (106 -183)	0.430
C-reactive protein (mg/dL	12 (6 -34)	28 (10 - 67)	0.048
Free testosterone (pg/ml)	10 (4 -16)	8 (4 -12)	0.011
Total testosterone (nm/l)	32 ±23	23±17	0.032

Figure 1. Multivariate logistic regression analysis showing independent predictability of syntax score

Variables	OR (% 95 CI)	p
Age	0.980 (0.936-1.025)	0.374
BMI	0.998 (0.884-1.109)	0.865
DM	1.628 (0.517-5.123)	0.547
HT	0.511 (0.205-1.273)	0.149
S	1.830 (0.628-5.338)	0.275
TK	1.002 (0.982-1.022)	0.869
LDL	0.990 (0.979-1.002)	0.100
CRP	1.005 (0.997-1.013)	0.239
Total testosterone	0.929 (0.700-1.232)	0.608
Free testosterone	0.906 (0.838-0.980)	0.014

BMI: Body mass index, HT: Hypertension, DM: Diabetes mellitus, TK: Total cholesterol, LDL: low dansity cholesterol, CRP: C-reactive protein,

ID: **582**

Topic: **Cardiology » Preventive cardiology**

Presentation Type: **Oral**

DO IMMIGRANT STATUS EFFECT THE FIRST ACUTE CORONARY SYNDROME AGE?

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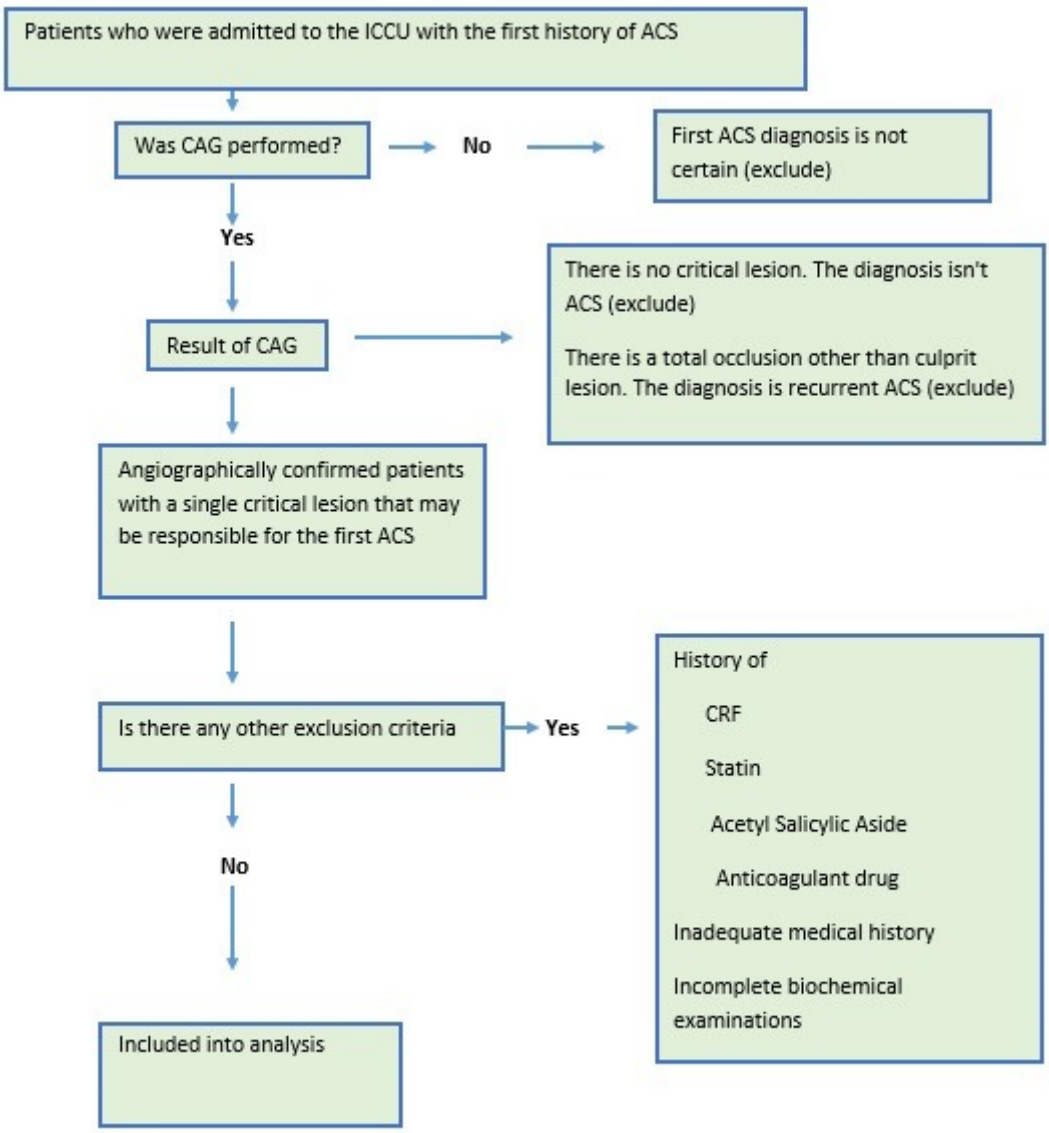
Introduction
Cardiovascular events are the major causes of mortality and morbidity. Defining risk factors is very important to prevent the cardiovascular events. Changing life conditions create new risk factors. One of them is the increasing migration due to urbanization. In the present study, we evaluated whether there was a difference between the ages of the first acute coronary syndrome (ACS) episodes of migrants or non-migrants.

Method
This is a cross-sectional and observational study. We examined consecutive 1233 patients whose first diagnosis of ACS was confirmed in 2014 to 2019 years (Figure 1). Patients were classified according to their immigrant status. Independent variables were examined by linear regression analysis.

Results
Of 1233 patients (80.8% male) with a first episode of ACS, the mean age was 57.7 ± 12.3 years (non-migrants, 59.3 ± 12.9 years; migrants, 55.2 ± 10.8 years, p< 0.001). The general characteristics of the patients were demostroted in Table 1. There was a strong relationship between immigration status of patients and the age of first ACS episode. The most important factor in the migration of patients was working conditions with 66.3%. 20% of patients had migrated because of familial reasons and 6% had migrated because of life preference. There was no statistically significant difference in the first ACS age between the groups, according to migration reasons (migrants due to working condition, 56.9±11.1 years; migrants due to familial reasons, 56.1 ±10.9 years; migrants due to life preference, 57.4 ±11. 4, p= 0.849). Male sex and smoking rates were higher in the group who migrated. In correlation analysis, these risk factors were associated with lower ACS age (p<0.001). However, in the linear regression analysis model, which included migration, smoking and gender risk factors, migration risk was determined as an independent risk factor that attracted the age of 2.2 years (p<0.002).

Conclusions
Our findings suggest that migration is an independent risk factor associated with ACS at an earlier age.



ACS:Acute Coronary Syndrome, CAG: Coronary Angiography, CRF: Chronic Renal Failure

Non-Immigrant n:762	Immigrant n:471	P value	
Age (mean ±SD)	59.3 ± 12.9	55.2 ± 10.8	<0.001
Male n (%)	597 (78.3 %)	401 (85.1)	0.003
HT n (%)	305 (42.1 %)	207 (45.6 %)	0.243
DM n (%)	201 (28.9 %)	138 (29.9 %)	0.728
HL n (%)	192 (31.0 %)	122 (30.7 %)	0.902
Smoke n (%)	375 (51.2%)	287 (61.7 %)	<0.001
FH n (%)	301 (52.7 %)	180 (43.4 %)	0.004
MS n (%)	211 (81.8 %)	73.9 (81.5 %)	0.929
BMI (mean ±SD)	27.8 ± 4.9	28.2 ± 4.7	0.160
Total C (mean ±SD)	205.3 ± 50.4	205.8 ± 50.1	0.877
LDL-C (mean ±SD)	133.9 ± 40.4	133.4 ± 41.1	0.860

HDL-C (mean ±SD)	43.1 ± 11.0	41.9 ± 10.2	0.081
Non-HDL-C (mean ±SD)	156.3 ± 50.1	157.4 ± 56.9	0.743
TG (mean ±SD)	160.8 ± 142.4	161.6 ± 124.1	0.915

BMI: body mass index,C: cholesterol, DM: diabetes mellitus, FH: family history, HDL: high density lipoprotein, HL: hyperlipidemia, HT: hypertension, LDL: low density lipoprotein, MS: mental stress , SD: standard deviation, TG: triglyseride

ID: **556**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

EVALUATION OF TICAGRELOR EFFICIENCY ACCORDING TO HBA1C LEVELS IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION

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BACKGROUND/AIM: There are studies in the literature showing that ticagrelor is an appropriate treatment option in patients with acute myocardial infarction and diabetes. In this analysis, we aimed to systematically compare the post-interventional angiographic outcomes of ticagrelor versus clopidogrel according to HbA1c levels in patients with acute myocardial infarction.

MATERIALS AND METHODS: This cross-sectional study included 532 patients with ST elevated myocardial infarction [STEMI] Patients were divided into ticagrelor (n = 334) [62,8%] and clopidogrel (n = 192) [37,2%] groups. TIMI flow grade (TFG) and TIMI frame count were calculated after the coronary intervention and compared between two groups according to HbA1c percentiles. (<25 percentile: 4,8-5,7%, 25-50 percentile 5,8-6,1%, 50-75 percentile 6,2-7,1%, 75-90 percentile 7,2-9,5%, >90 percentile >9,5%)

RESULTS: Baseline characteristics such as glucose, HbA1c, troponin levels and pre-interventional angiographic parameters and procedural parameters were almost the same in the ticagrelor and clopidogrel groups. The statistical analysis showed TIMI flow grade 2 was higher (21.2% versus 9.3%; p <0.001) in clopidogrel-treated patients compared to those using ticagrelor, and the rate of patients with TIMI flow grade 3 was low after the procedure (73.7% vs. 89.2%). ; p <0.001). The frame count median was higher in clopidogrel-treated patients compared to ticagrelor (24 vs 20; p <0.001). There was a positive correlation between the increase in HbA1C levels and the increase in TIMI frame count levels in whole group (r = 0.225; p = 0.004). Clopidogrel users had higher mean TIMI frame count compared to ticagrelor according to the HbA1c <25 and 25-50 percentile (23 vs 20; p <0.001 and 25 vs 20; p <0.001, respectively). The median TFC did not differ significantly according to the HbA1c 50-75 and 75-90 percentile (22.3 to 20; p = 0.192 and 22 to 20; p = 0.017, respectively). In the group of percentile >90, mean TIMI frame count level was higher in clopidogrel group compared to ticagrelor group (36.5 vs. 20; p <0.001).

CONCLUSION: Ticagrelor is a more effective treatment than clopidogrel in patients with and without diabetes, and this difference is more pronounced in HbA1c <6.1% and> 9.5%.

ID: **162**

Topic: **Cardiology » Hypertension and antihypertensive therapy**

Presentation Type: **Oral**

SENSITIVITY OF LEFT VENTRICULAR MASS INDEX IN PREDICTING GRADE 2 RETINOPATHY IN PATIENTS WITH RESISTANT HYPERTENSION

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Objective: Cardiovascular complications such as myocardial infarction, heart failure, stroke, and renal failure are related to both the degree and duration of blood pressure increase. Two signs of target organ damage in hypertension (HT) are the degree of retinopathy and left ventricular (LV) hypertrophy. Grade 2 retinopathy shows the pressure of the atherosclerotic artery on the vein. The relationship between cardiovascular disease and target organ damage can be bidirectional. This study asked whether grade 2 retinopathy is predictable in patients with resistant HT when the LV mass index (LVmass i) is known.

Methods: This study included 120 patients with resistant HT and 233 patients with Non Resistant HT; the patients had the same duration of HT (8 ± 1 years) and a similar age range (49,5 ± 3 years). Echocardiography was performed to investigate LV mass i. and ophthalmoscopy was used to investigate HT-related retinopathy.

Results: In the stable HT group, 42.4% of the patients did not exhibit retinopathy, 48% exhibited grade 1 retinopathy, 9.4% exhibited grade 2 retinopathy, and 0% exhibited grade 3 retinopathy. In the resistant HT group, 19.1% of the patients did not exhibit retinopathy, 30.8% exhibited grade 1 retinopathy, 45% exhibited grade 2 retinopathy, and 3% exhibited grade 3 retinopathy ($p < 0.001$).Grade 2 retinopathy was found to be correlated with LV mass i. ($r = 0.43$, $p = 0.001$). By regression analysis, LV mass, HT duration, and HT stage explained 38% of the formation of grade 2 retinopathy ($R2 = 0.38$). The sensitivity and specificity of LV mass i. in predicting grade 2 retinopathy were 72% [95% confidence interval (CI)= 64–79%] and 62% [95% CI = 59–66%], respectively.

Conclusions: In resistant HT, grade 2 retinopathy can be predicted with a sensitivity of 72% when the patient's LV mass i. is known.

Oral Presentation Session

Advanced Therapies for Venous Thrombosis

Date: 31.10.2020 Time: 13:45 – 14:45 Hall: 5

ID: **331**

Topic: **Cardiovascular Surgery » Various Veins**

Presentation Type: **Oral**

PHARMACOMECHANICAL TREATMENT OF ILIAC DEEP VEIN THROMBOSIS

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OBJECTIVE

Deep vein thrombosis is the third most common cardiovascular pathology after coronary artery disease and stroke with life-threatening complications. In the treatment of patients with acute / subacute deep vein thrombosis involving the iliac veins, endovenous pharmacomechanical treatment is a method that provides symptomatic improvement in a shorter time.

METHODS

In the last two years, nine patients with acute iliac deep vein thrombosis underwent pharmacomechanical treatment. Popliteal vein of extremity was catheterized by ultrasonography. If there is a mobile thrombus after venography, inferior vena cava filter was placed from the opposite extremity. Venous stent was placed in one patient with iliac stenosis.
Thrombus segments were treated for an average of 25-30 minutes. Control venography evaluated the patency of the venous system. Repetition of the total non-opened segments was performed and venography control was performed. Balloon angioplasty was applied to the residual stenosis followed by venous stent (self expandable). In patients without contraindications to the use of antifibrinolytic agents during the procedure, 10-25 mg (half dose) and 24 hours after the procedure were administered as infusion. In patients who received coumadin and stents as anticoagulants, acetylsalicylic acid 100 mg tb was started.

RESULTS

Anticoagulant therapy in patients with deep vein thrombosis is known to be inadequate to prevent thrombus dissolution and post thrombotic syndrome. Due to the lack of drug thrombolytic effect in anticoagulation, 2/3 of the patients cannot achieve adequate clot dissolution, so venous valve dysfunction and venous pathologies may develop. In current treatment guidelines, catheter-driven selective fibrinolytic therapy is recommended to avoid complications of fibrinolytic therapy.

Prior to pharmacomechanical treatment, the Vena Cava filter is usually used via the femoral vein from the opposite leg, which must be done while the patient is in the supine position.

The recommended criteria for patients undergoing mechanical thrombectomy were deep vein thrombosis that threatens the extremity, the presence of symptoms lasting less than 14 days, the first episode of venous thrombosis, low risk of bleeding, high life expectancy and good functional capacity of the patient.

CONCLUSIONS

Reduction or loss of thrombus mass in acute thrombus reduces leg pain due to thrombus. We think that mechanical treatment is effective in appropriate patients because it reduces post phlebitic sedum in the future.

ID: **304**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

MANAGEMENT OF EXTREMITY VENOUS THROMBOSIS IN NEONATES AND INFANTS: AN EXPERIENCE FROM A RESOURCE CHALLENGED SETTING

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Background: We aimed to evaluate the outcome of different treatment modalities for extremity venous thrombosis (VT) in neonates and infants, highlighting the current debate on their best tool of management.

Methods: This retrospective study took place over a 9-year period from January 2009 to December 2017. All treated patients were referred to the vascular and pediatric surgery departments from the neonatal intensive care unit. All patients underwent a thorough history-taking as well as general clinical and local examination of the affected limb. Patients were divided into 2 groups: group I included those who underwent a conservative treated with the sole administration of unfractionated heparin (UFH), whereas group II included those who were treated with UFH plus warfarin.

Results: Sixty-three patients were included in this study. They were 36 males and 27 females. Their age ranged from 3 to 302 days. Forty-one (65%) patients had VT in the upper limb, whereas the remaining 22 (35%) had lower extremity VT. The success rate of the nonsurgical treatment was accomplished in 81% of patients. The remaining 19% underwent limb severing, due to established gangrene. The Kaplan-Meier survival method revealed a highly significant increase in both mean and median survival times in those groups treated with heparin and warfarin compared to heparin-only group ($P < .001$).

Conclusions: Nonoperative treatment with anticoagulation or observation (ie, wait-and-see policy) alone may be an easily applicable, effective, and a safe modality for management of VT in neonates and infants, especially in developing countries with poor or highly challenged resource settings.

ID: **13**

Topic: **Cardiovascular Surgery » Various Veins**

Presentation Type: **Oral**

INVASIVE TREATMENT OF SYMPTOMATIC ACUTE ILIOFEMORAL DEEP VEIN THROMBOSIS - THE PRELIMINARY RESULTS OF A SINGLE SURGEON

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Objective: Pharmacomechanical thrombectomy has been widely used for the invasive treatment of acute and subacute deep vein thrombosis. In the current research, the efficacy and safety of pharmacomechanical thrombolysis for symptomatic acute iliofemoral deep vein thrombosis is evaluated.

Materials and Methods: One hundred and fifty two patients with symptomatic acute deep vein thrombosis between January 2007 and September 2019 whom underwent pharmacomechanical thrombolysis by the same single surgeon at the institution were evaluated retrospectively. The thrombectomy device was used only once for the patients with deep venous occlusion. In intractable cases, balloon angioplasty was not hesitated. The extent of thrombus was graded from I (<50%) to III (complete) depending on postprocedural venography.

Results: Acute or subacute 4.5±3.9 days (range, 1–14 days) deep vein thrombosis of the iliofemoral venous segment was detected in all patients. The symptoms were phlegmasia cerulea/alba dolens and/or severe pain. All the patients were treated with pharmacomechanical thrombolysis. The amount of the used tissue plasminogen activator during the procedure ranged between 15-60mg (range: 20.9±19.4 mg). The procedures lasted a mean of 61.3±15.9 minutes. Pharmacomechanical thrombolysis procedure resulted in complete thrombus lysis in 89.3% of the patients (grade III). Grade II lysis was achieved in 8.7% of the cases. In 2% of the cases thrombus resolution was Grade I. One hundred and forty nine of the patients could be could be treated at the initial intervention; however, 13 patients required additional tissue plasminogen activator infusion for the treatment of the residual or recurring thrombus. The cumulative success rate of the procedure could be 92.6%. Mortality and major complications including intracranial or gastrointestinal bleeding did not occur during or after the procedures. Postthrombophlebitic syndrome developed in 5.9% of the cases in the first year follow up.

Conclusions: Invasive treatment of acute deep vein thrombosis of the iliofemoral segment with pharmacomechanical thrombolysis yielded promising outcomes in the early and midterm follow up in the current series. In order to propose the invasive procedure as an alternative to conventional medical treatment, high volume cohorts with long term follow up results are needed.

ID: **364**

Topic: **Cardiovascular Surgery » Various Veins**

Presentation Type: **Oral**

PROGNOSTIC ROLE OF NLR, PLR, AND LMR IN PATIENTS WITH PULMONARY EMBOLISM

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OBJECTIVE: Pulmonary embolism (PE) is associated with significant morbidity and mortality. Novel biological parameters are being investigated for estimating the prognosis in these patients. Since PE is closely associated with inflammatory status, the neutrophil/lymphocyte (NLR), platelet/lymphocyte (PLR), and lymphocyte/monocyte (LMR) ratios were suggested to be useful to predict patient outcomes. Based on this background, this study aimed to evaluate the prognostic roles of these parameters in PE cases.

METHODS: A total of 103 PE cases were retrospectively evaluated regarding demographic and clinical characteristics, treatments, laboratory analyses and imaging studies, and outcomes.

RESULTS: Median follow-up of the patients was 39 months, and the 5-year overall survival probability was 73.8%. Twenty patients were classified as high-risk PE cases (19.4%). Thrombolytic treatment was administered to 23 patients (22.3%).The systolic pulmonary arterial pressure was measured during one year, and showed a significant decrease from 51.7±15.7 mmHg at admission to 26.6±4.0 mmHg at 1st year assessment ($p<0.001$).Age (OR: 1.06, $p<0.001$) and NLR (OR: 1.52, $p<0.0019$) were significantly associated with the disease status.Theindependent prognostic factors in moderate-low & low-risk PE cases were NLR (HR: 1.17, $p=0.033$), and LMR (HR: 1.58, $p=0.046$). For the patients with moderate-high & high-risk PE, the independent prognostic factors were determined as age (HR: 1.07, $p=0.014$), and PLR (HR: 1.01, $p=0.046$).

CONCLUSION: The NLR, PLR, and LMR were found to be associated with the prognosis in patients with PE. Clinical severity of the disease should be considered when utilizing these indicators for estimation of the outcomes.

ID: **218**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

UNILATERAL CLUBBING: A RARE FINDING IN EXTREMITAL VENOUS MALFORMATIONS

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OBJECTIVE: Clubbing, which is considered one of the oldest clinical symptoms in medicine defined by Hippocrates and affects both finger and toenails, is defined as focal and bulbous enlargement of distal phalanges due to proliferation of subungual connective tissue. Respiratory and cardiovascular diseases are common causes of bilateral clubbing. Unilateral clubbing is a rare condition that may result from local vascular abnormality or hemiplegia. We present our patients with unilateral clubbing of their hand fingers and toes as a clinical manifestation of venous malformation (VM) in the upper and lower extremities.

METHODS: In the last five years, among the 683 patients with VM, 552 extremital VMs in both upper and lower limb were re-evaluated clinically and radiologically for clubbing. The clubbing was diagnosed and classified, as shown in Table I.

Table I. Diagnostic tests/signs and grading of clubbing.

Diagnostic tests/signs	
Name	*Description*
Lovibond or profile sign	Bring the patient's fingertip at the level of your eye and look at the angle of the onychodermal or Lovibond tangentially. Normal: ≤160° and Clubbing: ≥180°
Curth's modified profile sign	Similarly, you can measure the angle between the middle and distal phalanx. Normal: 180° and Clubbing: <160°.
Fluctuation test	The fingertip of the patient is placed on the pulp of the physician's two thumbs and in this position is held under gentle pressure with the tips of the middle fingers of the physician applied to the proximal interphalangeal joint of the patient. The patient's finger is then palpated on the base of the nail with the tip of the physician's index fingers. Due to the softening of the nail bed, the fluctuation of the nail bed has increased in clubbing.
Schamroth's window test	This sign occurs by juxtaposed the dorsal surfaces of the terminal phalanx on opposing fingers. The normally formed diamond-shaped window is obliterated in the presence of clubbing because of the loss of the *hyponychial angle*. This sign is also known as *diamond* or *Schamroth's sign*
Digital index	The ratio of finger circumference in the nail bed (NB) to the distal interphalangeal insertion (DIP), i.e. NB/ DIP, is calculated and summed for 10 fingers. The final value is divided by 10 and the resulting value is the *digital index* (> 1 in clubbing)
Phalangeal depth ratio	The ratio of the index finger's distal phalanx depth (DPD) to the depth of the interphalangeal joint (IPD), i.e. DPD / IPD, is measured using a caliper (it should not touch the skin). A ratio of> 1 indicates clubbing.
Grading	
Grade	*Description*
I	Fluctuation and softening of the nail bed
II	Loss of the hyponychial angle
III	Accentuated convexity of the nail
IV	Fingertip develops a clubbed appearance
V	Nail and surrounding skin develop a glossy change with longitudinal striations of the nail

RESULTS: The rate of clubbing among the extremital VM was 2.5% (this rate was 2.2% and 2.6% in the upper and lower limbs, respectively). Among the patients with a median age of 8 (range, 2-23), the female/male ratio was 6/1. The etiological cause was venous malformation (64.3%) and Klippel-Trénaunay syndrome (35.7%). None of the patients had painful clubbing. In all patients, the digital index and the

phalangeal depth index were above 1. The degrees of clubbing were 14.3%, 21.4%, 42.9% and 21.4% for Grade II, III, IV and IV, respectively. Hallux and pollex were more frequently involved (42.9%) (Figure 1).

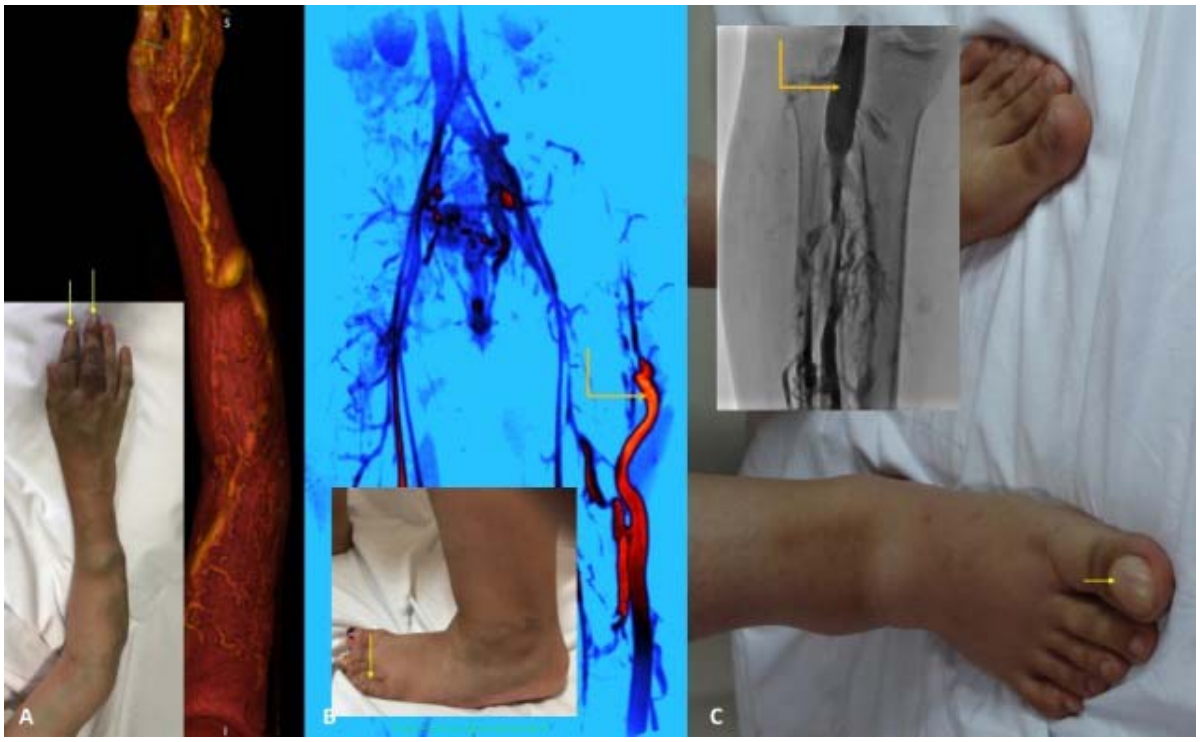

Figure 1. Clubbing in a patient with truncular venous malformation (T-VM) (arrows) (A). Clubbing in a patient with lower extremity VM (arrow); a CT venography showing an embryonic lateral mega vein (elbow-arrow) (B). Hallucal clubbing in a patient with lower limb T-VM (arrow). Note the aneurysmal dilatation of the popliteal vein in this patient (elbow-arrow) (C).

CONCLUSION: To our knowledge, unilateral clubbing associated with venous malformations has not been identified. The difficulty in venous return caused by venous malformation associated with changes in microcirculation may cause clubbing in existing cases.

ID: **815**

Topic: **Cardiovascular Surgery » Various Veins**

Presentation Type: **Oral**

NOVEL MANAGEMENT OF A CASE OF ILIAC VENOUS STENT FOR MAY-THURNER SYNDROME CAUSING LUMBAR NERVE COMPRESSION

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BACKGROUND

Endovascular Iliocaval stenting has become a common procedure for management of chronic venous diseases. Intra-spinal or neurological compression caused by stents remains a serious rare complication and all documented reports of similar cases have required surgical removal of said stent. We present a case where a symptomatic patient received surgical correction to release the nerve root with no further recurrence of symptoms. CASE REPORT A 42yo woman with May-Thurner syndrome and previous DVT which resulted in complete obstruction of the left iliac vein underwent left common iliac stent insertion for ongoing swelling and venous claudication in 2018. The vein was recannalised via angiography and a large self-expanding stent was placed under intravascular ultrasound guidance. Post-operatively the patient had new onset back pain with radiation into her posterolateral thigh and leg with no motor or sensory deficits; this was thought to be related to her chronic back pain and the patient was discharged home. Over the next 12months, the patient had ongoing L5/S1 neuralgia. The suspicion was that the left iliac vein stent was compressing the L5 nerve root at the spinal foramen or the nerve roots at the psoas gutter. The iliac vein stent remained widely patent during this time and the patient did not wish to have recurrence of her previous venous claudication symptoms. After extensive consultation with neurosurgery colleagues, the decision was made to attempt to preserve the existing venous stent and perform a neurolysis.

METHODS

A hybrid approach was used. Invasive venography was used to confirm ongoing patency of the iliac stent. A midline abdominal longitudinal incision was made with dissection down to the psoas gutter via the pre-peritoneal space. The stent was found to be in the extravascular space with the lateral border impinging on the psoas gutter. The L5 nerve was densely adhered to the surrounding inflamed tissue and a neurolysis was performed. The nerve was protected via a circumferential fat pad and Tachiseal was applied to the stent to protect the nerve from adjacent struts. Completion venogram showed patent left common and external iliac vein.

RESULTS

The patient was discharged post-op day 7 after an uneventful recovery and had no recurrence of the neuropathic pain.

DISCUSSION

We report a successful case in which combined vascular and neurosurgical approach allowed the patient to both retain ongoing iliac vein patency as well as resolve the patients' neuralgia.


08
100
PATENT PENDING
60

Oral Presentation Session

Transcatheter vs Minimal Invasive Surgical Aortic Valve Replacement: Outcomes and Controversies

Date: 31.10.2020 Time: 14:15 - 15:30 Hall: 4

ID: **238**

Topic: **Cardiology » PI for SHD - Transcatheter aortic valve replacement**

Presentation Type: **Oral**

TRANSCATHETER AORTIC VALVE REPLACEMENT EARLY-MID TERM FOLLOW-UP AT A SINGLE CENTER IN TURKEY

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OBJECTIVE:

The aim of this study was to assess the clinical outcomes of high-risk patients with severe aortic stenosis (AS) allocated to transcatheter aortic valve replacement (TAVR) ,including death, major cardiovascular events, major bleeding, paravalvular valve regurgitation and pacemaker requirement, through early-mid term follow-up at a single centre in Turkey.

METHODS AND RESULTS:

Consecutive patients with severe symptomatic AS who underwent TAVR procedure were enrolled in a retrospective single centre registry. Patients were included to the study who underwent TAVR procedure from January 2015 to June 2019. A total of 168 high risk (EURO score:26,21±4,05) patients (age 79,35± 7,2 years; 48% female) were followed up. 3 patiens died during procedure and at 1 patient was performed in emergent conditions because of valve embolisation. 2 strokes (%1,2), 6 major vascular complications (%3,6) were observed during procedure. Pacemaker requirement rate right after TAVR was %6.5 and paravalvular aortic regurgitation rate was %17. Survival after a median duration of follow-up of two years was 91%. %19,6 of patients were diagnosed as type 2 diabetes before the procedure and they were receiving antidiabetic treatment. Even though other co-morbidities, such as hypertension, chronic obstructive lung disease, previous coronary artery disease, did not correlated with increased risk of death; Diabetes melitus was associated with increased mortality (p:0.04). On the other hand , other major cardiovascular and valvular complication were not increased in diabetic patient group. There was statistically difference between outcomes at balloon expandable or self expandable TAVR valves.

CONCLUSION:

Both balloon expandable or self expandable TAVR valves are safety in high risk patients at a median duration of follow-up of two years. According to current studies, mortality rate one year after TAVR procedure is between %11,15-%30,25. In addition stroke rate during TAVR procedure were reported between %2-4 in different trials. Thus, our results show TAVR is an effective solution to treat aortic stenosis in selected patient groups.

ID: **537**

Topic: **Cardiovascular Surgery » Minimally Invasive and Robotic Cardiac Surgery**

Presentation Type: **Oral**

OUR EARLY OUTCOMES OF AORTIC VALVE REPLACEMENT VIA RIGHT ANTERIOR MINI THORACOTOMY

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OBJECTIVE: Aortic valve replacement through right anterior mini thoracotomy has become the predominant approaches for minimally invasive aortic valve replacement. Here, we present the early experience of aortic valve replacement via right anterior mini thoracotomy in our patients.

METHODS: This technique was used in 9 patients from September 2017 to November 2019. The mean age was 61.8 years and 2 (22.2%) were female. Surgical procedure was performed through an anterior right thoracotomy with a 5-to-6 cm skin incision placed in the third intercostal space. Cardiopulmonary bypass (CPB) was performed by femoral artery and vein cannulation. Myocardial protection was achieved with antegrade cardioplegia. After cardiac arrest, the aortic valve was exposed through an oblique aortotomy. The native valve removed and the valve implantation was performed.

RESULTS: The mean CPB and aortic cross-clamp (XCL) times were 131.4 minutes and 100.3 minutes respectively. Mechanical ventilation time was 7.2 hours. The mean intensive care unit (ICU) stay was 1.1 day and postoperative hospital stay was 7.3 days. One patient required an urgent reoperation due to bleeding. Bleeding was from a branch of the pericardial artery. No hospital mortality was seen in any patient.

CONCLUSION: Aortic valve replacement with right anterior mini thoracotomy increases the patient's comfort compared to the conventional sternotomy method and enables faster mobilization, less postoperative pain and shorter intensive care/hospital stay. In order to achieve better results, a coordinated team of surgeons, anesthesiologists, perfusionist, and nurses is required.

ID: **149**

Topic: **Cardiovascular Surgery » Minimally Invasive and Robotic Cardiac Surgery**

Presentation Type: **Oral**

THE MODIFIED 5-ITEM FRAILTY INDEX PREDICTS POSTOPERATIVE OUTCOMES AFTER MINIMALLY INVASIVE AORTIC VALVE SURGERY

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Background: Frailty is a geriatric condition that is associated with adverse outcomes and it is suggested that it is an important determinant of surgical outcomes. Although there is no consensus regarding the definition of frailty, it is mainly defined as an inability to maintain physiological homeostasis when faced with stressors and it is prevalent in 20% to 60% of older adults with cardiovascular disease. The aim of this study is to evaluate the 5-factor modified frailty index (mFI-5) as a predictor of postoperative outcomes after minimally invasive aortic valve surgery.

Methods: We retrospectively evaluated the prospectively collected data of 50 adult patients, 65 years old and older, who underwent elective isolated minimally invasive aortic valve replacement surgery between the years 2017-2019. The comorbid factors included in the mFI-5 were congestive heart failure, diabetes mellitus, chronic obstructive pulmonary disease, functional status and hypertension. Each patient's mFI-5 was calculated and the patients were divided into three groups as Group I: mFI-5=0, Group II: mFI-5=1, Group III: mFI-5≥2. The effect of frailty was determined using logistic regression analysis and the results were expressed as odds ratio (OR) with a 95% confidence interval (CI). A P value <.05 was considered statistically significant.

Results: A total of 50 patients (42% Females, 58% Males) underwent elective isolated minimally invasive aortic valve replacement surgery. The mean age was 71.8 ± 5.1 years. Distribution of patients based on mFI-5 was as follows; Group 1: 13%, Group 2: 35% and Group 3: 52%. Increase in mFI-5 was a strong predictor for serious medical complications as prolonged ventilator requirement, atrial fibrillation, acute kidney injury, prolonged intensive care unit and hospital stay times and also mortality. ($p < 0.05$).

Conclusion: The present study demonstrates that the mFI-5 can predict patients at a higher risk for developing postoperative complications after minimally invasive aortic valve replacement surgery. For patients with mFI-5 score of ≥ 2, the risk of complications and mortality increases significantly.

ID: **129**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Oral**

DIRECT COMPARISON BETWEEN SUTURELESS SORIN PERCEVAL VERSUS RAPIDLY DEPLOYED EDWARDS INTUITY ELITE: A SINGLE CENTRE EXPERIENCE

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Introduction:

Rapid deployment aortic valve replacement (RDAVR) are more increasingly regarded as an attractive alternative to conventional aortic valve replacement. This single-centre study compares surgical outcomes, valve-related complications, and hemodynamic performance between the only two commercially available rapid deployment valves.

Methods:

A total of 120 consecutive patients receiving either a Sorin Perceval S (N=61) or an Edwards INTUITY valve (N=59) between January 2016 and September 2019 were included. Retrospective analyse of prospectively collected database of all patients undergoing isolated Aortic valve replacement or with any concomitant procedure were included. This study compared Preoperative characteristics, valve-related adverse events, post-operative complications, trans-valvular gradients and survival rates.

Results:

Preoperative variables, including mean age (77.5 +/- 10), European System for Cardiac Operative Risk Evaluation (8+/-5), and body mass index (30+/-15), were not statistically different between the two groups. More females (75% versus 63%) and Octogenarians (31 versus 9) were in the Perceval group compared with the Intuity group, respectively.

More Perceval valves were deployed through mini-sternotomy (17 versus 2 P=0.004) but Intuity valves were more used in concomitant double valve procedures (12 versus 2 P=0.003). Implanted RDAVR size (mean 23 mm versus 21 mm), concomitant coronary artery bypass graft surgery (48% versus 33%), number of grafts, cardiopulmonary bypass, and aortic clamp time were comparable between the Perceval group and the Intuity group.

Thirty-day mortality (Intuity 1.7% versus Perceval 1.6%) and valve-related complications (Intuity 12.0% versus Perceval 20.5%) were insignificant. However, post-operative pacemaker implantation (Intuity 5% versus Perceval 11.5%) (P<0.05) differed significantly between groups. At follow up echocardiography, peak or mean pressure gradients were comparable between groups. However, statistically significant higher peak gradient were recorded when Perceval S is compared to Intuity 21 (P=0.039) and higher mean pressure gradient with Perceval L when compared to Intuity 25 (P=0.015).

Conclusion:

Both Perceval and Intuity rapid deployment valves are comparable with good early and medium-term surgical outcomes and valve hemodynamics, with relatively low valve-related complication rates. However, Perceval valves carry a higher risk of a need for Permanent pace maker and Intuity valves are associated with lower pressure gradients when compared with size matched Perceval valves.

ID: **43**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Oral**

AN IN-DEPTH ECHOCARDIOGRAPHIC ANALYSIS OF PERFORMANCE OF PERCEVAL VALVES

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Objective

Since their inception, sutureless prostheses have demonstrated the ability to improve both valve haemodynamics and operative ergonomics. Finding novel measurements to benchmark performance are important as well as identifying predictors of improved valve performance.

Here we describe the use of the stroke volume index (SVI) as a marker of

Methods

Patients undergoing aortic valve replacement (AVR) for severe aortic stenosis at a single institution between 2014 and 2018 were involved in the study. Pre-and post-operative echocardiography were analysed.

Results

In total, 97 patients were included with ages 71.0 ± 7.9 (mean ± standard deviation), 37% of which were females. Pre-operative characteristics: Euroscore (2.52 ± 2.96), hypertension (77.3%), atrial fibrillation (24.7%), diabetes (25.8%). Pre-operative echocardiography revealed a mean aortic valve area of 0.82 (± 0.31), peak gradient (PG) 76.1mmHg (± 29.2), left ventricular ejection fraction of 59.1 (± 10.5) and SVI of 43.4 (± 13.2).

Operative characteristics: valves were sized according to standardised intra-operative annular sizers (S 11%, M 35%, L 36%, X3 18%), 39% of patients received concomitant coronary artery bypass graft surgery, with 1 patient receiving additional mitral intervention, and 2 patients receiving tricuspid valve repair. Mini-sternotomy and isolated AVR was performed in 28% of patients. Operative survival was 99%, of which echocardiographic follow up at 12 months was achieved in 97%.

Post-operatively, mean SVI was 35.3 (±12.4) and PG was 24.9mmHg (±8.3). Multivariate regression modelling found advancing age to be consistently associated with a higher SVI (coefficient 0.413, 95% CI 0.044 – 0.781, p=0.029) and a lower PG (coef -0.332, 95% CI -0.577 - -0.086, p=0.009) irrespective of pre-operative echocardiography. A higher body surface area (BSA) was also found to predict a lower SVI (coef -14.7, 95% CI -26.110 - -3.265, p=0.012) irrespective of prosthesis size. Prosthesis size and BMI were both found to have no influence over post-operative SVI or PG (p>0.05).

Conclusions

This study highlights the utility of SVI in assessing post-operative outcome with the Perceval valve and the relationship between SVI and age as well as BSA.

ID: **39**

Topic: **Cardiovascular Surgery » Transcatheter Aortic Valve Replacement**

Presentation Type: **Oral**

OUR INITIAL EXPERIENCE WITH A NOVEL TRANSAPICAL TRANSCATHETER AORTIC VALVE PROSTHESIS

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BACKGROUND

Transcatheter aortic valve replacement (TAVR) is a great latest option for patients with aortic stenosis, especially in those who are in high risk for surgery. However, in developing countries transcatheter valve procedures are limited due to the high cost of currently available prostheses. Here we present our first five cases of transapical TAVR with a novel lower cost prosthesis MedLab-CT (MedEng CJSC, Penza, Russia), which is a balloon expandable stented valve with leaflets made of PTFE (Fig. 1).

METHODS

In September 2019 we performed transapical TAVR with MedLab-CT prosthesis in five patients with severe aortic valve stenosis. Mean age was 80 years (range, 70-92). Three of the patients were males. One patient had a porcelain aorta and another one had a history of CABG with patent coronary grafts. Bicuspid aortic valve was noted in one patient. All the procedures were performed under general anesthesia through a left sided mini-thoracotomy under fluoroscopic and TEE guidance.

RESULTS

There were no 30-day mortality, stroke, no need for permanent pacemaker implantation or chest re-exploration for bleeding. Paravalvular leaks causing severe aortic regurgitation did not developed in any patient. Postoperatively one patient suffered from severe pneumonia requiring antibiotics.

CONCLUSIONS

Our initial experience confirmed safety and showed excellent early results of a novel transcatheter prosthetic valve. Further study is needed to investigate long-term durability of the prosthesis.

ID: **634**

Topic: **Cardiovascular Surgery » TAVI**

Presentation Type: **Oral**

RESULTS OF TAVI WITH THE USE OF A VALVE WITH PTFE LEAFLETS

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Objective: To evaluate the clinical and hemodynamic results of transcatheter replacement of the aortic valve with the "MedLab-KT" prosthesis.

Methods: MedLab-KT is the first model of a transcatheter prosthetic with PTFE leaflets. It is a balloon-expandable stent, the cusps of which are made of 0.1 mm thick polytetrafluoroethylene plates. The reason of choice of synthetic material was the hypothesis of the absence of biodegradation of polytetrafluoroethylene in the organism. The valve has passed the preclinical phases of the in vitro and in vivo tests. The study included 69 patients who had undergone implantation of the MedLab-CT prosthesis. The survival rate and the frequency of a clinically significant stroke, as well as hemodynamic parameters according to echocardiography for up to 3 years, were evaluated. 39 patients were examined in person, the rest went through a telephone survey.

Results: The average follow-up was 12.4 months, the maximum - 4 years. The majority of patients belonged to the elderly group (mean age 73.3 years). For 51 patients (74%) according to the EuroSCORE scale and for 37 (54%), according to the STS scale, a high risk of surgical intervention was determined: ≥ 8%.

Mortality was 13%, 6 deaths were noted at the hospital stage, 3 patients died in the long-term period. Strokes not recorded. In the internal examination group, the average gradient on the aortic valve prosthesis is defined at 8.41 ± 4.21 mm Hg; failure due to paraprosthetic fistulas not higher than I degree was noted in 7 patients (18%), not higher than II degree in 1 case; transvalvular aortic insufficiency was not detected.

Conclusion: The results of the studied parameters are comparable with the data provided by foreign randomized clinical studies of famous models of transcatheter aortic valve prostheses.

Oral Presentation Session

Challenging Observations in Peripheral Venous and Arterial Disease

Date: 31.10.2020 Time: 15:00 - 16:00 Hall: 5

ID: **628**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Carotid Artery Disease**

Presentation Type: **Oral**

TEN-YEAR EXPERIENCE OF SURGICAL TREATMENT OF PATIENTS WITH NON-SPECIFIC AORTO-ARTERITIS

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Aim of the study: Conduct a retrospective analysis of the results of surgical treatment of patients with nonspecific aortoarteritis (NAA).

Material and methods: For a ten-year period (2008 - 2018), 976 patients with NAA were hospitalized at the Republican Specialized Center for Surgical Angioneurology and the Department of Vascular Surgery of the Tashkent Medical Academy. The average age of the patients was 30.6 ± 5.3 years. Of these, the majority (89.8%) are female. Various types of surgical interventions were performed in 229 patients. All surgical interventions were divided into 3 groups: open, endovascular and hybrid. All patients received long-term immunosuppressive and cytostatic therapy.

Results: Neurological complications - ischemic stroke, were observed in 3 (1.3%) patients in the group of open surgical interventions. Also in this group, bleeding of the anastomotic region was observed in 2 patients, which was stopped. Thrombosis of the operated vessel was noted in 8 patients, of which 2 cases were in the open surgery group, 3 cases were in the endovascular intervention group and 2 were in the hybrid surgery group. Also, in 1 patient after aorto - carotid bypass surgery, suppuration of the postoperative area and infection of the prosthesis were noted. Lethal outcomes were not noted. In the long-term postoperative period, the following results were observed on average up to 64 months of follow-up: restenosis or occlusion of the operated vessel - 36 (15.7%) cases, of which the largest number - 29 patients, was observed in the endovascular intervention group, 6 cases - in 1 group, and 1 case of occlusion in the group of hybrid interventions. Aneurysm of the anastomotic region - 2 patients from the first group. It should be noted that the reason for the majority of cases (26 patients) of restenosis or occlusion of the arteries was the use of immunosuppressive drugs in subtherapeutic doses and inadequate monitoring of the activity of the disease in primary care settings. Ischemic stroke in the long-term postoperative period was observed in 4 patients, which caused a fatal outcome in 2 cases.

Conclusions: 1. Shunting and prosthetics are the preferred methods in most patients with NAA with good long-term freedom from restenosis, but have a higher tendency to develop postoperative complications.
2. Endovascular treatment, in our opinion, should be performed for local lesions and in patients with high anesthetic risk, but patients often need repeated intervention in a long period and careful monitoring.
3. The combination of open surgical and endovascular treatment (hybrid interventions), as well as drug therapy can increase the effectiveness of treatment
4. Adequate immunosuppressive therapy, monitoring of disease activity and an integrated approach to the treatment of patients with nonspecific aortoarteritis are necessary to prevent adverse outcomes.

ID: **425**

Topic: **Cardiovascular Surgery » Various Veins**

Presentation Type: **Oral**

COMPARATIVE OUTCOME OF PATCH ANGIOPLASTY VERSUS BALLOON ANGIOPLASTY AFTER SURGICAL THROMBECTOMY OF THROMBOSED ARTERIOVENOUS HEMODIALYSIS GRAFT: 18-MONTH RESULTS

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Background: Repeated interventions to keep the well-functioning dialysis vascular access represent the Achilles heel for hemodialysis patients. Thrombosed permanent dialysis access, either arteriovenous fistula or graft remains one of the most common and debatable complications regarding frequency of occurrence and how to manage.

Objectives: Our study aims to evaluate mid-term outcomes of surgical thrombectomy of clotted arteriovenous grafts with adjunctive venous outflow procedures mainly patch angioplasty versus balloon dilatation to restore their function regarding patency as primary endpoint and safety as secondary endpoint.

Methods: Between May 2016 and April 2019, 96 of 125 patients with first-time thrombosed dialysis arteriovenous grafts were prospectively evaluated after block randomization for surgical patch angioplasty (group A) versus balloon angioplasty (group B) for venous anastomotic side after surgical thrombectomy in 4 tertiary referral hospitals in Egypt.

Results: Over 18-month follow-up period of our enrolled patients, immediate technical success was 100% with regaining graft functionality in 100% of 45 patients in group A patients versus 89.6% (P=0.056) in group B with achieving optimum graft functionality in 100% of technically successful declotting procedures (43 patients) in group B. The primary patency at 6, 9, 12 and 18 months in group A was 66%, 63.6%, 52.3% and 31.8% respectively, versus 48.8%, 48.8%, 37.2% and 18.6% respectively in group B. The secondary patency in group A at 6, 9, 12 and 18 months was 86.4%, 100%, 88.6% and 77.3% respectively versus 72.1%, 90.7%, 79.1% and 69.8% respectively that was not statistically significant except 12-month primary patency (P=0.014).

Conclusion: we found no significant difference in 18-month outcomes between patients treated with surgical thrombectomy with patch angioplasty and surgical thrombectomy with balloon angioplasty for thrombosed arteriovenous grafts regarding regaining functionality and patency, however patients treated with balloon angioplasty required more additional secondary interventions and most of them were to manage graft venous anastomotic site restenosis.

ID: **449**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

A MEDICAL PORTRAIT OF AN ANCIENT ENIGMA -THICK LEGS ARE NOT ALWAYS LYMPHEDEMA

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OBJECTIVE: Lipedema (LpE), a seldom-recognized disorder that nearly just affects women and frequently starts post-pubertal, is a painful, bilateral and symmetrical subcutaneous fatty deposition of lower extremities but sparing feet. Lipedema is diagnosed usually on history and clinical exam (Table I). Ultrasonography (USG) and lymphoscintigraphy (LSG) are useful in the differential diagnosis of veno-lymphatic disorders. Standard conservative therapy includes strict weight control, complex decongestive therapy with or without intermittent pneumatic compression, and physical exercises.

METHOD: In last decade, 147 patients with LpE were studied prospectively with regard to clinical, diagnostic and therapeutic aspects. The patients' demographic, clinical (i.e., history, physical exam, and tests) and diagnostic (i.e., USG, LSG) data were recorded. Also, clinical staging/typing and differential diagnosis (obesity, lymphedema-LE, lipolymphedema-LpLE) was made (Table I). After therapeutic suggestions, the patients were followed-up at intervals of six months.

RESULTS: While LpE/LE was 1.47/5.12 in the same period, LpLE/LE ratio was 6.4% and LpLE/LpE was 22.4%. All patients except two were female (98.6%). Median age was 52 years (range, 18 to 83). The onset of LpE was pubertal (19.4%), gestational (36.1%), and premenopausal, etc. (34.0%). Average child number was 3.2. On antecedent, the rates of familial history and hormonal imbalance were 58.4% and 34.3%, respectively. Median body mass index was 34.3 (range, 22.7 to 62.3). Accompanying diseases were obesity (87.7%), chronic venous disease (57.8%), lymphedema (22.4%), onychomicosis (22.8%), and the others (6.5%). Three patients with LpLE had elephantiasis nostras verrucose (2.0%). The patients had pain (35.8%) and pitting edema (16.3%). The rates of clinical typing were as follows: Type I, 6.1 % (IA: 75%); Type II, 45.5 % (IIB: 37.5%); Type III, 35.4 % (IIIB: 75%); Type IV, 9.5 % (IVA: 100 %); and Type V, 3.3 % (VA: 100 %). The rates of clinical staging were as follows: Stage I, 26.5%; Stage II, 41.4%: Stage III, 17.6%, and Stage IV, 19.0% (Figure 1). Stemmer's sign was positive in 19.0 percent of the patients. Lymphoscintigraphy demonstrated a lymphatic abnormality in 39.1 percent of the patients as bilateral (33.3%), the right (41.6%), and the left (16.6%). All patients except one took conservative treatment.

CONCLUSION: The significance of lipedema, a misdiagnosed and misunderstood disproportional fatty deposition syndrome, is due not only to the disease itself, but also to the combination of lipedema and the group of associated and secondary diseases such as veno-lymphatic diseases, obesity. The more diseases coexist, the worse is the prognosis of lipedema itself. The diagnosis of lipedema, a chronic disorder that significantly affects every day functioning, decreases social participation, and has considerable effects on the quality of life, with important functional and cosmetic morbidity, should be made as early as possible to inform lipedema patients and prevent progression and complications of the disease.

Table I. Diagnostic criteria, types and stages of lipedema.

Diagnostic criteria	
1	Lipedema merely affects women and commonly appears by the 3rd decade of life, with incongruent/disproportional fat distribution
2	Bilateral and symmetrical fat deposits develop downward from the hips, while the feet are usually spared
3	Non-pitting edema
4	Affected subcutaneous regions are tender, painful and characterized by easy bruising (pain with bimanual palpation)
5	Resistance to diet and stimulation of backflow by the elevation of the limbs (no/limited influence of weight loss on disproportionate fat distribution)
6	Increased vascular fragility
Types*	
I	Fat deposits on pelvis, buttocks and hips without spread to the rest of the legs
II	Buttocks to knees, with formation of folds of fat around the inner side of the knee
IIII	Fat deposits located between buttocks and malleoli
IV	Fat that is predominantly deposited in the arms, without affecting the lower limbs
V	Symmetrical deposits between the knees and malleoli (lower leg), without affecting the feet
Stages	
I	Normal skin surface with enlarged subcutaneous tissue
II	Uneven skin with indentations in the fat, larger mounds of tissue grow as unencapsulated masses (lipomas)
IIII	Large extrusions of tissue causing deformations, especially on the thighs and around the knees
IV	Development of lipo-lymphedema with large overhangs of tissue

***Schrader**'s classification; **Schingale** distinguishes five types of presentation of the lipedema: *Type I*: adipose tissue increased on buttocks and thighs, *Type II*: the lipedema extends to the knees with formation of fat pads on the inner side of the knees; *Type III*: lipedema extends from the hips to the ankles; Type *IV*: involving the arms and legs; *Type V*: lipo-lymphedema.

Figure 1. Going to the distorted leg with mechanical force of increased fat tissue in the knees and legs (**A**). Note the varying weight distribution and ulceration due to friction. *Schrader*'s stage III lipedema with bulging fat deposits (**B**); Type V Lipedema according to Schrader's classification (**D**); The female patients with type II Lipedema according to Schrader's classification (**F, H, I**). Note to mattress phenomena; Advanced columnar distribution of fatty deposits ("Michelin tire" appearance). Note the patient's bilateral secondary lymphedema **(J);** Characteristic "step-off" seen at the ankles in patients with lipedema. Pantaloon distribution of fat with overlapping at ankles but sparing of feet (cuff sign) (**A, E, J, M, P**). Disproportionate swelling of waist and lower extremities while feet are spared. This creates "cuff sign." Note lipedema of upper arm, but forearm and hand are normal (*Schrader*'s stage IV lipedema) (**G**); A 45-year-old male patient with lipedema whose symptoms began nine years ago. He applied to the outpatient clinic after complicated with lymphedema (**H**); Type II lipedema coexisted with livedo reticularis (**K**); Progression to the distorted leg by mechanical strain of increased adipose tissue in the inner sides of knees and legs (**L**); Columnar type lipedema with secondary lymphedema; the feet are still largely spared (fat-pad sign) (**M**); *Schrader*'s stage III lipedema coexisted with chronic venous disease (I call it "phlebolipedema"-Y.A.) (**N**); Stage II lipedema with irregular skin and nodular fat deposits ("columnar type" according to *Földi & Földi*) (**O**); stage III lipedema with large deforming fat deposits ("lobar type" according to *Földi & Földi*) (**P**); Note to irregular skin and nodular fat deposits.

ID: **328**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

THE IMPORTANCE OF USING ULTRASOUND WHEN INSTALLING A PERMANENT DIALYSIS CATHETER

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OBJECTIVE

In our study, we aimed to evaluate our surgical experience and early complications of permanent dialysis catheters which are inserted by ultrasound for the treatment of hemodialysis patients.

METHODS

In our clinic, a permanent catheter was placed in 113 patients (58 women) in the last year. The mean age of women was 63.4 years while the mean age of men was 62.5 years. retrospectively evaluated the permanent dialysis catheter operation. Permanent dialysis catheters in the operating room 20% and in the intensive care unit 80%; it was inserted only under local anesthesia and under ultrasound guidance. An ultrasound puncture was performed and the direction of the guide was monitored. Permanent dialysis catheters were applied to right and left subclavian vein, right and left jugular vein and right and left femoral vein. Complications developed during the operation and in the first month were evaluated.

RESULTS

All of our patients were diagnosed with chronic renal failure. Interventions were performed in the intensive care unit (80%) under ultrasound guidance. 20% of patients underwent surgery in the operating room. Some of the patients who underwent surgery in the operating room were those who had a permanent catheter in the same session after arteriovenous fistula operation. All of the patients underwent local anesthesia. General anesthesia or sedo analgesia was never used. Venous interventions were left femoral vein in 1 patient, right femoral vein in 3 patients, right jugular vein in 32 patients, left jugular vein in 11 patients, left subclavian vein in 2 patients, and right subclavian vein in 7 patients. None of the patients developed pneumothorax. In 2 patients, wound infection at the puncture site was observed as redness and increased temperature. Permanent catheters were removed in the third month because of suspected catheter infection. The complication rate was less than 1%. There was no mortality due to operation.

CONCLUCIONS

In the clinics ultrasound-guided permanent catheter insertion reduces the morbidity and complication rates with the cooperation of experienced physicians and nurses.

ID: **137**

Topic: **Cardiovascular Surgery » Various Veins**

Presentation Type: **Oral**

NARA SOCKS PROJECT AIMED AT DISSEMINATION OF COMPRESSION THERAPY AND REVIVAL OF LOCAL INDUSTRY

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BACKGROUND: In japan " Monozukuri " stands for the manufacturing industry and its spirituality and culture. It is not only making things but also Japanese traditional technique in pursuit of advanced production by the craftsmen. Koryo-cho with a population of 30 thousand called "Town of Socks" is the largest producer of socks traditionally here in Japan. These manufacturers are highly reputed for their technical skills and capabilities, and supply products to such overseas luxury brands. However, due to the large quantity of imported products to Japan, the production volume has dropped greatly from the peak period. And Japan is a country with many disasters because of island. The Great East Japan Earthquake struck in 2011. The 9.0 magnitude earthquakes caused a huge Tsunami and the death was reported to be over 16,000. It is necessary to enlightenment to prevention of thrombosis at the time of disaster to the people. The incidence of thrombosis at the time of a disaster is reported to be about 8 %. I asked medical institutions, stocking manufacturers, and university students in local for cooperation. As a result, one elastic stocking was completed. The purpose of the activity is enlightenment of prevention of thrombosis and reconstruction of local industry.

METHODS: The research period is from January 2017 to January 2019. There are 80 objects (M34/F46, 34.5±9.3 years old). We investigated changes in the circumference of the leg below the knee and improvements in the blood circulation of the legs before and after using the compression stockings with sonogram and investigated a compression pressure while wearing the stockings (Fig.1).

RESULTS: The results revealed that the circumference of the leg below the knee showed a decreasing tendency after wearing the compression stockings. The peak velocity of the popliteal vein tended to increase 20 min after wearing the compression stockings (Table 1).

CONCLUSION: The compression stockings seemed to be effective for promoting venous return and preventing deep vein thrombosis of the lower limbs in healthy people. I am hoping to reduce the suffering caused by human thrombosis and revive the local industry.

Measurement Item	0 min	20 min	40 min	P -value*
Peak velocity (cm/sec)	3.9 (2.5 – 8.7)	4.8 (3.0 – 9.6)	4.8 (3.0 - 10.4)	0.008
Vein diameter (mm)	8.6 (7.1 – 10.9)	8.48 (6.8 – 11.0)	8.3 (6.5 – 11.0)	< 0.001
Pair	0 vs 20 min	0 vs 40 min	20 min vs 40 min	
Peak velocity (P -value**)	< 0.05	< 0.05	1.000	

Vein diameter (P -value**)		< 0.05	0.063
	< 0.05		

*Friedman's test(Two-tailed)
**Wilcoxon signed-rank test(Two-tailed)

ID: **248**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

MAY-THURNER SYNDROME: BEYOND A VENOUS COMPRESSION

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INTRODUCTION AND PURPOSE: May-Thurner syndrome (MTS), also known as iliac vein compression syndrome, is often the results of compression of the left commune iliac vein by the right commune iliac artery. Although this compression of the vein is ubiquitous finding, it is not the only contributing factor. Because half of the patients with asymptomatic chronic venous disease (CVD) have compression findings. Although the process that makes these lesions symptomatic or asymptomatic is not well understood, MTS may be considered as a permissive condition that makes the person susceptible to thrombosis when a second hit occurs, such as oral contraceptives, malignancy, prolonged immobility, or thrombophilia. Recognition of the role that venous compression syndromes can play in any patient with leg swelling or iliofemoral DVT should not be neglected. In the present study, we investigated conditions that cause second hit and/or contribute to morbidity such as distal DVT, saphenous valvular insufficiency, and lymphedema.

PATIENT AND METHOD: In the last eleven years, 67 patients with MTS were followed and treated. Of the patients, 51 were female (76.1%) and the median age was 35 years (range, 11-63). DUS and CTV were used for diagnosis in all patients (Figure 1). When indicated, it was investigated for hereditary thrombophilia. MTS evaluated according to its clinical patterns, i.e. acute, chronic and post-thrombotic syndrome. Additional anatomic variants that can produce compression at the other venous vasculature were excluded.

RESULTS: In addition to chronic venous disease (CVD) symptoms such as lower extremity edema/weight sensation (86.5%), there were also symptoms of pelvic congestion such as dysuria, dyspareunia and hematuria (22.4%). Varicose veins were located in the extremities (86.5%) and vulvar/suprapubic (40.3%). The patients had deep vein thrombosis (25.4%) and superficial (7.5%). Hereditary thrombophilia was a common condition (32.8%). Other comorbidities were obesity (6%), nutcracker syndrome (22.4%), Klippel-Trénaunay syndrome (4.5%), and others. Eight patients had more than 50% vein compression. None of the patients had documented pulmonary embolism except asymptomatic one.

CONCLUSION: MTS, a progressive disease with long-term disabling complications, is an underestimated cause of DVT and CVD. Syndrome should be suspected in all young and middle-aged patients with left-sided IFDVT or isolated CVD. DVT may be associated not only with mechanical obstruction, but also with genetic factors predisposing to thrombophilia. Therefore, we believe that MTS should be considered not only as venous compression syndrome but also as a de novo syndrome that should be an inherited thrombophilia component.

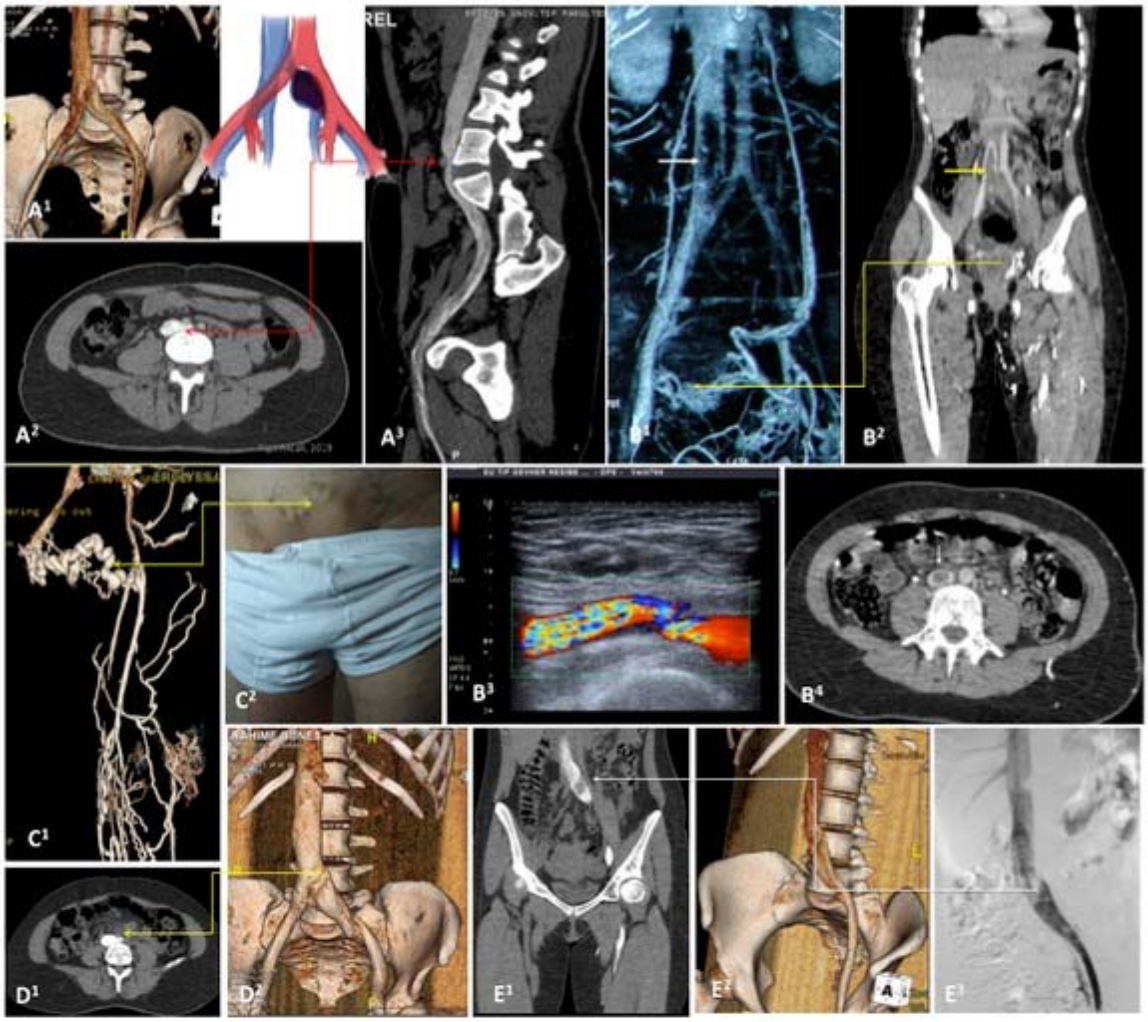

Figure 1. A CT venography shows the compression of the left common iliac vein between the right common iliac artery and lumbar vertebra (**A**); in an "acute" clinical pattern of MTS, a CT venography shows a caval-extending iliofemoral vein thrombosis, diffuse pelvic, suprapubic and femoral collaterals (**B**); in an "PTS" clinical pattern of MTS, a 3DVRCT venography shows suprapubic and femoral collaterals (**C**); and in an "chronic" clinical patterns of MTS, CT and contrast phlebographies show venous compression (D and E). Note the indentation of iliac veins in 3DVR views. *3DVRCT*, 3D volume rendering computed tomography.

ID: **626**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Carotid Artery Disease**

Presentation Type: **Oral**

HYBRID INTERVENTIONS IN TREATMENT OF LOWER LIMB ISCHEMIA AT PATIENTS WITH HIGH RISK OF COMPLICATIONS

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Aim of study: to improve the results of treatment of patients with critical lower limb ischemia (CLLI) with a high risk of complications with hybrid surgical interventions.

Material and methods: From 2017 to 2019, 65 patients (45 men and 20 women) with CLLI aged 66 ± 3.5 years who underwent hybrid interventions were hospitalized in the Department of Vascular Surgery. The average duration of the disease was 27 ± 3.4 months.

In determining the tactics of treatment, an important role has played the number of atherosclerotic lesions and the severity of the concomitant pathology, which significantly limited the performance of full reconstructive interventions on the arteries of the lower extremities. Reconstruction of the femoral artery with balloon dilatation of the iliac arteries was used in 22 (33.8%) patients, reconstruction of the femoral artery with stenting of the iliac arteries in 14 (21.5%). In 15 (23%) patients, reconstruction of the femoral artery was combined with angioplasty of the popliteal arteries.

Results: The effectiveness of hybrid interventions was assessed by regressing ischemia or relieving pain at rest, increasing the distance of painless walking, healing ulcers and increasing of regional systolic pressure and ankle-brachial index (ABI).

After hybrid interventions in the ileo-femoral segment, clinical improvement in the form of relief of pain at rest, granulation of ulcers, and primary healing of wounds after minor amputations in grade IV was achieved in 23 (35.3%) patients. Another 10 (15.4%) patients had satisfactory treatment results after reconstructive surgery in the form of pain relief. High amputations were not required for these patients. Hybrid operations with angioplasty of the lower leg arteries gave satisfactory results in 18 (37.7%) patients, in 1 (1.5%) of them, due to the increase in ischemia, amputation was performed at the hip level. Initially, ABI in these patients was 0.38 ± 0.06, and on the 3-4th day after interventions it increased to 0.74 ± 0.3 ($p < 0.05$).

In the early postoperative period, 1 (1.5%) patient on the background of severe concomitant diseases (coronary heart disease, hypertension, diabetes mellitus) developed myocardial infarction with a fatal outcome. One (1.5%) patient had thrombosis of the reconstruction site, for which he had high amputation. The clinical symptoms of CLLI, in particular, a decrease of lower limb ischemia to degrees IIa-IIb, were stopped in 38 (58.4%) patients. The follow-up period was 14 ± 1.5 months, during which the primary patency remained.

Conclusion: The use of hybrid surgical interventions in patients with CLLI at a high risk of complications is an effective method of surgical treatment of patients with multiple stenotic lesions, which leads to regression of ischemia and increases the salvage of the limb.

ID: **720**

Topic: **Cardiovascular Surgery » Peripheral Arterial Disease**

Presentation Type: **Oral**

EVALUATION OF ISCHEMIA MODIFIED-ALBUMIN CONCENTRATION THAT PRODUCED BY SKELATEL MUSCLE ISCHEMIA AFTER EXERCISE IN PATIENTS WITH PERIPHERAL ARTERY DISEASE

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Objective: It was shown that ischemia modified-albumin was a risk determinant for peripheral artery disease (PAD). Ischemia modified-albumin as a biochemical marker could be used in addition to ankle-brachial index test for the early diagnosis of peripheral artery disease. In this study, it was evaluated that the role of ischemia modified-albumin for early diagnosis, determination of lesion level and follow up of the PAD.

Methods: Forty three patients who had the diagnosis of PAD according to computed tomography angiography were included in study. All patients were classified as aorto-iliac, above the knee and below the knee according to lesion level. It was taken venous blood samples from all patients and measured ankle-brachial index before exercise (treadmill) and at 30th minute after exercise. Ischemia modified-albumin was measured in venous blood sample. The difference of ischemia modified-albumin before and after exercise and relationship between ischemia modified-albumin and ankle-brachial index were evaluated. The corelation between lesion level and ischemia modified-albumin was also evaluated.

Results: Tirdy six (83.7%) of 43 patients were male. Mean age was 63,02±8,64. Smoking was the most frequent risk factor that came across 32 (74.4%) patients. Ischemia modified-albumin level before and after excercise detected 21,99ng/dl and 23,22 ng/dl respectively. Difference between ischemia modified-albumin level of the patients that measured before and after excercise was not statistically significant ($p>0.05$). There was a statistically significance decrease for before and after ankle-brachial index value ($p=0.02$). It was not detected any correlation between ankle-brachial index and ischemia modified-albumin before and after exercise period ($p>0.05$). Reduction of the ischemia modified-albumin level was statistically significant for patients with aorto-iliac lesion according to lesion involvement ($p=0.04$). There was no statistically significance between ischemia modified-albumin measurement and other lesion levels ($p>0.05$).

Conclusions: The prevalent peripheral artery disease is related to bad prognosis. Ischemia related amputations in PAD patients migth be occured if early diagnosis and appropriate medical care do not provided. Although no relationship was detected between skeletal muscle ischemia and ischemia modified-albumin after exercise in our study. We think that ischemia modified-albumin measurement can be determined as an important biomarker for evaluation of PAD prognosis in studies with more patients.

ID: **836**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Oral**

PERCUTANEOUS TREATMENT OF FEMOROPOPLITEAL ARTERY LESIONS; A SINGLE CENTER EXPERIENCE

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Objectives
Drug-eluting balloons (DEB), a treatment modality that allows homogeneous delivery of an antiproliferative drug (paclitaxel) to the arterial vessel wall without leaving prosthetic material behind, have become an effective strategy for treating femoropopliteal artery (FPA) lesions On the basis of this background, we designed a prospective study to evaluate the performance and outcomes of DEBs for femoropopliteal disease, by means of primary patency rate measured at 6 months.
Methods
This monocenter prospective study has been conducted by the principles of the Helsinki Declaration and approved by the local Institutional Review Board and enrolled 23 patients with alone femoropopliteal PAD who were treated with DEBs between September 2019 and December 2019.
Results
37 peripheral artery procedures were searched on the records. a total of 23 patients with alone femoropopliteal PAD (mean age 65 ± 5; 100% male) were identified. The most common risk factors are hypertansion 52,17%, diabetes 26,08%, coronary artery disease21,73%, chronic renal failure 4,3% .Retrograde intervention was performed from the popliteal artery in 86,95% of the patients and antegrade intervention from the femoral artery in 13% of the patients .Intravascular stents were used in 39% of patients. Overall procedural success rate was 91,3% .In 2 patients; the lesion could not be passed. In 1 patient; the drug eluting balloon was surgically removed because it did not deflate sufficiently. 91,3% of the patients were discharged in one day after the procedure.
Conclusions
We concluded that DEBs have benefit in femoro-popliteal region at short term and endovascular procedure is an atractive alternative to conventional surgery.


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Oral Presentation Session

Cardiac Implantable Devices: Complications and Challenging Applications

Date: 31.10.2020 Time: 15:45 - 16:45 Hall: 4

ID: **163**

Topic: **Cardiology » Cardiac pacing for bradyarrhythmias**

Presentation Type: **Oral**

A NEW TECHNIQUE IN COMPLEX LEAD EXTRACTION: WRAP-AROUND THE LEAD

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Abstract

Objective: In recent years, cardiac implantable electronic devices complications including infection, dysfunction or venous stenosis increase the need lead extraction procedures of implanted cardiac devices. A new approach has been developed to extract the leads that broken or impossible to move otherwise. We aimed to present our experience about transvenous lead extraction in complex clinical situations.
Methods and results

Thirty two patients (mean age 62±15.7; male 25, female 7) underwent complex transvenous lead extraction procedures. Indications for extraction were based on the recommendations of the Heart Rhythm Society. Indications for lead removal included cardiac device infection in 13 (40.6%) cases, lead malfunction in the 14 (43.7%) cases, upgrade to cardiac resynchronization therapy-defibrillator (CRT-D) in the 3 cases (9.3 %), venous stenosis in one patient (3.1%) and penetration of right ventricular lead to pericardium in the remaining 1 case. Implanted device was a pacemaker in 12 (37.5 %), ICD in 13 (40.6 %) and CRT-D in 7 (21.8) of patients. Total 57 leads were extracted from the patients, 22 (38.5%) were atrial, 12 (21.0 %) were ventricular, 18 (31.5 %) were dual coil defibrillator and 5 (8.7%) was coronary sinus lead. In 3 cases Evolution® mechanical lead extraction system was used. The remaining procedures were performed with TightRailTM lead extraction system. Complete procedural success was achieved in all patients (56/57 leads) and overall clinical success was 100%. Snare with femoral approach was used to remove retained lead components in 8 (25.0 %) of patients. In 7 of these patients, Wrap-around with ablation catheter technique was used.

Conclusion

Our data show that mechanical lead extraction systems are highly effective for successful extraction of all types of implanted cardiac electronic device leads in complex clinical situations. In case of broken leads and leads that impossible to move otherwise, Wrap-around technique can be considered.

ID: **411**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

INFECTIVE ENDOCARDITIS ON IMPLANTABLE CARDIOVERTER DEFIBRILLATOR (ICD) LEADS: 03 PATIENTS CASES REPORTS

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Introduction: Cardiac pacemakers Infections severely compromises the prognosis of patients with these foreign materials. It most often affects intracardiac leads, but also the cardiac valves, in almost half of the cases. It would affect 1% of patients. The average age is over 60; prolonged or intermittent fever present in 90% of patients; signs of ICD pocket infection reported in 45% of cases; pulmonary manifestations are noted in 20-40% of cases. Vegetations are detected in 90% of cases in echocardiography. Staphylococci are responsible for 80% of infections. Antibiotic treatment including a bactericidal dual therapy, after the bacteriological samples within a period which takes into account the infection presentation modalities, the patient and the diagnosis certainty. All materials should be removed systematically whenever possible. Antibiotic prophylaxis is recommended when placing the endovascular material, and probably also during each manipulation.

Methods: We report 03 cases of infectious endocarditis on implantable cardioverter defibrillator. operated between August 2011 and August 2017. This study covered a period of 1 month postoperatively. This series, admittedly limited in number, illustrates the clinical diversity, as well as the diagnostic and therapeutic difficulties encountered in daily practice.

Results: The average age is 26 years old, predominantly male. Fever was present in all cases. Association with other localizations: pulmonary in the tow patients. angiography scan presence of a massive pulmonary embolisation. Negative blood culture in 3 cases. The function and volume of the Left ventricul were correct in all cases with the presence of vegetation on the ventricular and atrial stimulation leads. One patient had pocket infection, the two other patients hadn't cutaneous infarction. we used double probabilistic antibiotic therapy. They are all operated under circulatory assist. The technique was ablation of vegetations, leads sent to bacteriology, verification of the pulmonary route and temporary epicardial stimulation with continuation of triple antibiotic therapy for 40 days. Post-operative echocardiograms were normal. Intra-hospital mortality was zero.

Conclusion: Serious affection. The diagnosis and treatment of ICD infections are insured with a multidisciplinary team. Strict adherence to antibiotic prophylaxis in ICD implantation should reduce the incidence of this infection, which has high morbidity and mortality

ID: **341**

Topic: **Cardiology » Arrhythmias and antiarrhythmic therapy**

Presentation Type: **Oral**

THE RELATIONSHIP BETWEEN INAPPROPRIATE ICD DISCHARGE AND VITAMIN D LEVEL

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Objective:

Inappropriate shocks are important in patients with an implantable cardioverter-defibrillator (ICD) and are associated with increased long-term mortality. It is known that vitamin D deficiency is associated with arrhythmia. The aim of this study was to investigate the relationship between inappropriate high-energy discharges of implantable cardioverter-defibrillators and vit d level.

Methods:

A total of 28 patients who were admitted to our clinic with at least one cardioverter-defibrillator discharge and who were found to have inappropriate shock were included in the study. 28 patients with no history of shock were included in the study as control group. In this study, vitamin D level, laboratory parameters and demographic characteristics of the groups were compared.

Results:

There was no significant difference between the groups in terms of age, gender, diabetes mellitus, smoking history, hypertension, body mass index and ejection fraction. Vitamin d levels were found to be lower in patients with inappropriate discharges than control group (17.4 ± 9.4 vs 22.6 ± 8.6 respectively p = 0.043).

Conclusion:

The level of vitamin D is considered a determinant for inappropriate ICD discharges. In our study, it was shown that inappropriate discharges were associated with vitamin D levels in ICD patients.

ID: **324**

Topic: **Cardiology » Arrhythmias and antiarrhythmic therapy**

Presentation Type: **Oral**

TP-TE INTERVAL AND TP-TE/QT RATIO MAY BE PREDICTIVE OF IDIOPATHIC VENTRICULAR TACHYCARDIA IN PATIENTS WITH FREQUENT OUTFLOW TRACT PREMATURE VENTRICULAR COMPLEXES

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Background: Premature ventricular complexes (PVC) in structurally normal hearts commonly arise from right ventricular outflow tract (RVOT) and left ventricular outflow tract (LVOT) including aortic valve cusps, aortomitral continuity and epicardial summit area. Outflow tract ectopy can manifest itself as nonsustained and sustained monomorphic ventricular tachycardia (VT). The aim of present study is to evaluate the predictive value of QTc dispersion, Tp-Te interval and Tp-Te/QT ratio for idiopathic monomorphic outflow tract VT occurrence in patients with frequent idiopathic outflow tract PVCs.

Methods: A total of 180 patients (49.2 ± 13.6 years, 74 male) who had undergone outflow tract PVC ablation between 01.01.2015 and 01.11.2018 constituted our study population. Patients with isolated outflow tract PVC without any VT recording on Holter recordings and without any inducible VT at EPS were classified as isolated PVC group. Patients with any episode of VT that has the same morphology with outflow tract PVC were classified as nonsustained or sustained VT groups based on the duration of VT episode. QTc dispersion, Tp-Te and Tp-Te/QT ratio values were calculated and compared between groups.

Results: There were 116 patients with isolated PVC, 35 patients with nonsustained VT and 29 patients with sustained VT. QTc dispersion, Tp-Te and Tp-Te/QT ratio values were significantly lower in patients with isolated PVC compared to patients with nonsustained or sustained VT episodes (Table-1). Tpeak to Tend interval greater than 110.5 msec on derivation V6 predicted VT occurrence with 93.8% sensitivity and 82.8% specificity. Tpeak to Tend/QT interval greater than 0.27 on derivation V6 predicted VT occurrence with 93.8% sensitivity and 0.81% specificity (Figure 1)

Table 1: Comparison of QTc dispersion, Tp-Te and Tp-Te/QT ratio between isolated PVC, sustained VT and nonsustained VT groups

Parameter	Isolated PVC (n:116)	Nonsustained VT (n: 35)	Sustained VT (n: 29)	p value
QTcmax (msec) *	458.5 ± 33.2	470.9 ± 24.1	478.5 ± 28.0	0.003
QTcmin (msec)	427.4 ± 29.4	428.4 ± 25.5	427.8 ± 37.7	0.98
QTcdisp (msec)**	31.2 ± 15.8	42.6 ± 20.6	50.7 ± 29.3	< 0.001
V4 Tp-Te***	93.1 ± 17.4	123.4 ± 12.9	122.2±13.6	< 0.001
V5 Tp-Te***	93.2 ± 17.8	122.5 ± 13.3	124.6 ± 10.7	< 0.001
V6 Tp-Te***	93.4 ± 17.6	124.5 ± 12.2	124.4 ± 10.4	< 0.001
V4 Tp-Te/QT***	0.23 ± 0.04	0.30 ± 0.03	0.31 ± 0.04	< 0.001

V5 Tp-Te/QT***	0.24 ± 0.04	0.30 ± 0.03	0.31 ± 0.04	< 0.001
V6 Tp-Te/QT***	0.24 ± 0.04	0.31 ± 0.03	0.31 ± 0.03	< 0.001

QTC: Corrected QT interval, QTcdisp: Corrected QT interval dispersion, PVC: Premature ventricular complex, VT: Ventricular tachycardia

* p = 0.02, isolated PVC group vs nonsustained VT group; p = 0.002, isolated PVC group vs sustained VT group; p: NS, nonsustained VT group vs sustained VT group

** p = 0.04 , isolated PVC group vs nonsustained VT group; p = 0.002 isolated PVC group vs sustained VT group; p: NS, nonsustained VT group vs sustained VT group

***p: <0.001 isolated PVC group vs nonsustained VT group and sustained VT group; p: NS, nonsustained VT group vs sustained VT group

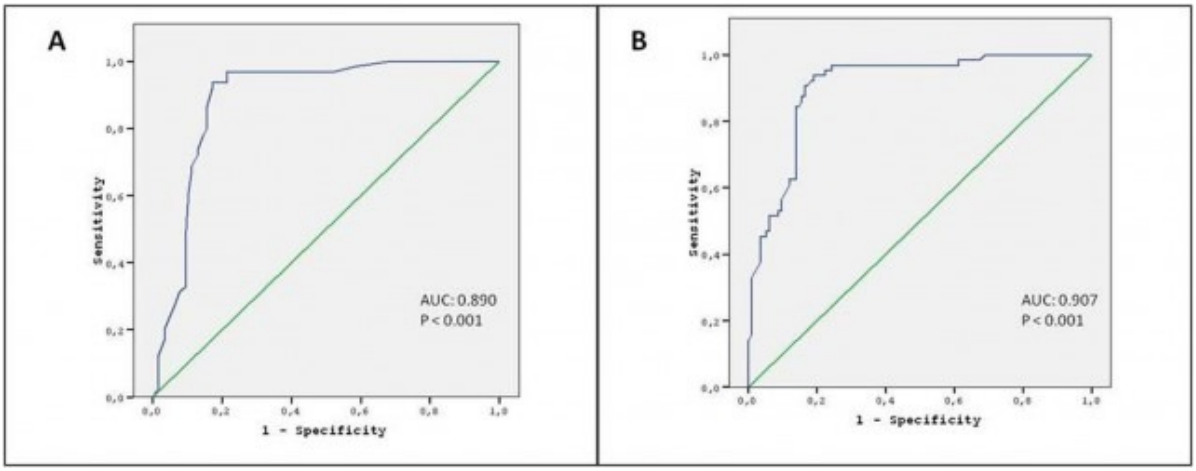

Figure 1: Receiver operating characteristic (ROC) curve for Tpeak to Tend interval on derivation V6 (A) and Tpeak to Tend interval/QT ratio on derivation V6 (B) in predicting the ventricular tachycardia occurrence in the study population

Conclusion: Tp-Te interval and Tp-Te/Qt ratio on derivation V6 may aid in prediction of presence of outflow tract VT in clinical practice.

ID: **253**

Topic: **Cardiology » Electrocardiography and Non invasive electrocardiology**

Presentation Type: **Oral**

CAN TP-TE INTERVAL AND QRS-T ANGLE PREDICT FREQUENCY OF VENTRICULAR PREMATURE CONTRACTIONS?

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Objective: PVC is generally known as benign in the absence of structural heart disease however, PVC induces deterioration of the left ventricular systolic functions in some cases. Also, frequent PVC might worsen the existing cardiomyopathy connected with other cardiac diseases. There is no consensus in the literature about the cut off amount of PVC have a high risk for cardiomyopathy or ventricular arrhythmias. In our study we aimed to evaluate the association of Tp-Te interval, Tp-Te/QT ratio and QRS-T angle with PVC frequency in patients with PVC burden.

Methods: Eighty subjects admitted to our cardiology department and underwent to 24 hour ECG Holter monitoring were included. Patients with low ejection fraction, structural heart disease, moderate to severe degree heart valve disease, coronary artery disease with the sign of ischemia, thyroid disorders, anemia were excluded from the study Patients were divided into two groups; group 1 defined as frequent PVC≥1% in 24 hour Holter monitoring, group 2 defined as rare PVC<1% in 24 hour Holter monitoring.

Results: Tp-Te interval and Tp-Te/QT interval are statistically significantly prolonged in patients with frequent PVC than control group (85.3 ± 13.9 vs 65.7 ± 11.9, p<0.001; 0.19 ± 0.03 vs 0.15 ± 0.02, p<0.001; respectively). QRS-T angle was statistically significantly abnormal in the group with PVC burden (p=0.024). Multivariate analysis of ECG paramaeters showed that Tp-Te interval and QRS-T angle is the independent predictors of excessive amount of PVC in 24 hour ECG Holter monitoring (p<0.001, p=0.04; respectively).
Conclusion: Increased Tp-Te interval and widened QRS-T angle are associated with ventricular arrhytmias and might be used for the prediction of PVC burden in patients with PVC in ECG in the absence of 24 hour Holter monitoring.

Table 1. Comparison of the ECG parameters between two groups

Parameters	Group 1 (PVC>1%) (n=37)	Group 2 (PVC≤1%) (n=43)	P value
HR (beat/min)	75.5 ± 15.3	79.9 ± 15.8	0.213
Tp-Te interval	86.6 ± 13.3	65.4 ± 12.8	<0.001
QT interval	387 ± 29.3	375.4 ± 32.8	0.098
QTc interval	428.5 ± 29.2	429.1 ± 23.5	0.928
Tp-Te/QT	0.22 ± 0.04	0.15 ± 0.03	<0.001
Tp-Te/QTc	0.2 ± 0.03	0.15 ± 0.03	<0.001
Abnormal QRS T angle (%)	11 (29.7)	4 (9.3)	0.024

ECG, electrocardiography; PVC, premature ventricular contraction; HR, heart rate

ID: **464**

Topic: **Cardiology » Cardiac Resynchronization Therapy**

Presentation Type: **Oral**

SUCCESSFULL RE-IMPLANTATION OF LEFT VENTRICULAR LEAD BY CORONARY VENOUS STENTING

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Cardiac resynchronization therapy (CRT) has beneficial effects on mortality and morbidity in certain heart failure patients however nearly half of patients with CRT are non-responders. We present a case of percutaneous coronary sinus (CS) intervention to facilitate left ventricular lead implantation in a patient with previous CRT.
Case Report

A 51- year -old woman with non-ischemic cardiomyopathy was referred to heart failure clinic. She had heart failure symptoms refractory to optimal medical treatment. CRT-D was implanted in 2015 but left ventricular lead has been nonfunctional due to high pacing thresholds and diaphragm stimulation. The electrocardiogram showed left bundle branch block and QRS duration of 160 ms. Transthoracic echocardiography revealed ejection fraction of 20 % compatible with severe systolic dysfunction. Patient was taken to catheterization laboratory with aim of lead revision. Simple traction did not help to extract nonfunctional lead which was located in anterolateral branch, so it was planned to implant a new CS lead in the posterolateral branch. A CS angiography demonstrated a stenosis in posterolateral branch. New left ventricular lead was not able to pass through the lesion. It was decided to perform CS angioplasty to facilitate delivery of lead. 2.0 X 20 low profile coronary balloon catheter was inflated to 8 atmospheres but repeated balloon inflations did not ease delivery of lead. CS stenting was needed ultimately. 2.75 x 28 mm drug eluting stent was implanted at 10 atmospheres. Left ventricular lead was passed through the stent into target branch. Postprocedural ECG showed narrowing of QRS complexes. Patient was discharged with dual antiplatelet therapy. Improved functional status was noted at first month follow up.

Discussion

Ischemic heart failure, non LBBB morphology and apical lead position are predictors of non-response to CRT. Non-responders have increased morbidity and mortality compared to responders .. Failure to cannulate CS, absence of suitable coronary sinus branch and acceptable threshold, lead instability and phrenic nerve stimulation are main factors for unsuccessful CRT implantation. LV lead implantation failure rate in the literature is about 5 % in lead revisions. CS intervention is a safe and effective technique which can be performed in case of venous stenosis, coronary sinus valves, and acute lead instability. CS rupture and dissection are rare complications of intervention. Although it was shown that implanting an additional CS lead has no additional beneficial effect on non-responders and has a 20% complication rate, our patient had clinical and electrocardiographic improvement.

Oral Presentation Session

Surgical Approach to Peripheral Venous Disease

Date: 31.10.2020 Time: 16:15 - 17:15 Hall: 5

ID: **314**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

LATERAL MARGINAL VEINS: A NEW PATHOPHYSIOLOGICAL PERSPECTIVE

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BACKGROUND AND OBJECTIVE: Persistent embryonic veins (PEVs), characterized by the absence of the valve and smooth muscle in media layer, appear as embryonic veins (EV) and lateral marginal veins (MV), depending on whether the deep venous system (DVS) is hypoplasia or agenesis or intact and functional. MV is a truncular venous malformation and is associated with an increased risk of VTE. This clinicopathological process may be accelerated not only by embryopathogenetic causes but also by venous compressions of the abdominal arterial vasculature.

PATIENTS AND METHOD: In the last 16 years, 62 patients with PEV were followed and treated in our department. The female to male ratio was 1.7 / 1.4.

RESULTS: The incidence of PEV in all Klippel-Trénaunay syndrome types (n = 151) and CLOVES syndrome (n = 6) was 39.5%. Persistent embryonic veins were MV (82.3%) and EV (17.7%). Two of them bilaterally, the involved limb ratio was right / left = 1.4 / 1.6. Deep venous system was patent in 69.3% of patients. The rest was agenesic or hypoplastic (30.7%). According to Weber classification, PEVs were Type I (17.7%), II (11.3%), III (6.4%), IV (12.9%) and V (30.6%); others remained unrated. Fifteen (25.9%) patients with KTS had May-Thurner syndrome (MTS) with different compression measures and two had anterior nutcracker syndrome (ANS) (3.4%) (Figure 1). The median age in patients with concomitant MTS and ANS was 12 (range, 2 to 27 years) as compared to the median age of 16.5 years (range, 6 months to 44) in all patients. Venous compression syndromes (VCSs), i.e., MTS and NS, were more common in female patients (72.3%). The rate of LLD in patients with VCS was 72.2% as compared with 29.5% of those without. Namely, LLD were approximately 2.5 times more common in patients with CVS compared to those without CVS. The genital anomalies were 2.7 times more common in patients with CVS compared to those without CVS.

CONCLUSION: Avalvular MV is one of the most important components of KTS, but it is seen as a varicose vein with similar risks and complications. Venous congestion and varicose veins can be developed due to 'stenotic barriers' against blood flowing through marginal veins with a weak wall structure and valveless. Therefore, it is suggested that concomitant venous compression syndromes such as MTS and ANS may increase the disabling and fatal complications caused by marginal vein such as angio-osteodystrophy and VTE.

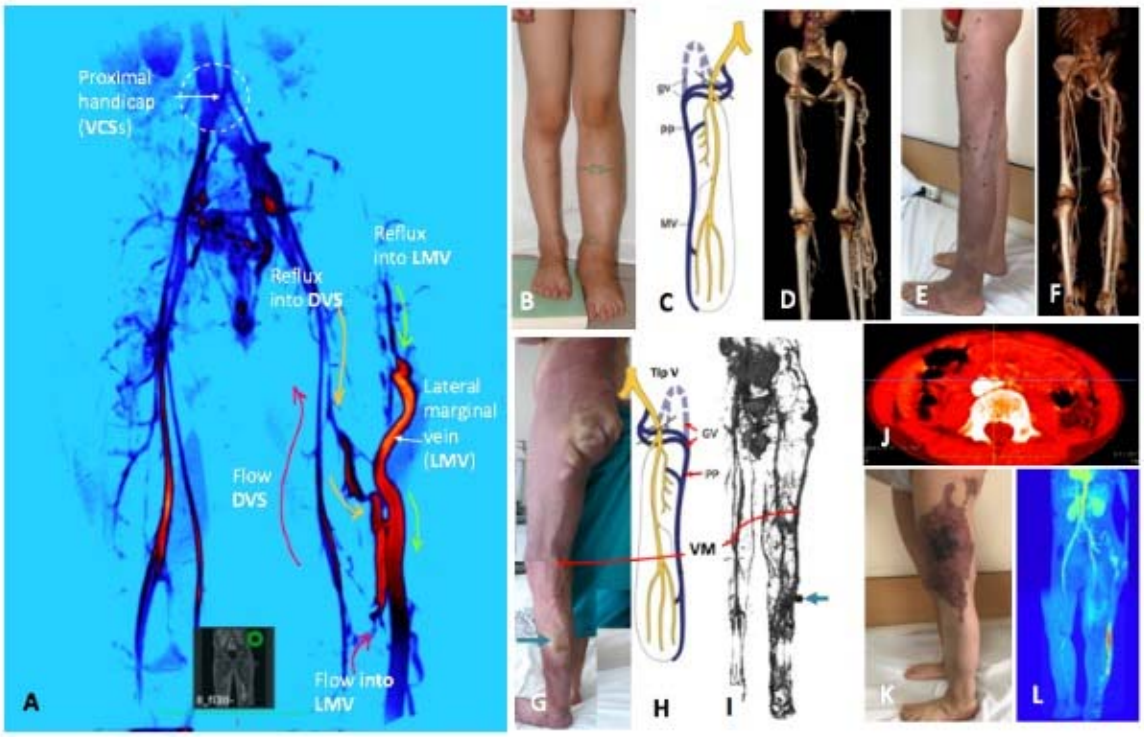

Figure 1. Blood flow in the deep venous system slows down, especially in the presence of hypoplastic vasculature, due to stenotic "barriers" caused by venous compression syndromes such as MTS and/or nutcracker syndrome, and venous blood flows backward more easily in the weakened LMV because it is avalvular and there is no smooth muscle in the media layer. Stasis, secondary varicose veins, thrombosis and finally pulmonary embolism may develop due to this increased back-flow in the lateral marginal veins (**A**); a Type V LMV according to Weber classification in the 3DVRCT of a female patient with vascular-bone syndrome and limb length difference, which are the late complications of the MV, (**B-D**); a 3DVRCT shows a male KTS patient's Weber Type IV MV (**E, F**); a male KTS patient with Weber Type V showing excessive dilatation and gluteal tortuosity (**G-I**); a 3DMPR of a female KTS patient demonstrates Weber Type V MV and MTS (**J- L**).

LMV/MV, lateral marginal vein; DVS, deep venous system; MTS, May-Thurner syndrome; KTS, Klippel-Trénaunay syndrome; 3DVRCT, 3D volume rendering computed tomography; 3DMPR, 3D multi-planar reconstruction.

ID: **111**

Topic: **Cardiovascular Surgery » Various Veins**

Presentation Type: **Oral**

MIDTERM RESULTS OF PERCUTANEOUS EXTERNAL VALVULOPLASTY IN PATIENTS WITH ISOLATED GREAT SAPHENOUS VEIN INSUFFICIENCY

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Objective: Lower-extremity venous insufficiency is one of the most common chronic disorders of the population. Drug therapy and compression stockings are used to relieve symptoms in early phases, while surgery is applied in advanced cases. Different surgical procedures have been described, including great saphenous vein (GSV) ligation and stripping, GSV radiofrequency ablation, and GSV endovenous laser ablation. Reconstruction procedures such as repair or transplantation of incompetent valves of deep veins, direct saphenofemoral junction (SFJ) plication, and external vein valve wrapping did not gain large popularity among physicians and are less applied.

External valvuloplasty (EVP) is a reconstructive surgical modality preferred in cases with dilation and reflux of the GSV due to SFJ or proximal GSV valve incompetency. Percutaneous external compression valvuloplasty (RD Global-Invamed, Ankara, Turkey) is a new, minimally invasive procedure to restore venous valve competence by reducing the vein's circumference. We aimed to report our midterm results and the the efficacy of this technique.

Methods: From January 2019 to July 2019, there were 28 patients with chronic venous disease due to saphenofemoral insufficiency enrolled in this study. All patients were preoperatively evaluated with color duplex scanning, and isolated valve insufficiency at the SFJ was the main enrolment criterion for EVP. Patients that had concomitant deep venous insufficiency or extensive varicose veins were not included. Mean Venous Clinical Severity Score (VCSS) at baseline was 5.2 ± 1.2.

Color duplex scanning was performed on all the patients at the first postoperative day, first and third postoperative month. Absence of reflux, vein patency, functionality of the valve, and deep or superficial vein thrombosis were the primary outcomes.

Under local anesthesia, a specifically designed nonabsorbable biopolymer was delivered with guidance of duplex ultrasound around the valve of the saphenofemoral junction percutaneously.

Results: After the procedure, venous reflux was completely abolished in 24 patients (85%). Average VCSS improved to 2.8, 2.4, and 2.3 at postoperative day 1, month 1 and month 3, respectively. Average duration of the procedure was 12 ± 2 minutes. No complications occurred. Patients were discharged on the same day. In a follow-up period of 3 months, clinical status was documented by color duplex ultrasound by the same radiologist. Three patients (10.7%) had mild reflux and one (3.5%) had moderate reflux.

Conclusion: Percutaneous external compression therapy procedure is a new and efficient method in cases with dilation and reflux of the GSV due to SFJ or proximal GSV valve incompetency. This is a preliminary study. Further studies with a larger population of patients and longer follow-up are warranted.

ID: **298**

Topic: **Cardiovascular Surgery » Various Veins**

Presentation Type: **Oral**

DIFFERENT MANAGEMENT OPTIONS FOR PRIMARY VARICOSE VEINS IN FEMALES: A PROSPECTIVE STUDY

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Background: The aim of this study was to evaluate the long term follow up results of different management modalities in treating primary uncomplicated lower limb female varicosities.

Methods: A prospective study took place within a three-year period from June 2010 until July 2012. Patients were divided into three groups group I (n=35) included those who underwent open surgical treatment. Group II (n=25) included those who subjected to ultrasound-guided foam sclerotherapy (USGFS). While group III (n=20) included those, who treated with endovenous laser therapy (EVLT). The patients were followed up for six years.

Results: All selected patients were female aged from 35 to 62 years with a mean of 47 ± 7.6 years. Thirty-five patients (43.75%) were treated surgically by saphenofemoral junction disconnection (SFJD), and great saphenous vein (GSV) stripping; 25 patients (31.25%) with USGFS and the remaining 20 patients (25%) were treated with EVLT. A significant success rate for GSV ablation for the EVLT treated group over the USGFS treated patients (P = 0.023). There is no significant difference between the surgically treated group and those group treated with EVLT (P = 0.85). Recurrence was observed following long-term follow-up after 6 years in 8.5% in group I, 36% in group II, and 10% in group III respectively. Venous clinical severity score (VCSS) and health-related quality of life score (HRQOLS) improved significantly in all treated groups.

Conclusions: Long-term follow-up of patients with primary superficial varicosities among females is mandatory to elucidate the postoperative recurrence, especially those who underwent USGF sclerotherapy. In addition to the observation of the development of newly formed varicosities in susceptible individuals which might develop later following long-term follow-up.

ID: **493**

Topic: **Cardiovascular Surgery » Various Veins**

Presentation Type: **Oral**

THICK LEGS MAY NOT BE AS INNOCUOUS AS IT APPEARS: RARE AND DANGEROUS COMPLICATIONS OF LYMPHEDEMA

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OBJECTIVE: In patients with untreated or neglected lymphedema (LE), rare but dangerous complications such as elephantiasis nostras verrucose or Stewart-Treves syndrome (STS) may develop in the late period. Elephantiasis nostras verrucose (ENV) is a rare, serious form of chronic peripheral LE that causes progressive cutaneous changes comprising dermal woody fibrosis, hyperkeratotic, and verrucous and papillomatous lesions. The STS is a rare, deadly entity, which is defined as cutaneous angiosarcoma arising in the setting of long--standing chronic LE. We presented our patients who had these complications to draw attention to their seriousness.

METHODS: In last 15 years, nine patients (female=7, male=3) with ENV (88.9%) and STS (11.1%) reviewed retrospectively. They accounted for 1.7% of the patients with LE managed during the same period. The patients' mean age was 51 (range, 26 to 84).

RESULTS: All patients except one with STS were obese: Class II (BMI=35.0-39.9)=3 patients; Class III (BMI≥40.0)=5 patients. All patients except one with STS were associated with a history of lower extremity cellulitis and/or lymphangitis at admission. Three patients had a lipedema complicated by lymphedema (Figure 1A). Concomitant chronic venous insufficiency (CVI) was identified in five ENV patients (62.5%). Physical examination revealed several confluent, partially hyperkeratotic and verrucous cobblestone-like papules and nodules on both popliteal areas. A 26-year-old female patient with a history of right sural surgery was diagnosed with primary lymphedema (truncular lymphatic malformation) at the outpatient clinic. However, because the patient lived in another city, the communication of the diagnostic and therapeutic process was lost. Years later, it was founded out that the patient managed by different treatment modalities (venolymphatic anastomosis etc.) and underwent amputation for lymphangiosarcoma (Figure 1B).

CONCLUSION: This study suggests the association among ENV, obesity, and soft tissue infection. In the origin of ENV, CVI may be a thankless risk factor. Prompt diagnosis and management can reduce the morbidity and mortality of ENV. Treatment options are limited to compression, acitretin, topical ointments, and surgery. The prognosis of STS, which is lymphangiosarcomas that result from congenital and other causes of chronic secondary lymphedema, even with wide surgical excision and subsequent radiotherapy, is poor.

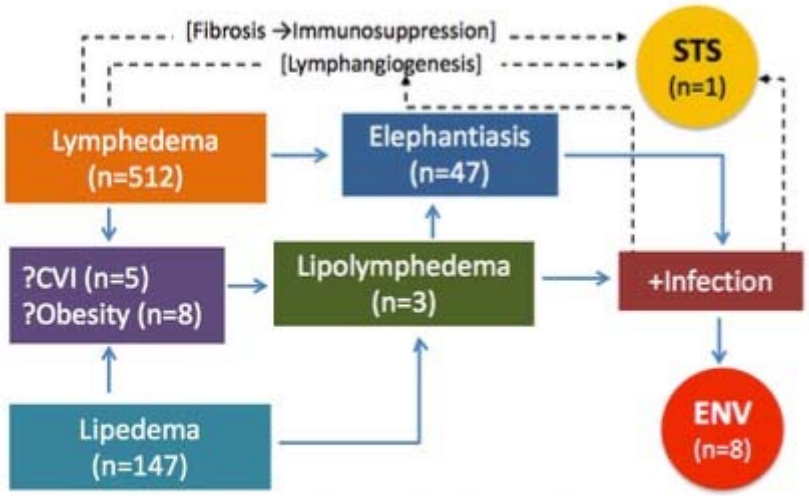

Figure 1A. Pathogenetic data. STS, Stewart-Treves syndrome; CVI, chronic venous insufficiency; ENV, elephantiasis nostras verrucosa.

Figure 1B. Elephantiasis nostras verrucosa (EVN) on the bilateral lower legs (**A**), the right foot (**B**), and the left thigh (**C**); A 70-year-old EVN woman presenting to hospital malodorous, verrucous, cobblestone-like papulonodules and plaques bilaterally *over her lower legs*. The surrounding area was erythematous, and warm to the touch (**D**); A 63-year-old female patient with lymphedema complicated by EVN in her left foot (**E**); A computed tomography of a 59-year-old male patient with coexisting peripheral arterial disease shows diffuse edematous subcutaneous tissue and atrophic muscle plans (**F**); The same patient's lymphoscintigraphy shows diffuse dermal backflow throughout the right lower extremity, with no involvement of the main lymphatic canal and regional lymph nodes (**G**); The clinical and MRI images of a 26-year-old female patient with lymphangiosarcoma (**H, I**). She underwent sub-knee amputation as the final therapeutic management.

ID: **791**

Topic: **Cardiovascular Surgery » Abdominal Aortic Aneurism**

Presentation Type: **Oral**

MYCOTIC SUPERIOR MESENTERIC ANEURYSM AFTER GROUP B STREPTOCOCCUS BACTERAEMIA

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Background

Visceral artery aneurysms are a rare finding with reported incidences of 0.01% to 0.2% of the population [1]. Superior mesenteric artery (SMA) aneurysms constitute about 5% of visceral aneurysms [2]. They are associated with a high rupture risk and high mortality risk [2]. Due to the rare nature of SMA aneurysm there are no guidelines for management of such cases. There are descriptions of both open and endovascular repair in the literature.

Method

A 79 year old woman presented to the Emergency Department with a four day history of abdominal pain associated with nausea and poor appetite. Three months prior to her presentation she had an episode of Group B Streptococcus bacteraemia with native mitral valve endocarditis, bilateral endogenous endopathalmitis and superior mesenteric thrombus and a splenic infarction. Examination revealed vital signs within normal limits and a soft abdomen with tenderness in the epigastric region on palpation. Computer tomography (CT) scan found that her previously occluded SMA had recanalised and a 25x25x60mm SMA aneurysm with a thick and irregular rim had developed. Intravenous piperacillin/tazobactam was commenced given her history of endocarditis and decision was made to perform an exploration of the SMA aneurysm. Pulsatility of the SMA aneurysm ceased on clamping proximal to the aneurysm and bowel remained well perfused. With input from general surgery the decision was made to ligate the SMA proximal to the aneurysm. The aneurysm was not ligated distally as the SMA aneurysm involved multiple branches.

Results

Early post-operative recovery was uneventful. On post-operative day 5 the patient developed respiratory distress and had a cardiac arrest with successful resuscitation. On CT scan she was found to have bilateral lower lobe pneumonia. Due to ongoing poor clinical state decision was made with her family and intensive care team to cease active treatment and she passed away on post-operative day six.

Conclusion

This patient has a mycotic SMA aneurysm most likely secondary to infected thrombus lodged into the SMA during previous Group B Streptococcus bacteraemia with associated native mitral valve endocarditis.

References

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ID: **792**

Topic: **Cardiovascular Surgery » Abdominal Aortic Aneurism**

Presentation Type: **Oral**

AORTO-ILIAC ARTERY ANEURYSM WITH CONCURRENT ENTERIC AND VESICULAR FISTULISATION

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INTRODUCTION

Iliac artery aneurysms (IAA) are associated frequently with abdominal aortic (AAA) and other degenerative large-vessel aneurysms. Risk factors include male gender, causcasian race, a history of smoking, and hypertension. The natural history of IAAs is continuous expansion and clinical manifestations may occur due to compression and erosion of surrounding structures. Aneurysms within the aortoiliac tree are the most common risk factor for aortoenteric fistula (AEF), a potentially life-threatening entity defined by an abnormal communication between the aortoiliac tree and gastrointestinal tract.

METHODS

A frail 80-year-old male presented to our emergency department with a three-day history of severe lower abdominal pain associated with per- rectal bleeding. He was a vague historian in the context of a known background of alcohol excessalcoholism, cirrhosis and recurrent falls resulting in traumatic subdural haematomas. His background included a history of peripheral artery and aneurysmal disease. Six years earlier he had undergone revascularisation of his right leg via a femoral – anterior tibial bypass, for treatment of a thrombosed popliteal aneurysm.

On examination, the patient was unwell. He was febrile (38.60C), tachycardic and tachypnoeic. He was normotensive without the requirement of vasopressors. His abdomen was distended and signs of peritonism were elicited in the suprapubic region. Per-rectal examination revealed dried blood at the anal verge and a benign prostate . No haemorrhoids or fissures were identified. He had palpable femoral pulses bilaterally, a palpable popliteal pulse on the left side, and a patent bypass graft on the right side. His pedal pulses were absent. Rose-coloured urine was noted draining from his urethral catheter. He was anaemic (haemoglobin 88 g/L) with an elevated white cell count (15.1 x 109). His serum creatinine was 85umol/L. Blood cultures were positive for Escherichia Coli.

RESULTS

A triple-phase computed tomography scan was performed of the abdomen and pelvis. This revealed a large peripherally calcified saccular aneurysm extending from the abdominal aorta (58 mm maximal diameter) to the right common iliac artery (81 mm maximal diameter) (Fig. 1). In relation to the iliac aneurysm, pockets of gas were found intraluminally, intramurally and extramurally (Fig. 1). Contrast was seen percolating from the aneurysm into the terminal ileum, in keeping with fistulisation (Fig. 1). There was was erosion of the aneurysm into the wall of the adjacent catheterised bladder, without conspicuous passage of contrast (Fig. 2), and associated right sided hydroureteronephrosis with enhancement of the urothelium.

The patient was reviewed by the attending vascular surgeon. Due to the patient's clinical status, advanced comorbidities and the complexity of his pathology, a decision for non-operative management and palliation was made. The patient passed away peacefully the next day.

CONCLUSION

Primary AEFs, arising de novo between the aorta and GIT, have an incidence of less than 1 percent. Fistulisation of the aortoiliac tree into the GIT and other organs concurrently is extremely rare. Clinical examination is unreliable in diagnosis. Triple-phase CT arteriography is the first-line imaging modality for evaluating suspected bleeding due to AEF. We present a rare case of a common iliac artery aneurysm with concurrent fistulisation into the colon and bladder.

ID: **809**

Topic: **Cardiovascular Surgery » Hybrid Cardiovascular Surgery**

Presentation Type: **Oral**

A HYBRID APPROACH TO ACUTE AORTIC GRAFT OCCLUSION

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Background

Acute aortic occlusion is a rare pathology associated with a high risk of mortality and morbidity [1,2]. The literature on acute aortic graft occlusion presentation and management is limited.
A 68-year-old male was working on his roof in hot weather when he experienced sudden an onset of bilateral lower limb paraesthesia. Leading up to presentation he did not experience rest pain or claudication. His significant medical history included previous open abdominal aortic aneurysm (AAA) repair.
His open AAA repair had been complex due to significantly diseased bilateral iliac arteries. A bifurcated 14x7mm Dacron graft had been used to perform the AAA repair. The right limb anastomosis was end-to-end onto the right common iliac artery and the left limb anastomosis was end-to-end onto the left external iliac artery (EIA). A trifurcate anastomosis was created on the left by anastomosing a 7mm graft end-to-side to the left limb of the aortic graft and end-to-end to the proximal left internal iliac artery. Due to poor pulses at the end of the AAA repair, a jump graft was anastomosed end-to-side to the right limb of the aortic graft to the right common femoral artery (CFA) via an end-to-side anastomosis.
On examination, the patient had bilaterally cool and pale lower limbs. There were no palpable lower limb pulses bilaterally and the patient met the criteria for Rutherford IIa for acute limb ischaemia.
CT imaging found the patient's infra-renal aortic graft to be occluded down to the distal EIA's bilaterally.

Method

A hybrid thrombectomy was performed. Access gained via cut-down to left CFA and a large amount of clot was retrieved using a Fogarty catheter. A 11Fr sheath was then introduced retrograde from the left CFA and under angiographic guidance an up-and-over wire was passed successfully into the right jump graft. The right CFA was then explored and arteriotomy performed to retrieve the wire and create a through-and-through wire. An over-the-wire Fogarty embolectomy balloon was then able to be passed up the right limb of the aortic graft and a large amount of fresh thrombus was retrieved.

Results

Bilateral dorsalis pedis pulses were palpable at end of the operation. The patient's postoperative recovery was uneventful. He was commenced on warfarin to reduce the risk of thrombosis.

Conclusion

Acute aortic graft occlusion requires timely management. Hybrid thrombectomy is an option in patients with complex anatomy due to previous vascular surgery.

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Babu SC, Shah PM, Nitahara J. Acute aortic occlusion – Factors that influence outcome. J Vasc Surg 1995;21:567-75

Oral Presentation Session

Updated Arrhythmia Perspectives: From ECG to Transcatheter Ablation

Date: 31.10.2020 Time: 17:00 - 18:15 Hall: 4

ID: **436**

Topic: **Cardiology » Arrhythmias and antiarrhythmic therapy**

Presentation Type: **Oral**

PATTERN OF CARDIAC ARRHYTHMIAS WITH IN-HOSPITAL OUTCOME IN PATIENTS WITH ACUTE ST ELEVATED MYOCARDIAL INFARCTION

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ABSTRACT

Background: Acute myocardial infarction (AMI) is a major cause of death worldwide with arrhythmia being the most common determinant in the post-infarction period. Identification and management of arrhythmias at an early period of acute MI has both short term and long-term significance. Objective: To evaluate the pattern of arrhythmias in acute STEMI in the first 48 hours of hospitalization and their in-hospital outcome.

Methods: In this prospective study, total of 50 patients with acute STEMI were included after considering the inclusion and exclusion criteria. The patients were observed for the first 48 hours of hospitalization for detection of arrhythmia with baseline ECG at admission and continuous cardiac monitoring in the CCU. The pattern of the arrhythmias during this period & their in-hospital outcome were recorded in predesigned structured data collection sheet.

Results: The mean age was 53.38 ± 10.22 years ranging from 29 to 70 years. Most of the patients were male 42(84%). Majority of the patients had anterior wall (anterior, antero-septal & extensive anterior) myocardial infarction (54%). Sinus tachycardia in isolation was the most common arrhythmia observed in 36.8% of patients followed by sinus bradycardia (22.8%), ventricular tachycardia (19.3%), ventricular ectopic (12.3%), first degree AV block (5.3%), complete heart block and atrial ectopic 1.7% each. Tachyarrhythmias were more common in anterior wall myocardial infarction, whereas bradyarrhythmias were more common in inferior wall myocardial infarction. Among studied patients, 72% had favorable outcome, followed by acute left ventricular failure 10%, cardiogenic shock & lengthening of hospital stay 8% each and death 2%.

Conclusion: The commonest arrhythmias encountered were sinus tachycardia followed by sinus bradycardia, ventricular tachycardia, ventricular ectopic, AV block and atrial ectopic. The incidence of mortality was 2%.

ID: **141**

Topic: **Cardiology » Transcatheter ablation for tachyarrhythmias - Atrial fibrillation**

Presentation Type: **Oral**

INTERMEDIATE TERM OUTCOME AFTER ELECTROGRAM GUIDED SEGMENTAL OSTIALPULMONARY VEIN ISOLATION USING A 8 MM TIP CATHETER FOR PAROXYSMAL ATRIAL FIBRILLATION

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INTRODUCTION: There is no Indian data on the outcome following conventional Radiofrequency catheter ablation (RFA) for patients with paroxysmal Atrial fibrillation (PAF). Inspite of recent advancements in this field including sophisticated three dimensional (3D) based imaging and advanced ablation catheters with contact force technology, many Indian patients will not afford such an expensive therapeutic procedure. Here in this article we have summarized the immediate and long-term outcome following RFA of Indian patients with PAF using Pulmonary vein (PV) electrogram based mapping and using 8 mm tip ablation catheter.

METHODS: 42 consecutive patients who underwent RFA for symptomatic PAF not controlled with at least one antiarrhythmic drugs were studied in a tertiary care institute from March 2015 to December 2018.

Inclusion criteria- All patients eighteen years or older who had symptomatic non-rheumatic PAF not controlled with at least one antiarrhythmic drug were included for the study.

Exclusion criteria-Patients with rheumatic atrial fibrillation were excluded. Persistent AF or long standing persistent AF, left atrial thrombus, LA antero-posterior diameter exceeding 50 mm, unstable angina in the previous 3 months, bleeding disorders, pregnancy, patients with contraindications for anticoagulation, decompensated heart failure and unwillingness to give consent.

PVI was performed solely by conventional electrophysiology procedure using 8 mm tip RF catheter and PV potential electrogram based mapping. 3D mapping was not used. Only PVI was performed. Substrate modification was not performed. Elimination of all ostial pulmonary vein potentials and complete entrance block into the pulmonary vein were considered indicative of complete electrical isolation. Follow-up visits were scheduled at 4 weeks, and 3, 6, months post procedure, and every 6 months thereafter.

RESULTS: After the procedure 34 were arrhythmia free, 8 continued to have atrial fibrillation. The mean age of the study population was 51.5 ± 11.7yrs.The mean follow up duration was 44 ± 21 months (range 6 months to 84 months).The number of pulmonary veins isolated included 1 (5 patients, 11.9%), 2 (20 patients, 47.6%), 3 (12 patients, 28.6%) and 4 (5 patients, 11.9%).In 42 patients, a total of 101pulmonary veins were isolated. The right superior pulmonary vein (RSPV) was isolated in 37 patients, the left superior PV (LSPV) was isolated in 39 patients, the left inferior PV (LIPV) was isolated in 14 patients and the right inferior PV (RIPV) was isolated in 6 patients. The procedure duration was 125 ±29 minutes and the fluoroscopy time was 47±13 minutes. The number of patients who remained in sinus rhythm at 1,6,12 and 24 months were 34 (81%),32(76%),30(71%) and 26 (62%). Two patients of these underwent repeat PVI which was successful and they had no further recurrences. Complications were rare. One patient had a minor pericardial effusion and one patient had transient sinus pauses which were conservatively managed.

CONCLUSION: Conventional RFA using PV potential electrogram based mapping and ablation with 8 mm tip catheter is safe and effective for patients with PAF with satisfactory immediate and long-term outcome and negligible complications and very cost effective in our setting with limited resources.

ID: **291**

Topic: **Cardiology » Preventive cardiology**

Presentation Type: **Oral**

GENDER AND AGE DIFFERENCES IN CIRCADIAN VARIATION OF HEART RATE VARIABILITY PATTERN S OF VAGAL ACTIVITY IN ADOLESCENTS AND YOUNG ADULTS: RESULTS OF THE BEMIND STUDY

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Corresponding Author (lars.pieper@tu-dresden.de)

Background

The autonomic nervous system (ANS), particularly the vagus nerve, plays an important role in regulation of metabolic homeostasis. From heart rate recordings, heart rate variability (HRV) indices can be calculated, representing a valid and reliable measure of autonomic function and provide insight to the ANS. Previous research showed that low vagal tone is associated with a variety of poor health outcomes (e.g. cardiovascular risk, morbidity, mortality, emotion regulation). Altogether, measures of HRV seem to represent an integrative marker for mental and somatic health. Clinicians need reference values of HRV parameters to use them as screening tools to identify individuals at risk. This contribution aims to describe circadian variation pattern of HRV parameter by age and gender in adolescents and young adults from Germany.

Methods

Data from the Behavior and Mind Health Study (BeMIND) were used. A total of 1102 predominantly healthy participants (age 14-21 years) underwent, among other measures, ambulatory 24 hour heart rate recordings (Firstbeat bodyguard 2) on multiple days (3404 days with at least 16 hours of recordings). The root mean sum of successive differences between R-R intervals (RMSSD) was used as an indicator of vagally mediated HRV. In a first step, the 24 h recordings were segmented into 5-minute intervals. For each 5-minute interval, the mean RMSSD was calculated. Three individual-level cosine function parameters (mesor, amplitude, acrophase) were calculated to quantify circadian variation pattern. Multivariate linear regression models were used to estimate the association of circadian variation pattern of RMSSD with gender and age.

Results

In our study sample mean RMSSD mesor was 44.9 (CI95%: 44.3, 45.6) and mean amplitude was 17.9 (CI95%: 17.5, 18.4). The mean acrophase (time of the highest RMSSD oscillation) was 21:50 hrs (CI95%: 21:41 hrs, 21:59 hrs). Controlled for age, females had a significantly reduced RMSSD mesor (-2.3 (CI95%: -4.2, -0.4)), a reduced RMSSD amplitude (-1.5 (CI95%: -2.0, -.1)) and a reduced RMSSD acrophase (-31.3 minutes (CI95%: -50.8, -11.7 minutes)) compared to males. Controlled for gender, no significant differences in RMSSD mesor and amplitude by age could be observed. RMSSD acrophase increased by age (14.1 min per year (CI95%: 10.1, 18.2)).

Conclusion

A significant circadian variation in HRV parameter was present, characterized by a maximum during nighttime and rather small but significant gender and age differences. With help of further research, circadian variation of HRV may become a screening tool of overall physical and mental health.

ID: **203**

Topic: **Cardiology » Transcatheter ablation for tachyarrhythmias - Atrial fibrillation**

Presentation Type: **Oral**

WHY IS PULMONARY VEIN ISOLATION NOT ENOUGH FOR VAGAL DENERVATION IN ALL CASES?

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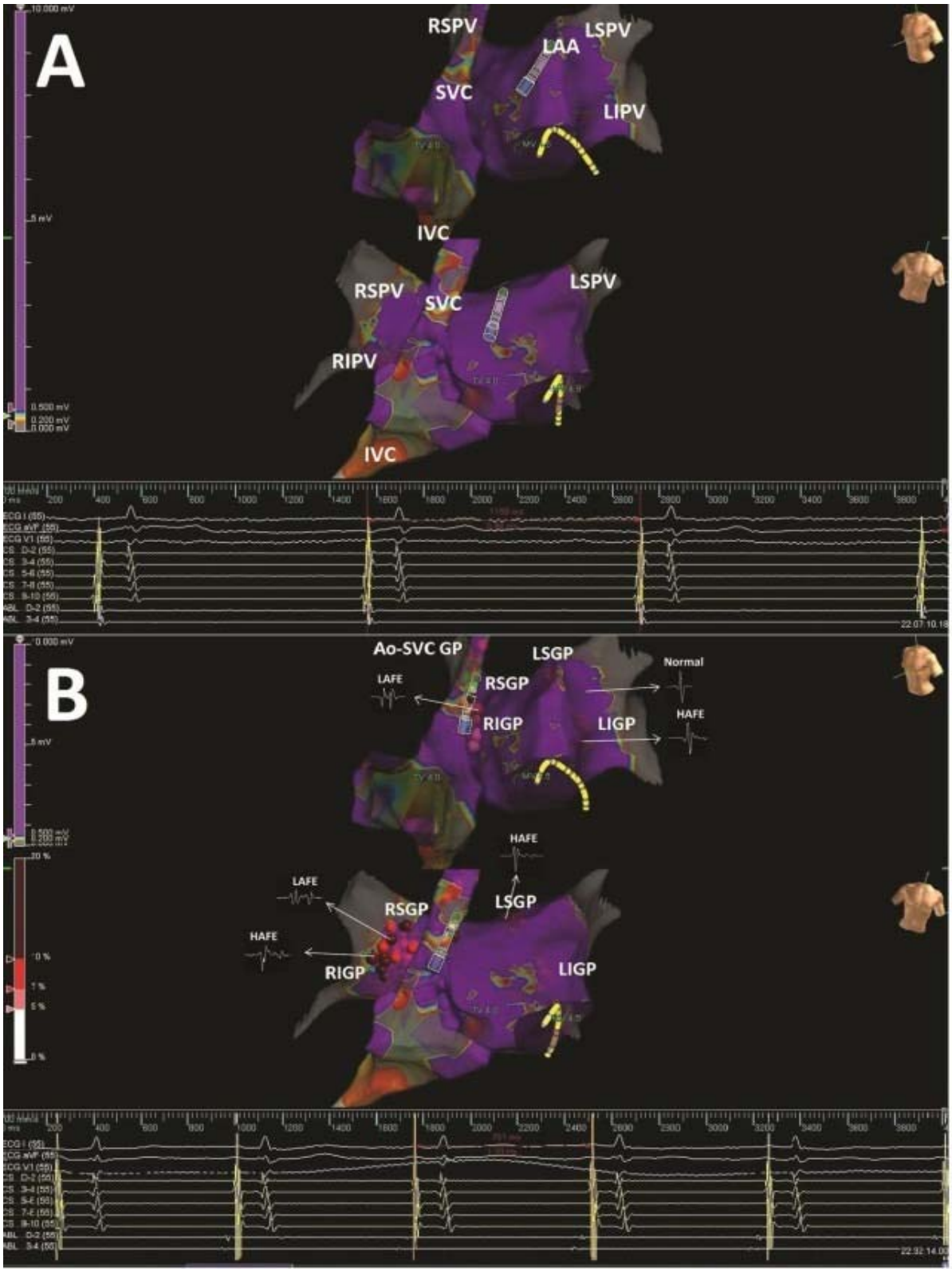
A 37-year-old female was referred to us symptomatic sinus bradycardia and pauses. The patient had undergone isolation of pulmonary vein (PV) for paroxysmal atrial fibrillation 2 years ago. We decided to perform cardioneuroablation because the patient refused pacemaker implantation. During baseline electrophysiological study, AA interval was calculated as 1159 ms. Isolation of PVs were verified by using a circular catheter. Ganglionated plexus (GP) sites were detected and ablated by using our previously defined fractionated electrograms based technique. The left inferior, the left superior, the right superior and the right inferior GPs were ablated, respectively. The right superior GP were detected far from the ostium of the right superior PV (Figure 1A). After completion of ablation on GPs with bi-atrial approach, final AA interval decreased to 751 ms (Figure 1B). Complete vagal denervation was confirmed by no atropine response. GPs are concentrated within distinct epicardial fat pads between right and left atrial structures and more antral relationship between the superior vena cava and the right superior PV might be used to as a marker to define in which patient PV isolation cannot cause vagal denervation.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ID: **177**

Topic: **Cardiology » Transcatheter ablation for tachyarrhythmias - Atrial fibrillation**

Presentation Type: **Oral**

IMPACT OF CARDIONEUROABLATION ON HEAD UP TILT TABLE TESTING DURING FOLLOW-UP

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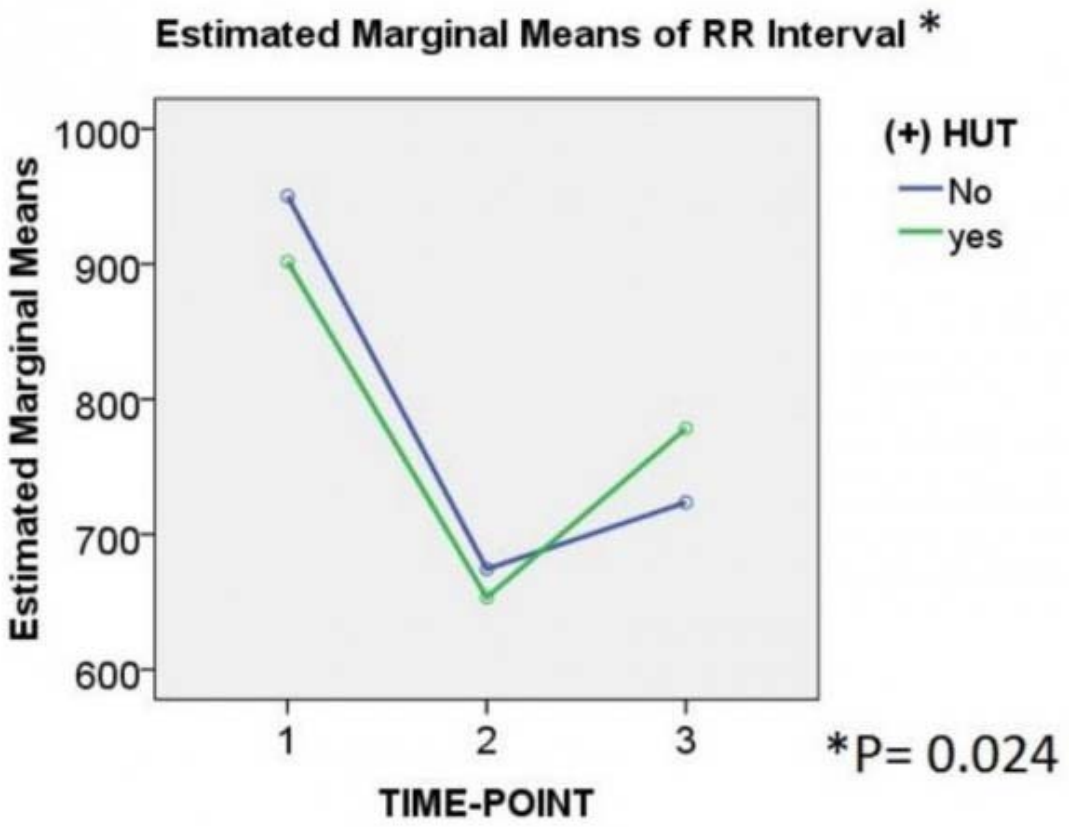
[2]*İstanbul University -Cerrahpasa, Faculty of Medicine, Istanbul, Turkey*

[3]*Kansas City Heart Rhythm Institute and Research Foundation, Overland Park, KS, United States*

[*]*Corresponding Author (aksutolga@gmail.com)*

Aims Previous reports have suggested that cardioneuro ablation (CNA) can be effective in reducing syncopal recurrences in patients with vasovagal syncope (VVS). This study assessed the efficacy of CNA in preventing a positive response to head-up tilt testing (HUT). Methods This is a single-center retrospective study reviewing prospectively collected data. Fifty-one nine consecutive patients with VVS were included in the study. After confirmation of significant asystole on HUT, all patients underwent CNA. HUT was repeated 1 month after CNA. The main outcome measures were recurrence of syncope episode and positive response on HUT. Results During a median follow-up period of 11 months (IQR, 3–27 months), all but 3 (5.8%) of 51 patients were free of syncope. Repeated HUTs were negative in 44 (86.2%) patients. When patients with recurrent syncope were excluded, vasodepressor response was seen in 3 cases and cardioinhibitory response in 1 case, respectively. CNA caused significant and durable shortening on RR interval in all cases. This effect was significantly higher in patients without positive HUT responses (Figure 1). Conclusion This pilot study shows that CNA can effectively prevent recurrent syncopal episodes in patients with refractory VVS. HUT seems as a valuable diagnostic tool not only to select suitable candidates and but also to evaluate success of CNA.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*P= 0.024

ID: **581**

Topic: **Cardiology » Transcatheter ablation for tachyarrhythmias - Supraventricular tachycardia**

Presentation Type: **Oral**

SURGICAL TREATMENT OF ATRIAL TACHYCARDIA ARISING FROM LEFT ATRIAL APPENDAGE

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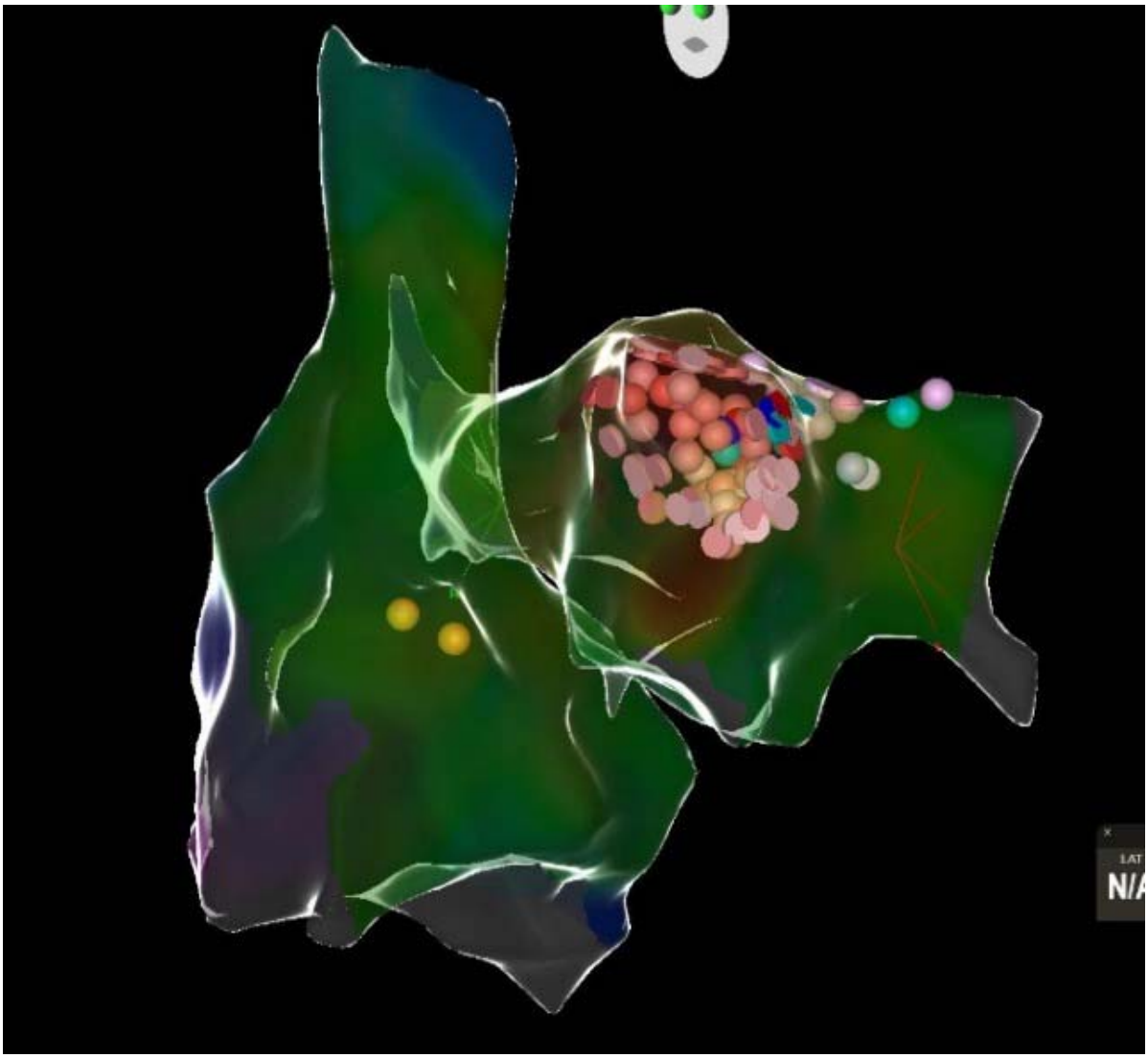
Objective: Focal atrial tachycardia arising from the left atrial appendage is less frequently encountered in clinical practice. Catheter ablation of this focal tachycardia is the main treatment and has a high success rate. Surgical radiofrequency isolation plus external closure of the appendage is an option in patients' refractory to catheter methods.

Methods: An 18 year old male patient was admitted to our hospital with a diagnosis of tachycardia induced cardiomyopathy (Ejection Fraction %35). His electrophysiological study revealed a centrifugal activation pattern in the left atrial appendage where local atrial activation was 105ms earlier than distal coronary sinus. Sinus rhythm was not achieved despite multiple attempts (Figure 1). Surgery was planned to isolate the source of refractory arrhythmia.

Results: Left atrial appendage of the patient was electrically isolated by using AtriCure® Synergy Ablation Clamp through left anterior mini-thoracotomy. Sinus rhythm was restored right after successful isolation. AtriClip® PRO Device was used to externally exclude the left atrial appendage in order to eliminate possible thrombus formation in isolated appendage.

Conclusions: Surgical ablation methods are valid and successful options in patients who are refractory to medical and catheter methods. Dedicated arrhythmia teams (Cardiologists, electrophysiologists and cardiac surgeons) have the potential to increase patients' outcomes.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ID: **633**

Topic: **Cardiology » Transcatheter ablation for tachyarrhythmias - Supraventricular tachycardia**

Presentation Type: **Oral**

INAPPROPRIATE SINUS TACHYCARDIA IN A CHILD WITH WOLF PARKINSON WHITE SYNDROME AFTER SUCCESSFUL RADIOFREQUENCY ABLATION TREATMENT

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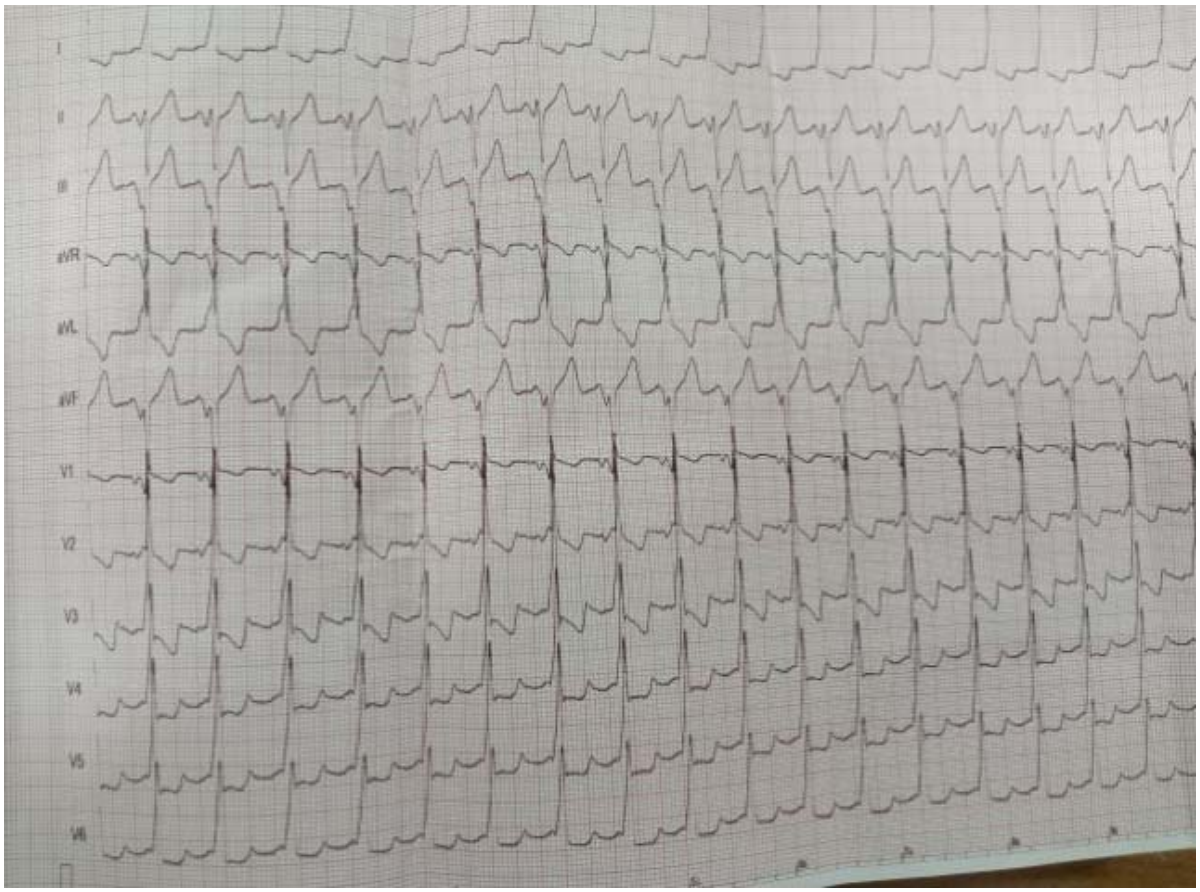
Hatay Mustafa Kemal University, Hatay, Turkey

**Corresponding Author (nuhyilmas@gmail.com)*

Background
Inappropriate sinus tachycardia is a sinus tachycardia that develops without any other underlying cause. It can rarely develop in patients with arrhythmia who have been performed radiofrequency catheter ablation. In this article, we present a pediatric patient with Wolf Parkinson White syndrome who developed inappropriate sinus tachycardia after radiofrequency catheter ablation for two separate accessory pathways, right posterolateral and aortic annulus.

Case
A seven years male patient was admitted to pediatric cardiology unit for complaint of intermittent chest pain and palpitation that has been continuing for the last three months. Complaints of the patient was gradually increasing last ten days. Laboratory test and electrocardiography showed a high levels of Troponin-I (0,21) and elevation of ST segment on these derivation of DII-DIII-AVF, and depression of ST on V2-6. Additionally, delta waves were detected according to Wolf-Parkinson-White syndrome. His echocardiographic examination was found normal. Coronary angiography that performed due to high level of Troponin-I, approximately ten times higher of upper normal limit, revealed that there was no coronary obstruction. On his electrophysiologic study two accessory pathway, right posterolateral and aortic annulus, was found and ablated successfully. After a day, delta wave disappeared but a sinus tachycardia with the heart rate reaching 134 beats/min at rest was realized. A single dose 1mg/kg metilprednizolon administered via intravenous route. Investigations applied to underlying cause such as fever, respiratory distress, complete blood count, comprehensive biochemistry tests, chest x-ray, thyroid tests, medication used, pain, anxiety, were found as negative. Therefore, inappropriate sinus tachycardia diagnosed and B Bloker treatment, propranolol 1-2 mg/kg/d, was started to the patient. After one week follow-up, he had normal heart rate and he was asymptomatic. The treatment duration was planned as 6 months.

Conclusion
Inappropriate sinus tachycardia developing after radiofrequency catheter ablation is a rare condition. The causes of this situation have not yet been clearly defined. This is thought to be related to damage due to RF ablation on intracardiac parasympathetic system, and hence the increase of the sympathetic tonus of the local heart. Spontaneous recovery could be achieved in 6 months in some patients with no symptoms, and B Blocker agents have been recommended in symptomatic patients. Additionally, ivabradine therapy is also recommended for medical treatment in symptomatic patient with inappropriate sinus tachycardia t but in interventional therapy, the treatment of choice may be sinus node ablation or modification.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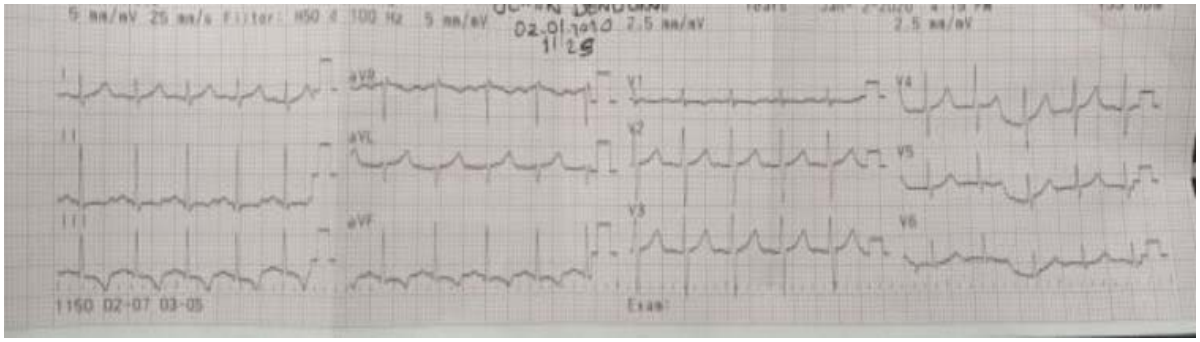
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ID: **630**

Topic: **Cardiology » Arrhythmias and antiarrhythmic therapy**

Presentation Type: **Oral**

ASSESMENT OF TOTAL ATRIAL CONDUCTION TIME IN PATIENTS WITH ATRIOVENTRICULAR NODAL REENTRANT TACHYCARDIA AND CONTROL SUBJECTS

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Background: Most forms of atrioventricular nodal reentrant tachycardia (AVNRT) are created by reentry between 2 (or more) atrial connections to the AV node. Atrial vulnerability and structural remodeling that leads to reentrant circuits in AVNRT is largely unknown. PA-TDI interval assessed by tissue Doppler imaging is a useful technique to determine total atrial conduction time (TACT) which reflects atrial remodeling and arrhythmic substrate.

Purpose: In this prospective study, we aimed to assess TACT in patients with AVNRT and control subjects.

Methods: Study population consisted of 62 consecutive patients (age 44 ± 12 years; 74% women) undergoing electrophysiological study and ablation for symptomatic, drug-resistant AVNRT and 42 age and sex matched control subjects. All patients and control subjects underwent tissue Doppler imaging for assessment of TACT.

Results: PA-TDI interval was longer in patients with AVNRT compared to control subjects (121 ± 13 ms vs 105 ± 11 ms; P <0.001). PA-TDI interval was significantly correlated with P-wave duration on the surface ECG (r = 0.23; P = 0.02). Left atrial volume index and left atrial phasic functions were similar in patients with AVNRT and control subjects.

Conclusion: TACT is prolonged in patients with AVNRT. Further studies are needed to determine the underlying factor(s) such as AVNRT that leads to prolonged atrial conduction time.

ID: **624**

Topic: **Cardiovascular Surgery » Various Veins**

Presentation Type: **Oral**

A COMPARISON N-BUTYL CYANOACRYLATE AND RADIOFREQUENCY ABLATION IN TREATING VARICOSE VEINS IN THE SAME PATIENT

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Abstract

Purpose: To compare N-butyl cyanoacrylate (NBCA) and radiofrequency venous ablation (RFA) in different legs in the same patients with venous insufficiency.

Methods: Sixty patients with bilateral saphenous vein insufficiency between January 2017 and December 2018 were included in the study. Patients with a saphenous vein diameter less than 5.5 mm at the saphenofemoral junction (SFJ) were also excluded. Patients were classified on the basis of Clinical Severity, Etiology, Anatomy and Pathophysiology (CEAP) before the procedure began. Venous clinical severity score (VCSS) values based on scoring of preprocedural clinical symptoms and findings were recorded. NBCA or RFA was applied to one of the patient's legs and the remaining procedure, RFA or NBCA, to the other leg.

Results: Minor complications in NBCA and RFA were hyperemia at 20.7% and 31.0%, ecchymosis at 31.0% and 51.7% and edema at 27.6% and 65.5%, respectively. The rate of recanalization was 6.8% in the NBCA group. No recanalization was observed in the RFA group. The level of patients satisfied with NBCA was 51.7%, compared to 31.0% for RFA, while 17.2% of patients were satisfied with both the procedures. Times to return to daily activity were 0.9 days in the NBCA group and 1.3 days in the RFA group. There was no statistically significant difference between the groups in terms of pain during the procedure or postoperatively. Less pain was reported in the NBCA during both ($P < 0.02$).

Conclusion: The NBCA procedure may be superior to RFA in certain respects.
Keywords: Varicose veins, N-butyl cyanoacrylate, Radiofrequency ablation

ID: **18**

Topic: **Cardiology » Arrhythmias and antiarrhythmic therapy**

Presentation Type: **Oral**

A CASE OF ATRIAL FLUTTER FOLLOWING MARIJUANA ABUSE AND ITS MANAGEMENT

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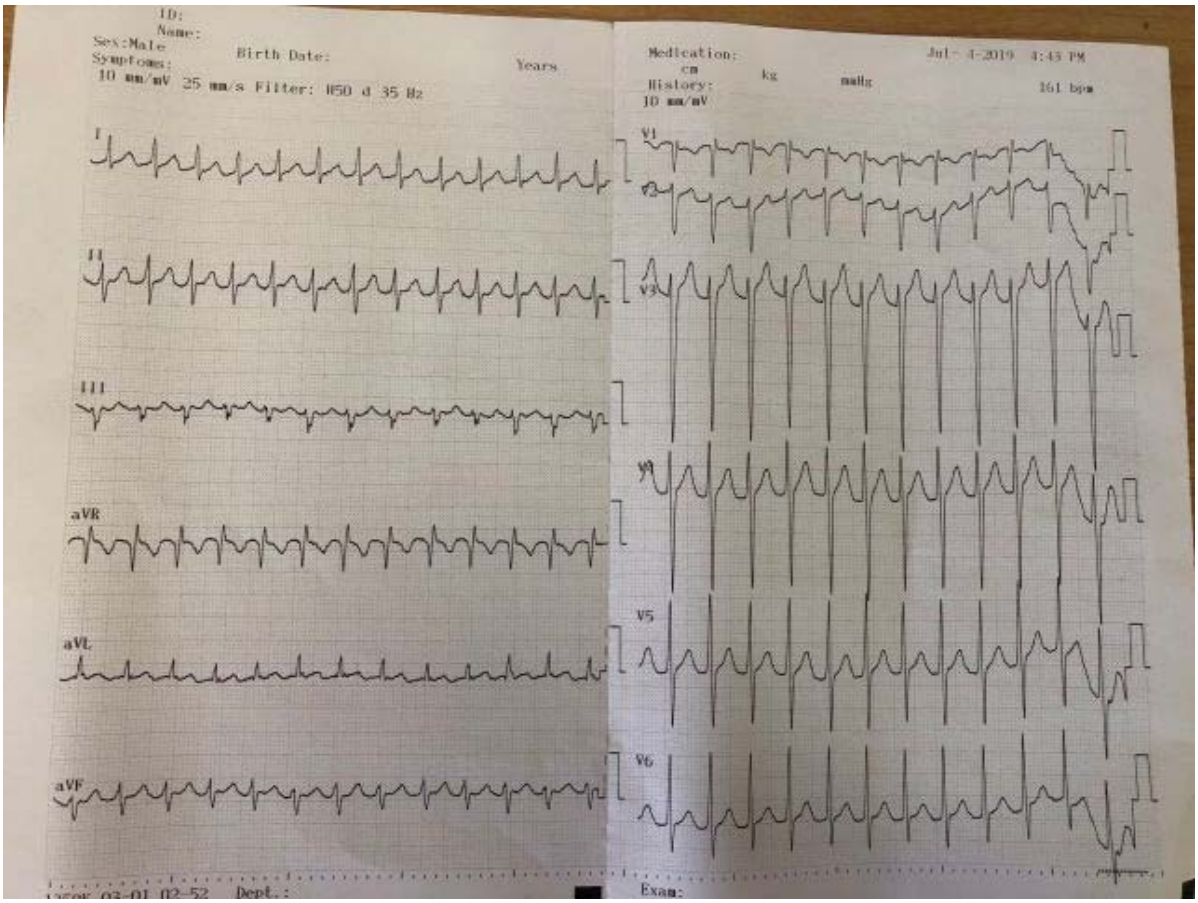
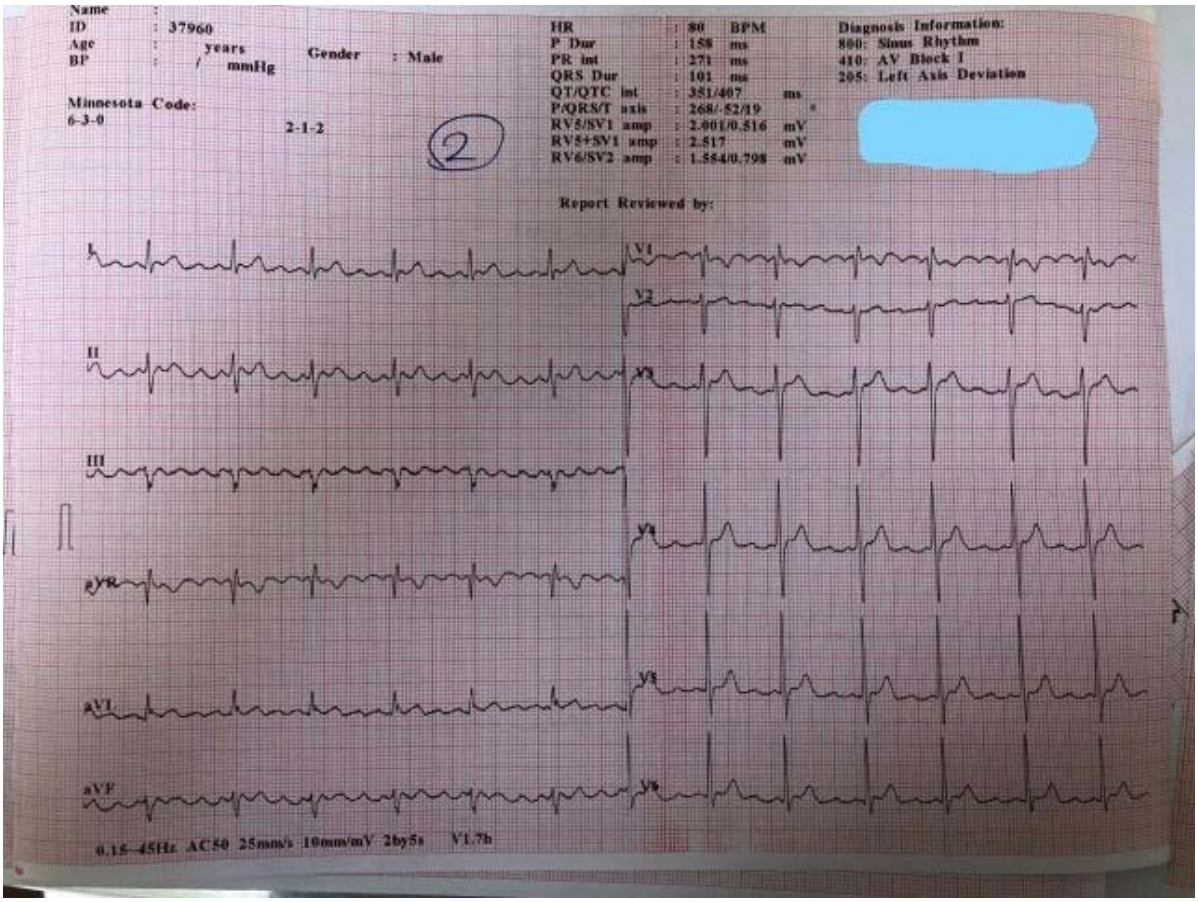
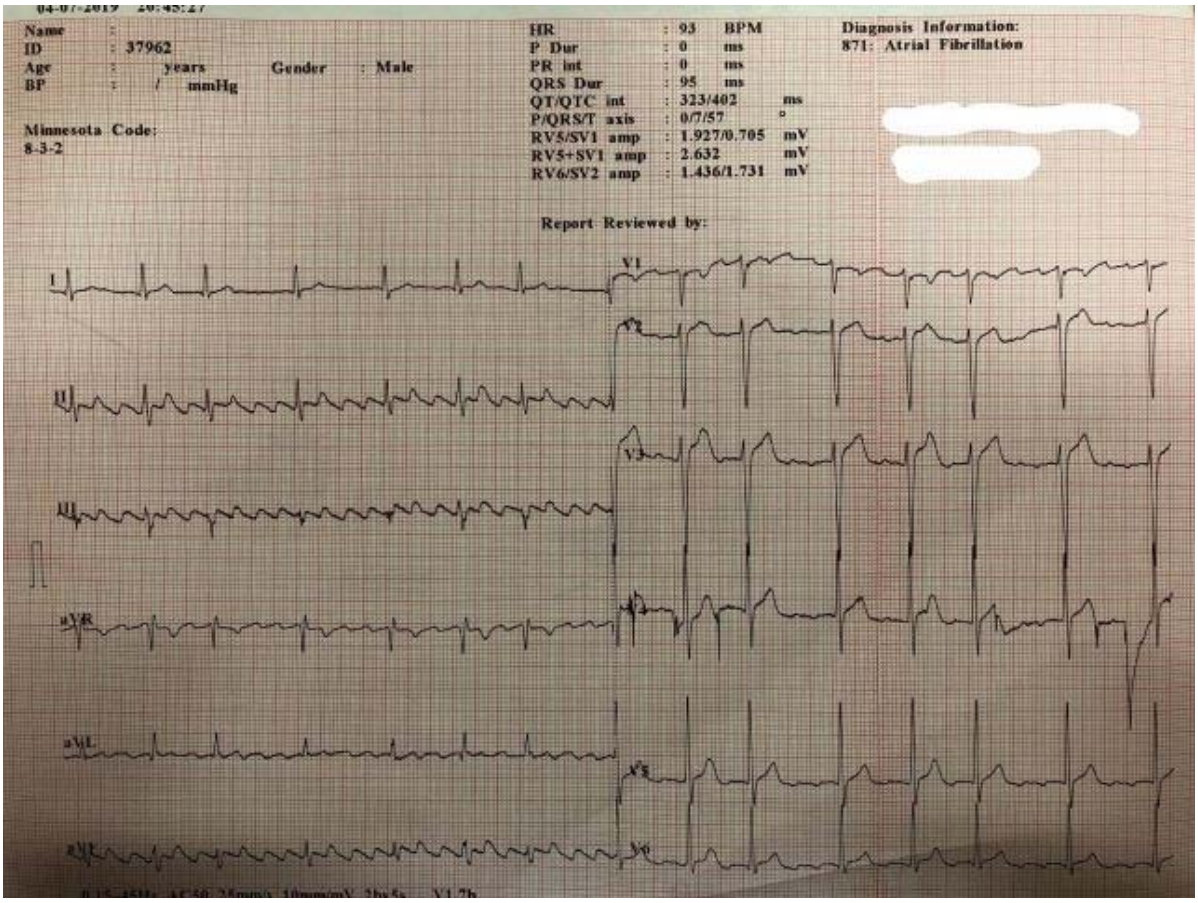
Introduction: Marijuana is mostly associated with neuropsychiatric effects and cardiovascular complications. Since its use is prohibited in our country, information on its effects and complications are mostly obtained from cases. We frequently encounter coronary complications of cannabinoids. We present a rare case of atrial flutter due to marijuana abuse.
Case: A 28-year-old male patient was admitted to the clinic with palpitation which started 17-18 hours ago. He expressed that had no previous disease. On physical examination, patient was tachyritmic and blood pressure was 130/75 mmHg. In ECG, supraventricular tachycardia was observed which is P wave could not be seen clearly (Figure 1).



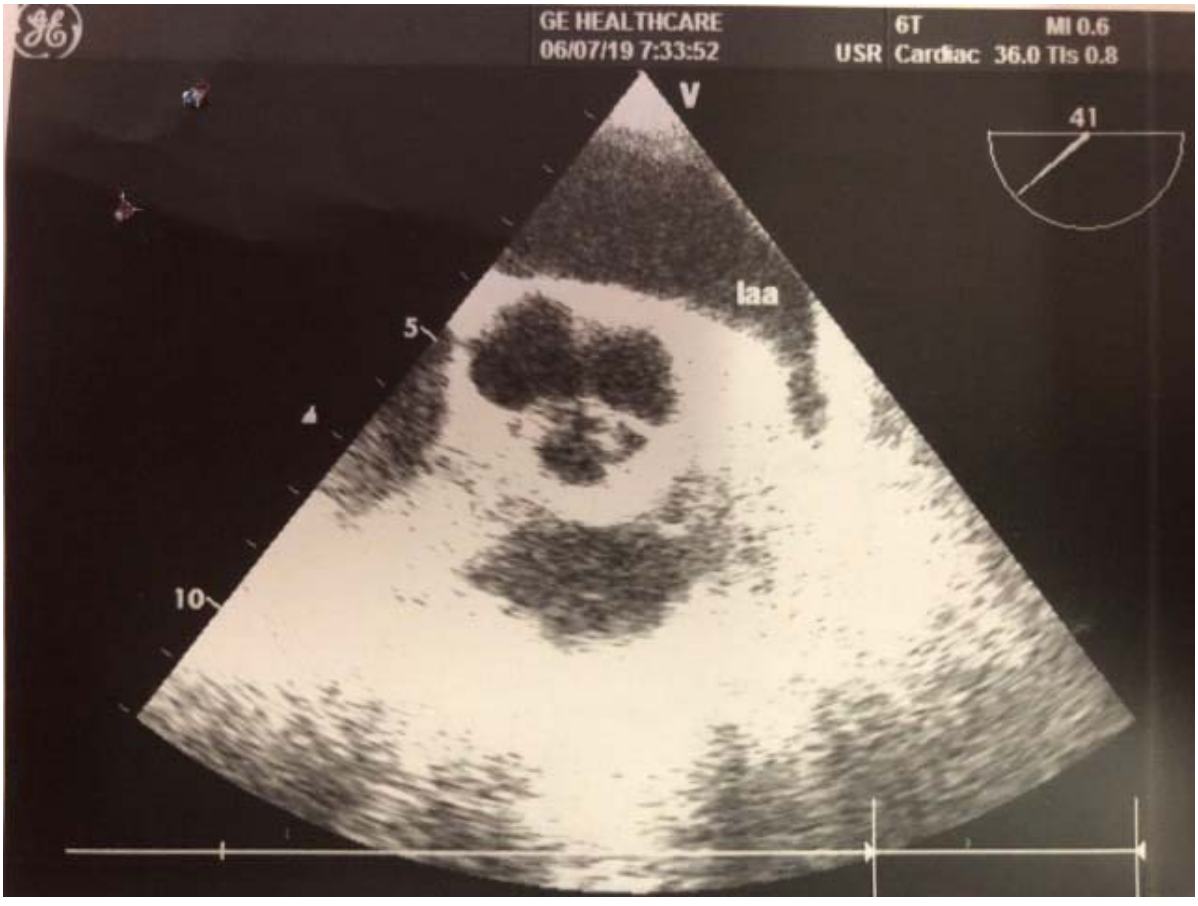
Blood tests were normal. Echocardiography showed no abnormality. During echocardiography the patient reported that he abused marijuana before the onset of palpitation. 6-6-12 mg adenosine was administered. Although AV block response was obtained, it could not be detected with ECG. After subcutaneous 6000 anti-Xa IU / 0.6 ml enoxaparin, 1 amp IV diltizem was injected and atrial flutter with AV block was observed (Figure 2).



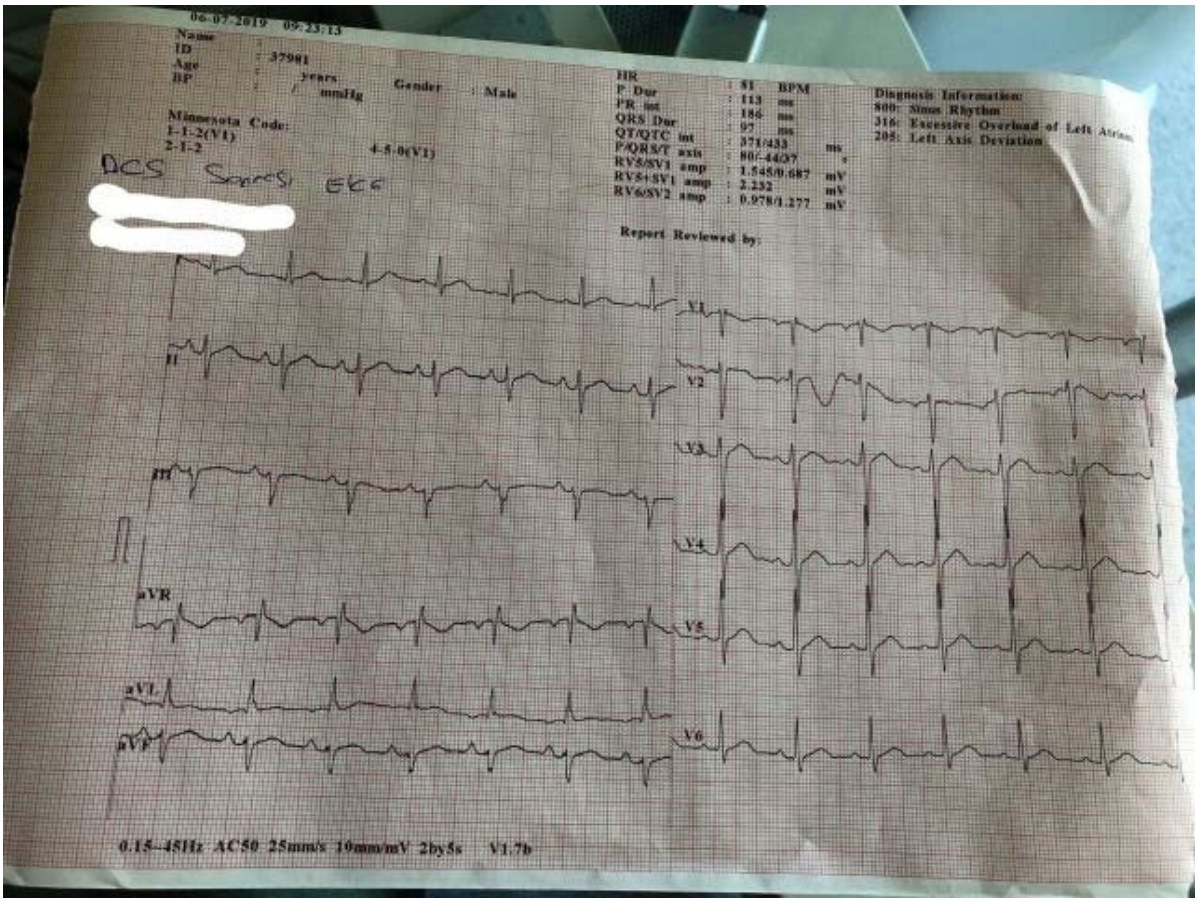
After 2-3 hours, 600 mg propafenone PO was loaded for rhythm control. After 6 hours sinus rhythm could not be restored and iv amiodarone was started 300 mg in the 30 minutes followed by 1200 mg in 24 hours and enoxaparin 0.6 ml was ordered. During the 24-hour infusion of amiodarone, atrial flutter with variable-grade AV block was observed and DCS was planned (Figure 3).



LAA was clear in TEE (Figure 4,5).



In the absence of adequate sedation with 5 mg midazolam, propofol was injected and DCS was performed with 150 J and sinus rhythm was restored (Figure 6).



The patient was discharged with no rhythm abnormality after 20 hours of follow-up. The patient has been followed-up for 9 months in daily rhythm with both a symptom and a "smart watch". During the follow-up patient had no complaints.

Discussion: There are a limited number of case reports on the arrhythmogenic effects of cannabinoids. In epidemiological studies, it has been reported that dose-dependent sinus tachycardia is frequently observed after marijuana abuse (1,2). Other reported arrhythmias are sinus bradycardia, second-degree AV block, and atrial fibrillation (3-5). The arrhythmogenic effects begin a few minutes after abuse with a biphasic effect on the autonomic nervous system, reach the peak within 30 minutes and show this effect up to 90 minutes (1-6). It creates sympathetic activation in low doses and parasympathetic activation in higher doses. Both vagal and adrenergic stimulation can lead to atrial tachyarrhythmias (7). With vagal stimulation, the duration of action potential (AP) is reduced, the atrial refractory period is shortened and cellular hyperpolarization occurs. It allows the development of AF by the re-enterant mechanism as a net effect of decreasing the wavelength of atrial activation (7). On the other hand, adrenergic stimulation shortens the AP duration, triggers the formation of atrial tachyarrhythmias with abnormal automatism, triggered activity and micro-re-entries by disrupting the electrophysiological integrity of the atrial tissue (7). Our case was an atrial flutter due to sympathetic activation of marijuana. The case is also important in terms of careful examination of the patient's history and sometimes questioning the patient alone to show that the cause - effect relationship can be understood without detailed tests.

Key words: marijuana, atrial flutter, atrial fibrillation

ID: **795**

Topic: **Cardiology » Preventive cardiology**

Presentation Type: **Oral**

EVALUATION OF MIYOCARDIAL REPOLARIZATION PARAMETERS AND INDEX OF CARDIAC ELECTROPHYSIOLOGICAL BALANCE (ICEB) IN PATIENTS WITH SURGICAL EARLY MENOPAUSE

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Background

Surgical early menopause is defined a woman goes through menopause due to medical reasons, rather than the natural aging process. The incidence of cardiovascular diseases (CVD) cumulatively rises after menopause, particularly after surgical menopause.

Some ECG changes are used as a predictive factor for arrhythmia. Myocardial repolarization parameters are evaluated with QT interval, corrected QT (QTc), Tp-e interval, Tp-e/QT and Tp-e/QTc ratio. The peak to end interval of T wave (Tp-e) and Tp-e/QT ratio are parameters of trans-myocardial distribution of repolarization and may be related to dangerous rhythm irregularity and ventricular arrhythmias. Again, Index of cardiac electrophysiological balance (iCEB) is described as QT time divided by QRS time (QT/QRS) from the electrocardiogram. It is a new and non-invasive feature, which may anticipate malign ventricular arrhythmias. In the present study, we aimed to evaluate the myocardial repolarization parameters and iCEB in patients with surgical early menopause.

Methods

In this study included 30 patients with early surgical menopause and 40 control group patients with clinically and demographically similar characteristics. Twelve-lead ECGs of the study population were recorded in a quiet room after five-minute rest, with 20 mm/mV amplitude and 50 mm/s rate from an ECG machine. All 12 lead electrodes were analyzed, but the V5 and DII leads were evaluated more detailed due to best reflects of apical-basal and interventricular distribution of repolarization. The Tp-e interval described as the distance from the highest amplitude of the T wave to its return to the isoelectric line. The QT interval was calculated as distance between the starting of the QRS to end of the T wave according to isoelectric line. The R-R distance was measured and used to compute the heart rate and to correct QT distance (QTc) with Bazett's formula (QT interval/√(RR interval)). Again, index of cardiac electrophysiological balance (iCEB) was obtained from the QT time divided by QRS time (QT/QRS). All parameters were repeated three times and the mean values were recorded for each ECG parameter.

Results

There were no differences in baseline demographic and laboratory parameters. In electrocardiography; heart rate, PR interval, QRS interval, and QT interval were similar in both groups ($p>0.05$). But, QTc, Tp-e interval, Tp-e/QT and Tp-e/QTc ratio were significantly higher in the surgical early menopause patients ($p<0.05$). However, there was no significant difference between the groups in terms of iCEB ($p>0.05$) (Table 1).

Conclusion

In this study, we found that QTc, Tp-e interval and Tp-e/QT, Tp-e/QTc ratios were significantly higher in surgical early menopause group, but the iCEB is similar between the groups. The prognostic significance and predictive value to arrhythmic events these parameters in surgical early menopause patients require further evaluation with long-term follow-up and large-scale prospective studies.

Key words: Surgical early menopause; Tp-e interval; QTc interval; Tp-e/QTc ratio; index of cardiac electrophysiological balance (iCEB)

	Surgical early menopause group (n=30)	Control group (n=40)	P value
Age (year)	41 (30-48)	40 (33-47)	0.12
BMI (kg/m^2)	28.1 ± 3.8	27.2 ± 4.0	0.32
Systolic BP (mmHg)	130 (90-160)	125 (90-140)	0.09
Diastolic BP (mmHg)	80 (40-100)	75 (50-90)	0.75
Heart Rate (bpm /dk)	75.7 ± 10.7	68.9 ± 11.9	0.7
PR (msn)	160 (100-200)	159 (110-190)	0.23
QRS (msn)	85 (65 - 112)	83 (68 - 105)	0.07
QT (msn)	379.2 ± 24	376 ± 25.7	0.09
QTc (msn)	415 (380 - 465)	405 (375 - 450)	0.02
Tp-e interval (msn)	100 (60 - 120)	85 (60 - 120)	0.001
Tp-e/QT ratio	0.24 (0.14 – 0.29)	0.22 (0.20 – 0.28)	0.04
Tp-e/QTc ratio	0.22 (0.19 – 0.26)	0.20 (0.18 – 0.25)	0.01
QT/QRS	4.08 ± 0.52	4.18 ± 0.51	0.22
QTc/QRS	4.49 ± 0.57	4.51 ± 0.52	0.77

ID: **781**

Topic: **Cardiology » Management of Atrial Fibrillation**

Presentation Type: **Oral**

PROGNOSTIC NUTRITIONAL INDEX PREDICTS POOR OUTCOMES IN PATIENTS WITH NONVALVULAR ATRIAL FIBRILLATION: A RETROSPECTIVE ANALYSIS

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Background: The prognostic nutritional index (PNI) is an useful tool for predicting clinical outcomes in patients with heart failure, coronary artery disease, pulmonary embolism, systemic lupus erythematosus or malignancy. However, few studies have assessed PNI in patients with nonvalvular atrial fibrillation (NVAF). Therefore, we investigated the impact of PNI to predict outcomes in patients with NVAF.

Methods: We retrospectively analyzed patients with NVAF admitted to the our cardiology outpatient units between February 2015 and February 2019. The prognostic nutritional status was calculated from the following formula: 10 × serum albumin (g/dl) + 0.005 × total lymphocyte count (per mm3). The primary endpoint of the study was composite events, including all-cause mortality, hospitalisation history for cardiovascular reasons and thromboembolic events.

Results: A total of 518 patients (median age of 69 years, 54% women) were included, and 124 (23.9%) reached the primary endpoint at follow-up. Compared to patients without poor outcomes, patients who reached the primary endpoint during follow-up were older, had higher prevalence of coronary artery disease, chronic kidney disease and heart failure, but lower PNI levels and lower anticoagulant use rate at study entry (**Table**). Multivariable analyses showed that older age, presence of heart failure and low PNI (hazard ratio: 2.759, 95 % confidence interval 1.920 - 3.898) at admission was independently associated with the primary outcome. Kaplan-Meier analysis and the log rank test revealed that low PNI (< 40) was significantly associated with primary endpoint ($p < 0.001$).

Conclusions: The present study demonstrated that the lower PNI is associated with poor outcomes in patients with NVAF. Evaluation of nutritional status may provide useful information about risk stratification and prognosis in these patients.

Table: Baseline characteristics of study population

Parameters	**Overall (n=518)**	**Primary endpoint (n=124)**	**No primary endpoint (n=394)**	***p value***
Age (years)	69 (65 – 79)	72 (69 – 80)	65 (61 – 69)	<0.001
Coronary artery disease, n (%)	285 (55)	80 (64.5)	204 (51.7)	0.001
Hypertension, n (%)	388 (74.9)	95 (76.6)	293 (74.3)	NS
Diabetes mellitus, n (%)	134 (25.8)	33 (26.6)	101 (25.6)	NS
Chronic kidney disease, n (%)	108 (20.8)	38 (30.6)	70 (17.7)	0.002
Heart failure, n (%)	233 (44.9)	75 (60.4)	158 (40.1)	<0.001
Stroke, n (%)	73 (14.1)	19 (15.3)	54 (13.7)	NS
Low PNI (< 40) score, n (%)	32 (6.1)	20 (16.1)	12 (3)	<0.001
Anticoagulants, n (%)	357 (68.9)	75 (60.4)	282 (71.5)	0.002
β-blockers, n (%)	336 (64.8)	77 (62.1)	259 (65.7)	NS
Statins, n (%)	306 (59)	72 (58)	234 (59.3)	NS

ACE-inhibitors, n (%)	165 (31.8)	41 (33)	124 (31.4)	NS
LVEF, %	62 (58 – 64)	61 (58 – 63)	62 (59 – 65)	NS
LAVI, mL/m2	37 (34 – 40)	38 (36 – 41)	36 (33 – 39)	NS

ID: **804**

Topic: **Cardiology » Electrocardiography and Non invasive electrocardiology**

Presentation Type: **Oral**

IS THERE A RELATION BETWEEN CORRECTED QT AND SLOW CORONARY FLOW PHENOMENON

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Objective: Although the exact pathophysiology of slow coronary flow phenomenon (SCF) is not understood, it could be seen in some arrhythmias and ST elevation myocardial infarction cases. This study aimed to investigate whether there is a relation between SCF phenomenon and sex, DM, HT, family history, hyperlipidemia, smoking, QTc, QT, QRS and HR.

Methods: University Ethics Committee approved the study (no: 1245). The patients who referred with a complaint of angina pectoris between February 2019 and February 2020, and had a coronary angiography indication via positive stress electrocardiography (ECG) test on effort, ischemic findings on myocardial perfusion scintigraphy, segmental wall dysfunction observed on echocardiography, coronary stenosis observed on CT scans, patients who had a typical chest pain and patients who had a 12 lead ECG were involved. The exclusion criteria were; patients who had critical stenosis of more than 30%, history of congestive heart failure, coronary artery disease, plaque or ectasia, valvular heart disease, hyperthyroidism, chronic obstructive pulmonary disease, ventricular pre-excitation, atrioventricular conduction abnormalities, those taking medications known to alter cardiac conduction, and those who had a QRS value higher that 120 were excluded from the study.

A resting 12 lead ECG was recorded. Bazett's formula was used to correct QT interval (QTc) with. The SCF was defined according to thrombolysis in myocardial infarction (TIMI) frame count method. Two experienced cardiologists analyzed angiographies. The subjects with SCF formed the group I. Randomly selected 88 patients were the group II. Demographics, presence of diabetes mellitus, hypertension, hyperlipidemia, family history of coronary artery disease, smoking, peripheral artery disease, chronic kidney disease, and anemia were also collected.

Results: There were 152 patients (mean age of 54.09±8.99 years). Of these patients 64 were in the group I, and 88 were in group II. The relation of SCF and demographics, QTc and risk factors are shown in table 1. The groups were homogenous for demographics and other risk factors. Further, there was no statistically significant relation observed between SCF and QTc, and any of the risk factors (p>0.05).

Conclusion: The result of this study showed that SCF was not related to sex, DM, HT, family history, hyperlipidemia, smoking and QTc in patients who had no critical stenosis. Further research on investigating the exact mechanism is necessary.

Keywords: Slow coronary flow, QTc, PCI, ECG.

		Group I	Group II	p
Sex	Female	%35.9	%35.9	0,111**
	Male	%48.6	%51.4	
Diabetes mellitus	Positive	%35.5	%64.5	0,527**
	Negative	%43.8	%56.2	
Hypertension	Positive	%47.9	%52.1	0,161**
	Negative	%36.7	%63.3	
Family history	Positive	%43.7	%56.3	0,716**
	Negative	%40.7	%59.3	
Hyperlipidemia	Positive	%49.3	%50,7	0,113**
	Negative	%36.5	%63.5	

Smoking	Positive	%54.3	%45.7	0,242**
	Negative	%38.7	%61.3	
	Quit	%33.3	%66.7	
QTc	mean±SD	409.52±31.41	409.73±34.79	0.988*
	Median (min-max)	339-495 (402)	340-472 (410.5)	
QRS	mean±SD	88.59±14.08	87.93±11.97	0,638*
	Median (min-max)	40-119 (87)	56-119 (86)	
QT	mean±SD	379.58±27.28	370.83±28.92	0,061***
	Median (min-max)	302-440 (377)	289-436 (372)	
Heart Rate	mean±SD	71.52±15.98	74.81±15.37	74.81±15.37
	Median (min-max)	45-135 (68.5)	74.81±15.37	

ID: **844**

Topic: **Cardiovascular Surgery » Surgical treatment of AF**

Presentation Type: **Oral**

THE IMPORTANCE OF ADDRESSING ATRIAL FIBRILLATION DURING CONCOMITANT CARDIAC SURGERY

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Objective: Long-term maintenance of sinus rhythm for patients undergoing cardiac surgery with atrial fibrillation (AF) is only possible with concomitant Cox Maze IV operation. Contemporary studies suggest that concomitant biatrial lesion sets produce up to 90% long-term sinus conversion rates. This has the potential to improve life quality and even survival of the patients; however, many surgeons are reluctant to perform this procedure. More than half of the AF patients undergoing cardiac surgery for different reasons never receive any kind of intervention for AF. Rate control with anti-coagulation remains the only alternative treatment for those patients. Anticoagulation can be a relatively safe option at the time of surgery but may become dangerous or even contraindication with the patient's increasing age and new diseases that may develop.

Method: 74 year old female patient was admitted to our clinic with dyspnea with mild exertion. Long standing persistant atrial fibrillation rhythm was seen in the electrocardiogram (Fig1). Echocardiography showed ejection fraction 55%, severe mitral and tricuspid regurgitation, left atrial diameter 49 mm, end-diastolic dimension 56 mm, end-systolic dimension 37 mm, pulmonary arterial systolic pressure was 30 mmHg. While investigating the patient, urgent surgery was planned for the patient because of the progression of dyspnea. The operation was performed with standard median sternotomy. After performing a right atriotomy, the right atrial Cox Maze IV lesions were performed in the beating heart by using argon cryoprobe (CardioblateCryoFlex 10-S Surgical Ablation Probe, Medtronic). The left atrial appendage was excised and closed primarily. After performing a left atriotomy, left atrial CoxMaze IV lesions were performed. The cleft in the mitral valve p2 segment was repaired, then the 30 mm Medtronic Profile 3D rigit ring was implanted into the mitral annulus.28 mm Medtronic Contour 3D rigit ring was implanted into the tricuspid annulus. In intra-operative trans-esophageal echocardiography, the mitral and tricuspid valve regurgitation was not observed, and the patient had sinus rhythm.

Results: Six months after surgery, She was diagnosed as myelodysplastic syndrome with low platelet counts which made anticoagulation contraindicated. Her rhythm holter examination showed that she was still in sinus rhythm. Her echocardiography revealed a normal ejection fraction with mild mitral and tricuspid insufficiency. In addition to valve repairs, maintenance of sinus rhythm made her hematologists treat her without using any anticoagulation medicine.

Conclusions: Atrial fibrillation should be addressed during cardiac surgery because maintenance of sinus rhythm is always beneficial and might become more crucial during follow up!

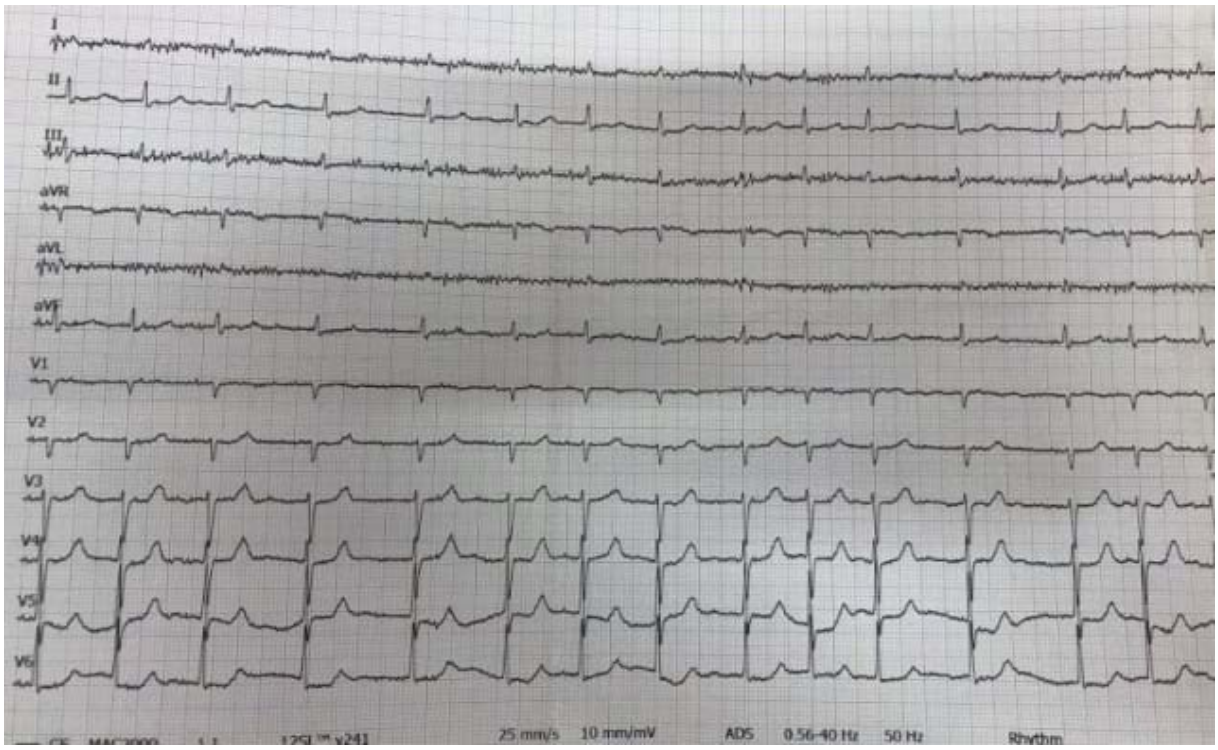

Figure 1 Preoperative Electrocardiogram

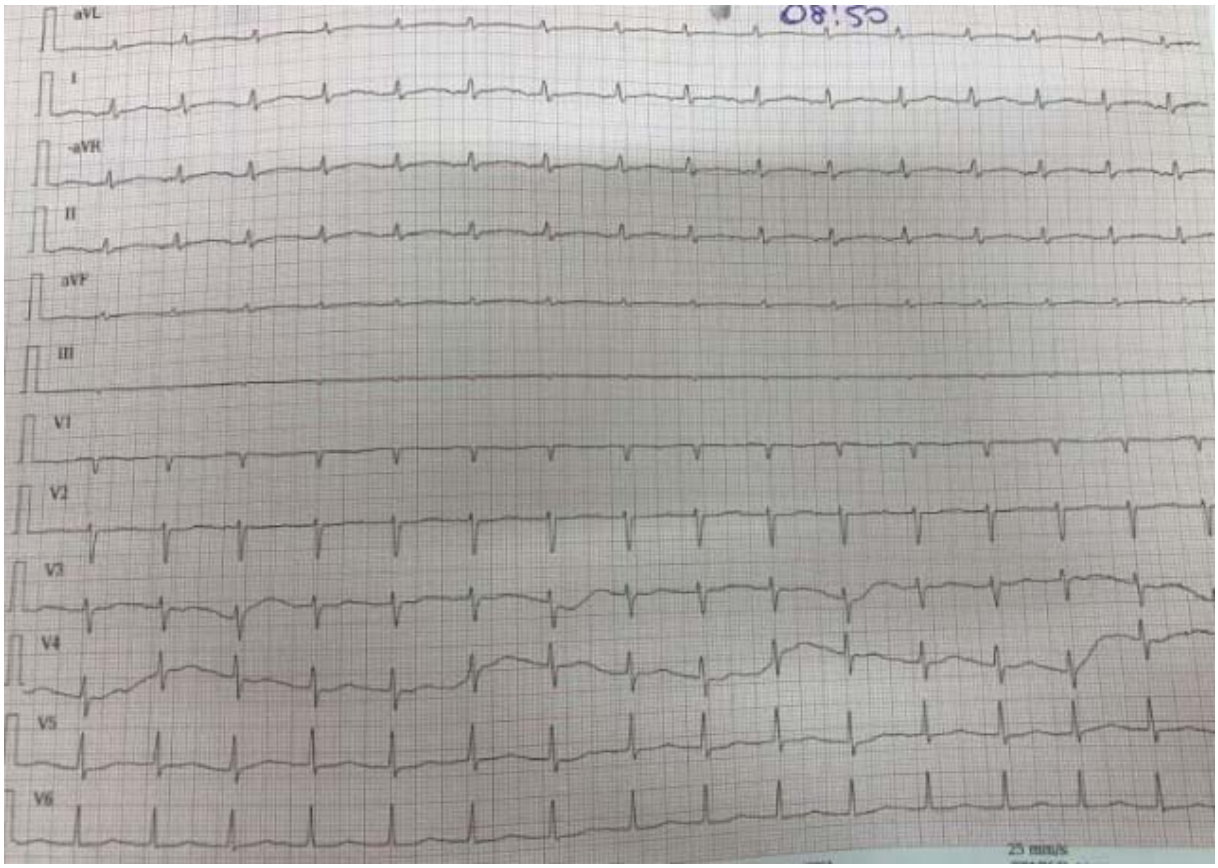

Figure 2 Postoperative Electrocardiogram

ID: **825**

Topic: **Cardiology » Electrocardiography and Non invasive electrocardiology**

Presentation Type: **Oral**

EVALUATION OF HEART RATE RECOVERY AFTER EXERCISE STRESS TEST IN PATIENTS WITH SYMPTOM POSITIVE

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OBJECTIVE: There is still an uncertainty when investigating coronary artery disease (CAD) in patients whose exercise test is symptom-positive. Previous studies have revealed that autonomic dysfunction and impaired heart rate recovery(HRR) after exercise was associated with prognosis of CAD. In this study , we aim to evaluate heart rate recovery after the exercise stress test in patient with symptom positive.
METHODS: Our study includes a total of 58 patients who submitted to treadmill electrocardiographic exercise stress tests. All patients underwent 12-lead surface electrocardiograms (ECGs), echocardiography and submaximal treadmill exercise testing (Bruce protocol). Heart rate values at the 1st, 2nd, and 3rd minutes of the recovery phase from the peak heart rate (HRR1, HRR2, HRR3) and peak heart rate ratio(rHRR1, rHRR2, rHRR3) were calculated from treadmill records. We have tree groups. The groups include 20 healthy individuals (group A), 19 symptom-positive patient(group B) and 19 patients whose exercise test is positive (group C).
RESULTS: In all, 58 patients (20% females) were enrolled in our study. There was no differences among the groups of baseline clinical, demographic, and echocardiographic parameters of the study participants. HRR parameters, the HRR1, HRR2, and HRR3 values were significantly reduced in the patient group but rHRR1, rHRR2 and rHRR3 values were similar in all groups . In addition, exercise time and METs values are significantly different among the groups ($p< 0.001$).

CONCLUSIONS : Although HRR parameters are signi cantly reduced in patients whose exercise test is positive, rHRR parameters are similar both positive group and healthy group.Our study revealed that the HRR parameters alone may not be sufficient for evaluating autonomic dysfunction in patient whose exercise test is positive.

Table 1	**Group A n=20**	**Group B n=19**	**Group C n=19**	**P value**
Age, years	45.8±12.3	54.3±10.7	49.8±9	0.6
Gender, female/male	5/20	5/19	2/19	0.409
Ejection fraction	61.2±2.7	59.3±3.3	60.1 ±3	0.158
Basal heart rate	85.7±11.8	79.9±9.5	95.3±17.7	0.03
Peak heart rate	167.4±10.5	143.2±20.9	150.6±10.5	<0.001
HRR1	140.1± 14.6	116.3±18.1	126±19.7	<0.001
HRR2	124.4±16.1	101.4±16.2	111.5±18.9	<0.001
HRR3	112.3±15.1	93.3±15.8	101.6±16.7	0.002
rHRR1(%)	16.3±6.5	18.6±6	16.6±9.1	0.572
rHRR2(%)	25.7±8.2	29±6.3	26.2±8.2	0.395
rHHR3(%)	32.9±8.3	34.8±5.3	32.8±7.6	0.633
Exercise time	9.4±1.6	6.2±1.9	7.6±1.7	<0.001
METs	10.8±1.9	7.9±2	8.8±1.7	<0.001

ID: **763**

Topic: **Cardiology » Arrhythmias and antiarrhythmic therapy**

Presentation Type: **Oral**

A FAMILY WITH ANDERSEN-TAWIL SYNDROME DIAGNOSED BY COMPLICATED PREGNANCY DUE TO BIDIRECTIONAL VENTRICULAR TACHYCARDIA

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Aim: Andersen-Tawil syndrome (ATS) is a rare autosomal dominant potassium channelopathy. The disease is caused by loss-of-function mutations in the KCNJ2 and KCNJ5 genes that encodes an inward rectifier K+ channel. It is characterized by the clinical triad of periodic paralysis, cardiac arrhythmias and dysmorphic features. We aimed to investigate 3 cases from the same family that had been diagnosed in our center.

Methods: We studied 3 patients from the same family who have cardiac arrythmias and dysmorphology conherent with ATS. Demographic information, personal and family history of symptoms, arrhythmic events, electrocardiographic (ECG) parameters, therapies at enrollment and during follow-up, and data related to extracardiac manifestations of ATS were collected. Conventional ECG, Holter ECG monitoring, echocardiography and genetic analysis were performed.
Results: A family consists of two siblings (18,23) and a mother (48) who suffer from palpitations have been investigated. Their ECG showed prolonged QTc (index case: 518, sibling: 470, mother: 480) which is more prominent in one of the siblings who is pregnant with 28 weeks. Holter monitorization demonstrated high burden of ventricular ectopy and bidirectional VT (BidVT). By the aid of fenotype Andersen Tawil syndrome was suspected and promoted by genetic testings. Different medical treatment regimes were adopted among family members with distinct outcomes.

Conclusion: As the characteristic features are very variable, diagnosis of ATS is challenging. Treatment of cardiac arrhytmias are tricky as antiarrhythmic treatment for patients with ATS is empirical. It is even harder during pregnacy because of safety concerns. Response to treatment is rather variable as the severity of the syndrome is diverse among the affected members. ATS should be considered in the diagnosis in patients with BidVT.

Keywords: *Andersen-Tawil syndrome *Pregnancy *Bidirectional VT *Antiarrhytmic medications

PATİENT 1	PATİENT 2	PATİENT 3	
GENDER	F	F	F
AGE(Years)	23	48	18
Symptom	Palpitation	None	None
Syncope	None	None	None
ECO	Normal	Normal	Bicuspid Aorta
QTc on ECG	518 ms	480 ms	470 ms
Baseline ECG	Bidirectional VT	Frequent supraventricular ectopy	Frequent ventricular ectopy

VEA Burden	40314 (%38)	1987 (%2)	3163 (%3)
VT	Present	No	No
Max QTc	520	559	506
MIN HR	51	49	40
MAX HR	107	160	150
Treatment	Metoprolol 2x50 mg	Propaphenone 2x150 mg	None
Genetic	KCNJ2 mutation	KCNJ2 mutation	KCNJ2 mutation

Oral Presentation Session

Noval Approaches and Outcomes for Heart Valve Surgery

Date: 31.10.2020 Time: 17:30 - 18:30 Hall: 5

ID: **169**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

MITRAL VALVE REPAIR IN CHILDREN WITH MARFAN SYNDROME

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BACKGROUND: Mitral valve prolapse is the most common cardiac-related involvement of Marfan syndrome. Severe mitral regurgitation caused by mitral valve prolapse in children requires valve repair.

METHODS: A 5-year-old 22 kg female patient was admitted to our hospital with tachypnea. Severe mitral regurgitation and ASD were revealed by echocardiography. This patient had also lens dislocation and skeletal anomalies. Mitral valve repair was performed successfully from the median sternotomy. We performed anterolateral and posteromedial papillary muscle shortening, A2 chordal shortening, implantation in P2 loop neochordae, and 3D physio ring (30 mm) annuloplasty. ASD was closed with pericardium treated with glutaraldehyde. X clamping time was 130 minutes.

RESULLTS: In postoperative period echocardiography showed no mitral regurgitation or stenosis.

CONCLUSION: In children who undergoing open heart surgery due to mitral insufficiency, valve repair should performed and valve replacement should be avoided.

ID: **599**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Oral**

INTRAOPERATIVE DIAGNOSIS OF QUADRICUSPID AORTIC VALVE WITH SEVERE AORTIC INSUFFICIENCY

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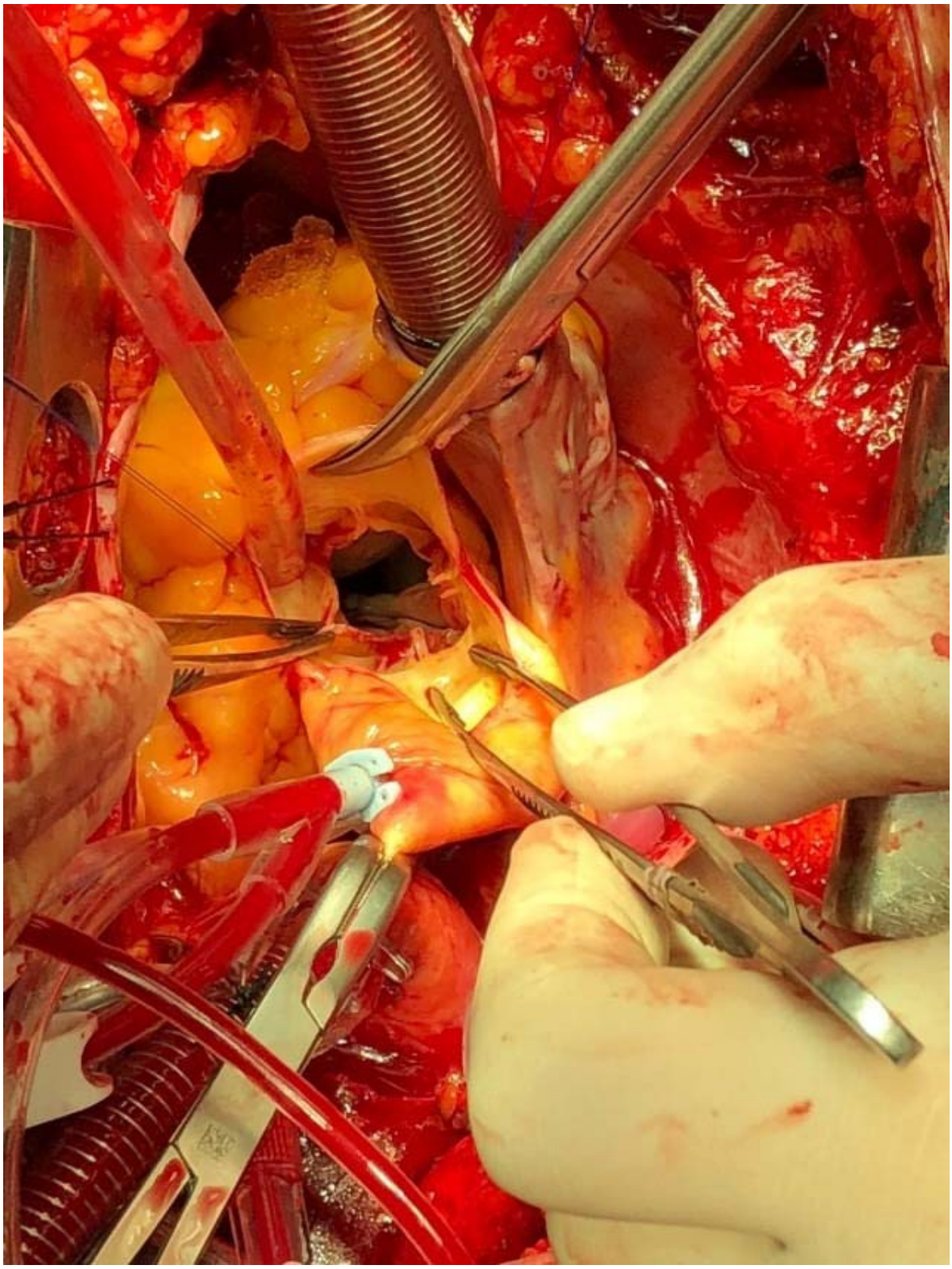
Background: Quadricuspid aortic valve is a rare congenital cardiac anomaly. It is generally isolated and complicated with aortic insufficiency, with a slow and progressive evolution. Significant valvulopathy is often toward the fifth to sixth decade. Diagnostic tools are transthoracic (TTE) and transesophageal echocardiography (TEE). Though, some patients get the diagnosis during aortic valve replacement.

Case presentation: In this case, a 58-year-old man, suffering from dyspnea and weakness, was referred to surgical AVR for significant aortic insufficiency with reduced EF (%25) and heart failure (NYHA class III-IV). The patient who was evaluated and followed by dilated cardiomyopathy for 8 years at multiple heart center for his symptoms with coroner angiography and echocardiography assessment. In this process, moderate aortic insufficiency was reported but heart failure was progressive thus CRT-ICD was implanted two years ago. The patient referred to our clinic for aortic valve replacement due to severe aortic regurgitation. In the operation, while performing the aortatomy, it was evaluated that the structure of the aortic valve was quadricuspid. It was not appropriate for aortic valve repair. Therefore, it was replaced with 23 mm mechanic aortic valve.

Conclusion: Despite extensive and advanced use of echocardiography, in some cases it cannot be enough for diagnoses. QAV can reduce ejection fraction and induce heart failure prior of resulting severe aortic regurgitation.



ID: **550**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Oral**

COMPARISON OF PERIOPERATIVE RESULTS OF SUTURELESS AND CONVENTIONAL VALVES IN AORTIC VALVE REPLACEMENT SURGERY

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Objective: The aim of this study was to evaluate the early and midterm results of sutureless and conventional valves used in patients with bioprosthetic aortic valve replacement on aortic stenosis.

Methods: Patients who underwent a bioprosthetic aortic valve replacement on the aortic stenosis at the Cardiovascular Surgery Clinic of Kartal Koşuyolu Yüksek İhtisas Training and Research Hospital between the years of 2012-2017; divided into two groups as sutureless bioprosthesis were implanted and conventional bioprosthetic aortic valve implants. The patients in these 2 groups were evaluated by comparative analyzes.

Results: The number of patients in the sutureless group was 62 (22 male, 40 female, mean age 71,38 ± 9,83) and 69 (34 male, 35 female, mean age 70,36 ± 12,32) in the conventional group. The surgical risk assessment using the EuroScore 2 in the sutureless group was found to be statistically significant (p=0,0121). The mini incisional approach in the sutureless group was 22 (36%) while in the conventional group only 4 (6%) were found. (p=00002). Mean Aortic Cross Clemp Time (ACCT) was 53.87 min (min: 15 min, max: 175 min) in the sutureless group and 79.2 min (min: 30 min, max:226 min) in conventional group was found to be significant. In sutureless group, the mean cardiopulmonary bypass (CPB) times was 87.56 min (min: 28 min, max: 216 min) while in the conventional group CPB times found 117.45 min (min: 44 min, max: 540 min) as statistically significant (p <0.0001); it was found to be strongly significant. Early (<30 days), all-cause mortality in total sutureless group was 5 (8.06%), while in the conventional group 2 was calculated as 2 (2.90%) (p=0.255). Early mortality due to cardiac causes was 1 (1.61%) in the sutureless group and 1 (1.45%) in the conventional group (p = 1,000). Mortality due to all causes in the late period (> 30 days) was 11 (19,30%) in the sutureless group and 13 (19,40%) in the conventional group (p = 1,000). Late mortality due to cardiac causes was 4 (7.02%) in the sutureless group and 9 (13.43%) in the conventional group (p=0,379). When Kaplan-Meire survival analysis was performed, the overall survival rate of the sutureless valve group was found to be 72.6% and 78.3% in the conventional valve group (p=0,253).

Conclusions: Sutureless aortic valves appear to be a promising alternative to conventional valves in advanced elderly and high-risk patients with comorbid diseases,

Keywords: Aortic stenosis, Aortic valve replacement (AVR), Sutureless aortic valve

ID: **367**

Topic: **Cardiovascular Surgery » Heart Valve Repair**

Presentation Type: **Oral**

INFECTIVE ENDOCARDITIS ASSOCIATED WITH SPONDILODISCITIS, OUR EXPIRIENCE

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Background: Infective endocarditis associated with a high of risk of complications such as systemic and cerebral emboli, glomerulonephritis, splenic infarction and rheumatologic manifestations. Spondylodiscitis, however, is rarely observed. It is association with infective endocarditis in about 4% of that patients.

Methods: Case 1- A 48- year old man was hospitalized with low back pain and fever. Ten days before, patient had a urinary infection. During hospitalization, after magnetic resonance was done, discitis was revealed. Ten days delay diagnosis of infective endocarditis was established according to the Duke criteria. An echocardiography revealed vegetations on septal cuspis of tricuspid valve. Blood cultures were obtained grew out Staphylococcus Aureus. Antimicrobial therapy was initiated according the results of blood culture, 4 weeks. Case 2- A 78-old man was admitted to hospital because he had high temperature and low back pain. He had severe urinary infection. After Magnetic resonance was done, discitis was revealed on two places. Case 3 A 54-year old man was admitted with high temperature and low back pain. Transesophageal echocardiography confirmed endocarditis of mitral valve. After magnetic resonance was done, discitis was revealed on two places. Blood cultures were obtained grew out Staphylococcus aureus. The patient was treated with three antibiotics intravenous six weeks.

Results: First and second patient, after 4 weeks antibiotics therapy, were operated on. In fist patient we removed the vegetations with partial excision of septal cuspius and performed annuloplasty of tricuspid valve. In second patient, we replaced the aortic valve with aortic biological valve. Intraoperative we found vegetations on right cuspis and perforation of the left. On the same way we continued antibiotics therapy next 4 weeks.

Conclusions: Infective endocarditis should be included in differentia diagnosis in patients with spondylodiscitis and risk factors for endocarditis. In such patients, echocardiography should be performed routinely.

ID: **605**

Topic: **Cardiovascular Surgery » Heart Valve Repair**

Presentation Type: **Oral**

CLOSE MITRAL COMISSUROTOMY IS STILL A GOOD OPTION FOR MITRAL STENOSIS IN BANGLADESH A 20 YEARS FOLLOW UP

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Background: The incidence of rheumatic fever in Bangladesh is high. Good number of patients develop mitral stenosis. The purpose of the study is to evaluate the result of our Bangladeshi patient. We perform these operations in different hospital and clinic in Dhaka city by an organized team. Operation was done from 1999 to 2019. The total number of patients was 850. Male and female ratio was 1: 1.5. Age range from 16 years to 58 years. Most of the patients were NYHA class III. Mean MV area was calculated range from 0.5 cm2 to 1.4 cm2. MVG range from 17 mm Hg to 24 mm Hg.

Method: Consecutive patients undergoing CMC for mitral stenosis at our hospital from 1999 to 2019 were reviewed. Indication of CMC were non calcified moderate to severe mitral stenosis along with or without minimal mitral regurgitation and aortic regurgitation with moderate functional tricuspid regurgitation.

Result: The procedure was successful in 99% of the patients. Patients improved significantly after operation. 75% had major and total improvement. In hospital mortality only 0.2%. Rate of restenosis, 10% within 5 years, 40% within 15 year, 10 % within 20 years. CMC was done 2.5 cm2 to 3.5 cm2. Patient discharged after 5 + 1 days.

Conclusion: Usually the patient develop symptom at the age of 20 years and operation done at the age of 30 years. The LA appendage is ligated so there is less chance of thromboembolism. CMC is done by metallic dilator, so more chance of dilatation. It is long lasting. So we recommend CMC as a better palliative surgery in Bangladesh.

ID: **611**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Oral**

SURGICAL VERSUS MEDICAL TREATMENT OF PATIENTS WITH SEVERE TRICUSPID REGURGITATION

Hatice Irem Öztürk[1], Tuğra Gençpınar[1], Kıvanç Gökhan Kaçar[1], Hüseyin Dursun[2], Abidin Cenk Erdal[2], Mehmet Birhan Yılmaz[2], Öztekin Oto[2]

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Objectives:
The aim of this study was to assess the outcome of isolated tricuspid regurgitation (TR) who underwent tricuspid valve replacement (TVR) or received drug treatment.

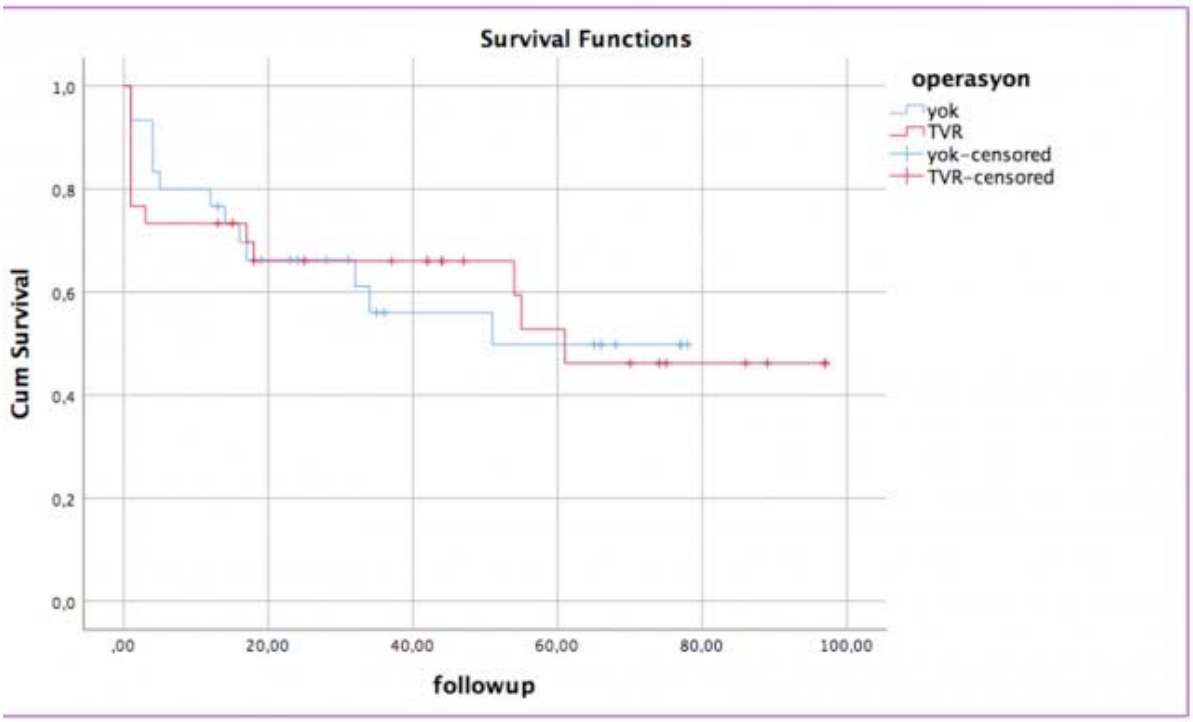
Background:
TR is associated with increased rates of heart failure and mortality. Severe isolated disease of the tricuspid valve (TV) is increasing and results in intractable right heart failure. However, isolated TV surgery is rarely performed, and there are little data describing surgical outcomes.

Methods:
Patients with isolated severe TR who underwent TVR or medically managed from December 2010 to November 2019 in our hospital were identified. Patients with malignancy, pregnancy, previous history of cardiopulmonary resuscitation, concomitant severe pathology of other valves and undergoing concomitant cardiac valve operations were excluded.

Results:
Almost a 10-year period, a total of 60 isolated severe TR patients identified, follow-up was 35±29 months. In medically managed group, 66.7% of the patients were female (n=20), mean age was 62±7 years. In TVR group, 80% of the patients were female (n=24), mean age was 53±17 years. In both groups, the presence of NYHA range(p=0.591), diabetes mellitus (DM) (p=0.712), hypertension (HT) (p=0.148), severe kidney disease (p=0,425) were similar. 30 isolated TV operations were performed, fourteen (46.6%) of them were redo-TVR. Overall mortality was occurred in 13 (43.3%) patients in medically managed group and 13 (43.3%) patients in TVR group (p=1.00)
In both groups, from univariate analysis, male gender (p=0.036), increased index admission pulmonary artery pressure(PAP) (p=0.053), decreased index admission glomerular filtration rate GFR (p=0.028), decreased index admission hemoglobin (p=0.001), DM (p=0.042) and high New York heart association (NYHA) classification (p=0.016) were statistically significant for mortality. From Backward Stepwise LR multivariate analysis, index admission hemoglobin [p<0.024, exp(B):0.594 (95% CI=0.378-0.933)] and male gender [p=0.01, exp(B):30.302 (95% CI=2.254-407] were independent predictors of mortality.

Conclusions:

Isolated TV surgery is rarely performed, although utilization has increased over time. However, despite an increase in surgical volume, operative mortality is still high the same as medical treatment. Therefore, research into optimal surgical timing and patient selection is critical. Preoperative optimal treatment of modifiable risk factors such as anemia, DM and chronic kidney diseases may reduce mortality. Besides the third option such as Transcatheter tricuspid valve interventions might be considered in patients who are not suitable candidates for TVR. Larger trials should be performed to confirm these results.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ID: **620**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

RIGHT VENTRICULAR HYDATID CYST RUPTURED IN THE PULMONARY ARTERY

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Introduction: Cardiac location of hydatid disease is rare (<3%), even in endemic countries. It is an affection characterized by a long functional tolerance and a great clinical polymorphism.

Methods: We report a case of a 44-year- man old, with no medical history presenting a respiratory distress and cyanosis, following the sudden rupture of a right ventricular hydatid cyst in the pulmonary artery shown on echocardiography.
The intraoperative exploration revealed the rupture of the right ventricular cyst in the pulmonary artery; which contained a clear colorless liquid, hydatid sand, Membrane, and daughter cysts. The surgical treatment consisted in removing the liquid, the membrane and the ablation of daughter cysts, sterilization by 30% hypertonic saline solution, and finally the padding of the residual cavity.

Results: the immediate postoperative course was simple.

Conclusion: Cardiac hydatid cyst surgery is required, due to the rupture risk and sudden death by anaphylactic choc.

ID: **709**

Topic: **Cardiovascular Surgery » Heart Valve Repair**

Presentation Type: **Oral**

TRANS APICAL OFF-PUMP MITRAL VALVE REPAIR

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Objective:

Mitral valve repair is the gold standard treatment modality for degenerative mitral insufficiency. However, open-heart surgery may be too risky for elderly patients with many other co-morbidities due to side effects of cardiopulmonary bypass.
Trans apical off-pump neochordae implantation technique is a new and micro invasive way of mitral valve repair for mitral valve prolapse.

In current case we present an elderly patient who diagnosed to have severe mitral insufficiency due to mitral valve prolapse and chronic renal disease; and treated with trans apical off-pump neochordae implantation technique.

Case presentation:

72 years old male patient was hospitalized due to severe dyspnea and severe mitral insufficiency was detected on echocardiographic examination. Transesophageal echocardiography further revealed flail P3 segment of the posterior leaflet due to ruptured chords. Also, his medical history revealed chronic obstructive pulmonary disease and polycystic renal disease with blood creatinine levels 4.8 mg/dl. Due to co-morbidities, mitral repair with conventional open-heart surgery deemed to carry high risk of mortality and the patient was scheduled for trans apical off-pump neochordae implantation procedure.

Trans apical access was obtained via left submammarian 4 cm incision from 5th intercostal space. The whole procedure was done under 3D echo guidance. After placing purse string sutures with pledgets to the posterolateral part of the heart, the instrument was inserted and passed through mitral valve to reach left atrium under echo guidance after the patient is given heparin. The jaw of the instrument was opened and pulled back until the ruptures segment was captured. The appropriate capture was confirmed with fiber optic indicator and then, CV-4 gore-tex suture was implanted. After one more neochordae implantation, the two neochordaes was pulled out from the apex of the heart and appropriate size was determined under echo. Optimal length was adjusted and the chords was fixed to the apex of the heart over a Teflon pledget. The final result was minimal mitral valve insufficiency.
Conclusions:
Mitral valve repair with trans apical off-pump neochordae implantation technique is a new way of repairing the mitral valve and gaining popularity in all over the world. Since the procedure is off-pump and devoid of side effects of cardiopulmonary bypass, it may be a good option for patients who are candidates for mitral valve repair and otherwise carry high-risk of mortality and morbidity with conventional open-heart surgery.

ID: **725**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

AN ADVANCED SELF-MADE SIMULATOR BOX FOR CARDIAC SURGERY

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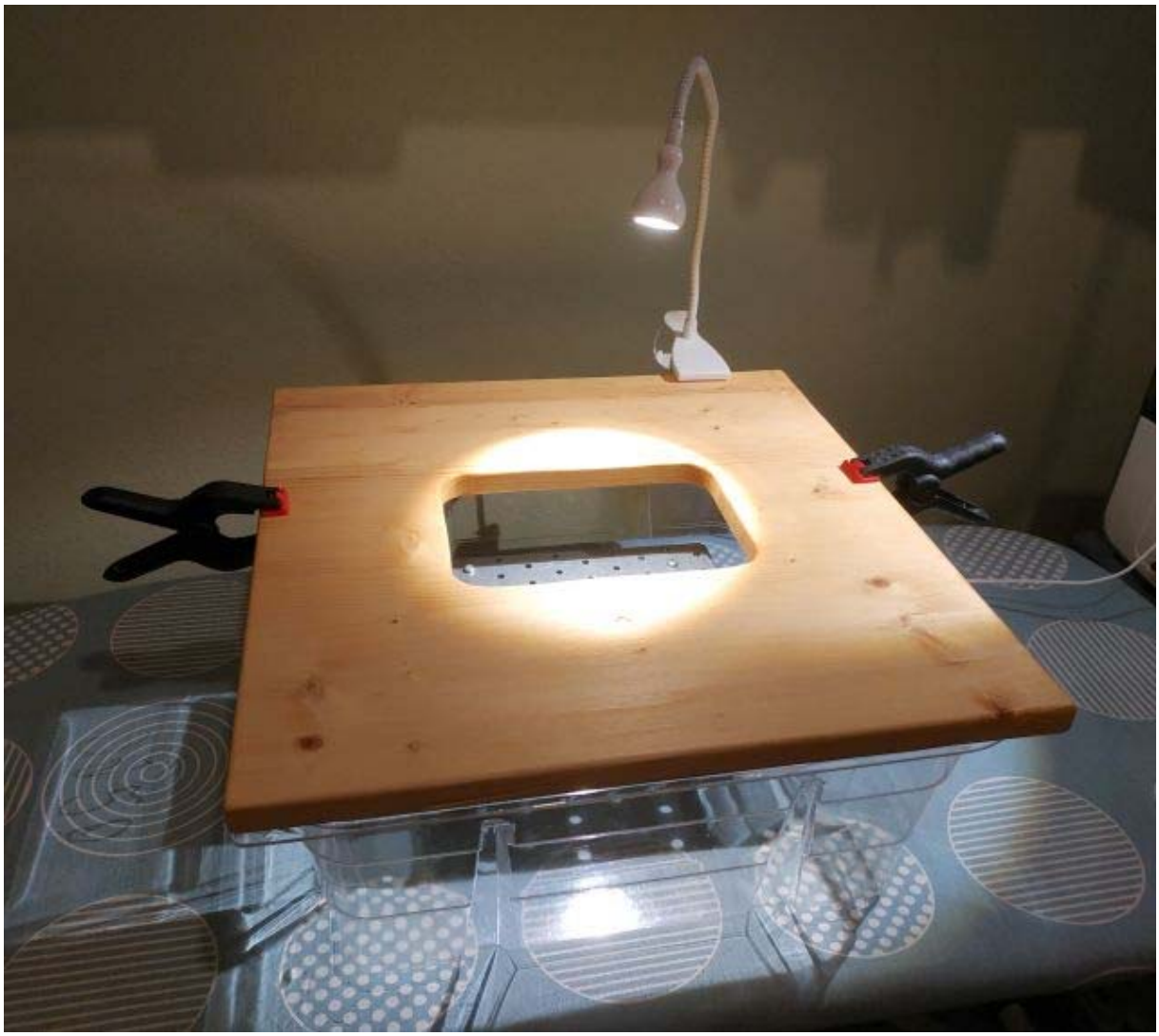
BACKGROUND: Simulator-based training is a modern trend in any field of surgery. Our aim was to develop a simple and universal simulator to train cardiac surgical residents.

METHODS: Our simulator consists an internal adjustable metal platform, plastic box and a cover (Figure 1). The internal platform is assembled from wood connectors; the box is taken from a Custom Tubing Pack (Medtronic Inc., Minneapolis, MN, USA); and the cover is made of wood. The latter is supplemented with a Gabbay-Frater suture guide (Teleflex Inc., Wayne, PA, USA) and a crocodile clip.

RESULTS: The design of the simulator allows to fixate various items easily under a required degree — these characteristics make the simulator multipurpose: it may be used to practice aortic purse-string sutures, aortic cannulation, coronary anastomoses, aortic valve/root and mitral valve procedures, as well as a repair of traumatic injuries. Moreover, the simulator is cost-effective as its total cost does not exceed 10 Euro.

CONCLUSIONS: Our simulator box may be applied to simulate a variety of cardiac surgical techniques and, which is more, is affordable and easy to assemble by a trainee.



ID: **635**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Oral**

COMPARATIVE EVALUATION OF MORTALITY AND HEMODYNAMIC PERFORMANCE BETWEEN ATS AND ST JUDE MECHANICAL HEART VALVES IN MITRAL AND AORTIC POSITIONS

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Background: Rheumatic heart disease is the most commune heart disease in Asian countries specially in Afghanistan, the age adjusted death rate for this heart disease is 27,57 per 100 000 people as published by data of world health organization (WHO). ST JUDE mechanical heart valve first time implanted in October 1977 and quickly became the gold standard for subsequent valve, and ATS medical international developed a mechanical heart valve that has been in use since 1992, these mechanical heart valves implantation has been started in Afghanistan since 2012.

We present a result of 148 patients who have undergone valve replacement in mitral and aortic position with ATS and ST JUDE mechanical heart valves at departments of cardiothoracic and vascular surgery amiri medical complex and global medical complex Kabul Afghanistan.
Method and results: we performed ATS and ST JUDE mechanical heart valve replacement in 148 patients between May 2015 and April 2018 at departments of cardiothoracic and vascular surgery global medical complex and amiri medical complex Kabul Afghanistan.
Male patients were 69(46.6%) and female patients were 79(53.3%), age range was between 11-65 years, 94(63.5%) patients under went mitral valve replacement, for 38(25.6%) patients performed aortic valve replacement and 16(10.8%) patients undergone double valve replacement, overall mortality were 16(10.8%) patients for mitral, aortic and double valve replacement. The early mortality (hospital mortality) were 4.05% and late mortality during 3 years follow up were 6.7%.

Conclusion: there were seen a few prosthetic valve complications after ATS mechanical valve implantation (total number of implanted ATS mechanical heart valve were 70), early mortality was just 1 patient and there was no late mortality, but in implanted ST JUDE mechanical heart valve (total number of implanted ST JUDE mechanical heart valve were 78) the early mortality were 6 patients and late mortality were 9 patients due to valve related complications. The international normalized ratio(INR) was maintained between (2.5-3.5) in both ATS and ST JUDE mechanical heart valves for mitral position and (2-3) for aortic position, hemodynamically ATS mechanical heart valve seen better than ST JUDE mechanical heart valve regarding trans valvular gradient, thrombosis and low prosthetic valve noise, and this appears to be an excellent mechanical heart valve.

Oral Presentation Session

Clinical and Epidemiologic Features of Atrial Fibrillation: New Insights

Date: 31.10.2020 Time: 18:30 – 19:45 Hall: 4

ID: **339**

Topic: **Cardiology » Transcatheter ablation for tachyarrhythmias - Atrial fibrillation**

Presentation Type: **Oral**

THE PREDICTIVE VALUE OF PRECISE-DAPT SCORE FOR THE THROMBOGENIC MILIEU IN LEFT ATRIUM AND LEFT ATRIAL APPENDIX IN THE PATIENTS WITH ATRIAL FIBRILLATION

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Introduction and Aim: Atrial fibrillation (AF) is the most common arrhythmia in the clinical practice. In AF patients, the assessment of thromboembolic risk and the initiation of anticoagulant therapy to appropriate patients play critical role in management of these patients. Current guidelines recommend to use CHA2DS2VASC score in evaluation of thromboembolic risk. However, the effectiveness of this score has been questioned recently. This situation requires new risk indicators. Although PRECISE-DAPT score was initially constituted to determine the duration of dual antiplatelet therapy in patients with PCI, current studies have reported that this score may also predict thrombotic events. In this study, we aimed to evaluate the effectiveness of PRECISE-DAPT score to predict thrombogenic milieu by comparing with CHA2DS2VASC score in non valvular AF patients whom referred TEE before AF ablation procedure.

Method: 428 patients were included in the study. The presence of grade 2-3 SEC and thrombus in left atrium and/or left atrial appendage were accepted as thrombogenic milieu. The patients were divided into two groups according to the presence of thrombogenic milieu. In addition, we constituted three groups as grade 0-1 SEC group, grade 2-3 SEC group and thrombus group to evaluate the parameters in detail.

Results: Grade 2-3 SEC was found in 36 patients and thrombus was detected in 24 patients. 60 patients were included to the thrombogenic positive (artı) group while 368 patients were included to thrombogenic milieu (-) group. PRECISE-DAPT and CHA2DS2VASC scores were higher in thrombogenic positive (artı) group in multivariate logistic regression analysis, PRECISE-DAPT score was found to be an independent predictor of thrombogenic milieu (OR: 1.145, CI:1.083-1.211, p<0,001). The comparison of ROC curves was shown that PRECISE DAPT score was higher area under curve than CHA2DS2VASC score, 0,745 and 0,649 respectively.

Conclusion: In our study, in patients performed TEE before AF ablation, PRECISE-DAPT score was found to be an independent predictor for thrombogenic milieu presented as high grade SEC and thrombus, there by thromboembolic risk. PRECISE-DAPT score seems to be more effective than CHA2DS2VASC score. In AF patients, PRECISE-DAPT score may provide additional benefit in assessment of thromboembolic risk, thus enabling a more individual and accurate anticoagulation decision in these patients.

Key words: AF, PRECISE-DAPT, SEC ve thrombus

ID: **189**

Topic: **Cardiology » Management of Atrial Fibrillation**

Presentation Type: **Oral**

EVALUATION OF DIFFERENCES IN DEMOGRAPHIC AND CLINICAL PARAMETERS BETWEEN PATIENTS WITH PAROXYSMAL AND PERSISTENT/PERMENANT ATRIAL FIBRILLATION IN SOUTH-EASTERN REGION OF TURKEY

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[2]*Dicle University Faculty of Medicine, Diyarbakir, Turkey*

[3]*Marmara University Faculty of Medicine, Istanbul, Turkey*

[*]*Corresponding Author (fethullahkayan@hotmail.com)*

Objective: The aim of the present study is to investigate the differences in demographic and clinical findings of patients with paroxysmal and permenant/persistent atrial fibrillation in south-eastern region of Turkey

Methods: Two-hundred consecutive patients without exclusion criteria who had admitted to cardiology clinic of an university hospital with the diagnosis of AF between January 2012 and October 2013 constituted our study population. Patients with valvular AF were excluded from the study. Demographic and clinical data of the patients were retrospectively reviewed from patient files.

Results: Clinical and demographic findings of patients with paroxysmal and persistent/permanent AF are persented on table 1. Patients with persistent/permanent AF were older and higher prevalence of congestive heart failure, ischemic dilated cardiomyopathy, history of stroke/transient ischemic attack (TIA). There were no significant differences between groups regarding body-mass index and prevalence of hypertension, diabetes and coronary artery disease. CHA2DS2 VASc score of patients with persistent/permanent AF was significantly higher compared to patients with paroxysmal AF.

Conclusion: Patients with persistent/permanent AF displayed a higher clinical risk profile compared to patients with paroxysmal AF in our study. Persistent/permenant atrial fibrillation may be considered as a representative of the higher risk of the patient and therapy should be intensified with special emphasis on anticoagulation.

Table-1 : Clinical and demographic findings of patients with paroxysmal and persistent/permanent AF

Parameter	Paroxysmal AF	Persistent/Permanent AF	p value
Age (years)	63.9 ± 12.4	70.6 ± 10,9	<0.001
Gender (male, %)	23 (41.1%)	61 (42.4%)	NS
Body-mass index (kg/m^2)	27.9 ± 6.4	28.3 ± 5.7	NS
Congestive heart failure (n, %)	11 (19.6%)	62 (43.1%)	0.002
Hypertension (n, %)	34 (60.7%)	100 (69.4%)	NS
Diabetes mellitus (n, %)	8 (14.3%)	36 (25%)	NS
History of Stroke/TIA (n, %)	2 (3.6%)	21 (14.6)	0.028
Coronary artery disease (n, %)	22 (39.3%)	69 (47.9%)	NS
Smoking habitus (n, %)	12 (21.4%)	18 (12.5%)	NS
Ischemic dilated cardiomyopathy (n, %)	5 (8.9%)	31 (21.5%)	0.03

Nonischemic dilated cardiomyopathy (n, %)	2 (3.6%)	16 (11.2)	NS
Hypertrophic cardiomyopathy (n, %)	0 (0%)	1 (0.7%)	NS
Hyperthyroidism (n, %)	5 (8.9%)	13 (9%)	NS
CHA2DS2 VASc score	2.7 ± 1.7	3.8 ± 1.6	<0.001

ID: **316**

Topic: **Cardiology » Arrhythmias and antiarrhythmic therapy**

Presentation Type: **Oral**

ASSOCIATION OF OBSTRUCTIVE SLEEP APNEA WITH POSTOPERATIVE ATRIAL FIBRILLATION IN PATIENTS UNDERGOING CORONARY ARTERY BYPASS GRAFTING

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[3]*Koç University, Istanbul, Turkey*

[*]*Corresponding Author (ceramos3@gmail.com)*

OBJECTIVE

Postoperative Atrial Fibrilation (POAF) is known to occur up to 33% after coronary artery bypass grafting (CABG) operations. Obesity is suggested to be one of the contributing factors for POAF following CABG. Obstructive sleep apnea (OSA) is also common in patients with coronary artery disease (CAD), and may contribute to POAF, since obesity and OSA co-exist. We aimed to adress the relationship between OSA and POAF in a subcohort of revascularized CAD patients undergoing CABG.

METHODS

This was a secondary analysis of the RICCADSA (Randomized Intervention with CPAP in Coronary Artery Disease and Obstructive Sleep Apnoea) trial, conducted in Sweden between 2005 and 2013. Among 511 revascularized CAD patients, 124 underwent CABG, followed by a home sleep study, in average 73±30 days after the operation. OSA was defined as an apnea-hypopnea index (AHI) of at least 15 events per hour, and non-OSA as an AHI below 5 events per hour. Severe OSA was defined as an AHI of at least 30 events per hour. Postoperative AF was defined as a new-onset AF occurring within 30 days following the CABG. A logistic regression analysis was used to determine variables associated with POAF, in which a stepwise backward model was used (variables with P>0.20 were removed).

RESULTS

After excluding eight patients with chronic AF, 116 remained as the final study population. In all, 99 (85.3%) had OSA, and 17 (14.7%) no-OSA. POAF was observed among 42 (36.2%), of whom 40 in OSA (40.4%) vs 2 in no-OSA (11.8%) (p=0.023). The frequency of POAF was higher with increasing OSA severity (48.9% in severe OSA). There was significant association between OSA and POAF (Odds Ratio [OR] 4.8, 95% Confidence Interval [CI] 1.0-22.6; p=0.048) independent of age, gender, body-mass-index (BMI), current smoking, hypertension, diabetes, and lung disease. Severe OSA was associated POAF with an OR of 7.1 (95% CI 1.4-35.6; p=0.018) in multivariate analysis. Age and diabetes mellitus, but not BMI and other variables, were associated with POAF in this cohort.

CONCLUSIONS

Our results suggest that OSA may contribute to POAF in patients undergoing CABG. Whether or not a sleep study to screen patients who will undergo CABG for OSA, and subsequently treat with continuous positive airway pressure before the surgical intervention may decrease the risk for POAF needs to be further evaluated.

ClinicalTrialRegistration: clinicaltrials.gov NCT00519597.

Acknowledgements: The study was funded by the Swedish Research Council, Swedish Heart and Lung Foundation, and ResMed Foundation.

ID: **104**

Topic: **Cardiology » Arrhythmias and antiarrhythmic therapy**

Presentation Type: **Oral**

THE EFFECT OF RCA MORPHOLOGY ON PREDICTING ATRIAL FIBRILLATION RISK

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Background: Right coronary artery (RCA) has two anatomical variations detected on coronary angiography namely C-shaped and sigma shaped RCA. It is known that C-shaped coronary artery is associated with more atherosclerotic disease but there has not been any study showing whether there is a difference between these variations in terms of susceptibility to atrial fibrillation. The aim of this study is to determine if there is an increased risk in one of these variations or not.

Methods: A total of 124 participants with normal coronary arteries in coronary angiography were included in our study. 56 had sigma shaped (45%) and 68 had C-shaped right coronary artery. P maximum (p max), p minimum (p min), p wave dispersion and p terminal force were calculated from electrocardiography. 24 hour holter monitoring was performed for detecting any arrhythmias.

Results: We determined prolonged p max, p min, p wave dispersion (PD) in sigma shaped right coronary artery patients and also abnormal p terminal force at 62% of those. There was a statistically significant difference between all of the electrocardiographic parameters. In C-shaped coronary artery group 2 of the patients had paroxsymal atrial fibrillation in holter monitoring while in sigma shaped 8 of them had (p=0,021).

Conclusion: Right coronary artery morphology can be used to determine the risk of atrial fibrillation.

ID: **101**

Topic: **Cardiology » Arrhythmias and antiarrhythmic therapy**

Presentation Type: **Oral**

THE EFFICACY OF SWITCHING ANTIARRHYTMIC DRUGS IN LONE ATRIAL FIBRILLATION PATIENTS

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[2]*Karadeniz Technical University, Trabzon, United States*

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OBJECTIVE: Several studies have shown amiodarone infusion is effective acute cardioversion of atrial fibrillation (AF). Due to high incidence of side effects clinicians may prefer switching antiarrhythmic drugs (AADs) on chronic therapy. It is not known whether the efficacy of switching AADs to AF recurrence.

METHODS: The study population consist of lone AF patients who underwent cardioversion (spontaneous, medical or electrical) by scanning the hospital database. 35 patients were identified. In addition, patients who were continuing AADs treatment after cardioversion were included in the study. In the follow-up, recurrent AF was defined as patient had documented AF in 12 lead electrocardiography and/or 24 hour holter monitoring. Patients were divided into two groups as recurrent AF (n=19) and non-recurrent AF (n=16).

RESULTS: Total follow up duration was 36.9±40.5 (1-125) months. Patients mean age was 32±6.5 and 28 (80%) was male. At this time interval 19 (54.3%) patients developed recurrent AF under AADs therapy. At the beginning 6 (17.1%) patients spontaneously, 4 (11.4%) patients electrically and 25 (71.4%) patients medically cardioverted. Medical cardioversions provided with amiodarone infusion (n=15, 60%, propafenone HCL infusion (n=9, 36%), intravenous beta blockers (n=1, 4%). Of the 15 patients, 3 were changed from propafenone to amiodarone, 2 from amiodarone to propafenone, 1 from amiodarone to beta blocker oral maintenance therapy. There was no statistically significant difference in AF recurrence between switch and non-switch group (p=0.4). Only male gender was associated with AF recurrence (62.5 vs 37.5 %, p=0.01)

CONCLUSIONS: AF recurrence rate is high with AADs treatment at a mean follow-up of 3 years. Switching AADs does not affect the development of AF recurrence.

Oral Presentation Session

Off-Pump Coronary Surgery: New Techniques and Outcomes

Date: 31.10.2020 Time: 18:45 – 20:00 Hall: 5

ID: **475**

Topic: **Cardiovascular Surgery » Medical and Surgical Treatment of Heart Failure**

Presentation Type: **Oral**

CARDIOVASCULAR OUTCOMES IN CORONARY ARTERY DISEASE WITH EJECTION FRACTION <= 30% AND ISCHEMIC BURDEN <= 10% UNDERGOING OFF-PUMP COMPARED TO ON-PUMP CORONARY ARTERY BYPASS GRAFTING

Dudy Arman Hanafy, Widya Trianita Suwatri, **Rendy Aprilianus Jiwono**, Rr. Pasati Lintangella

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BACKGROUND: A benefit of coronary artery bypass graft (CABG) for coronary artery disease (CAD) with Ejection Fraction (EF) <=30% and ischemic burden (IB) <=10% is still on debate. Off-pump coronary artery bypass (OPCAB) might reduce postoperative complications related to cardiopulmonary bypass (CPB). The objective of this study is to analyze mortality and morbidity in patients with EF <=30% and ischemic burden <=10% undergoing OPCAB compared to conventional CABG (CCABG).

METHODS: This study used a retrospective analytic cohort study design to determine mortality and morbidity in 109 CAD subjects with EF <= 30% and IB <=10% comparing OPCAB and CCABG during the period of January 2016 to November 2019 at the National Cardiovascular Hospital Harapan Kita, Indonesia and meet the study's inclusion and exclusion criteria. Besides the EF and IB criteria, we only included patients who were scheduled electively. We excluded patients who underwent emergency and urgency CABG procedures, CAD subjects accompanied by ruptured ventricular septum, moderate to severe heart valve disease requiring intervention and were confirmed by echocardiographic examination, subjects with cardiac surgery in addition to the CABG procedure.

RESULTS: We included 35 patients undergoing OPCAB and 74 patients undergoing CCABG between January 2016 to November 2019 at the National Cardiovascular Centre Harapan Kita. Arrhythmia is statistically lower in OPCAB compared to CCABG (8.6% vs 39.2%; p = 0.001). Kidney injury is statistically lower in OPCAB (8.6% vs 27.0 %; p = 0.027). Stroke is statistically lower in OPCAB (1.0 % vs 17.6%; p = 0,032). There is no significant difference between OPCAB and CCABG in mortality, 5.7% vs 16.2%, (RR 3.20; CI 95% 0.67–15.12; p = 0.126)

CONCLUSIONS: There was a statistically significant difference in the occurrence of postoperative morbidity in CAD patients with EF <=30% and IB <=10% who underwent OPCAB surgery compared with patients who underwent CCABG. Mortality that occurred after OPCAB procedure was lower in CAD patients with EF <=30% and IB <=10% compared to CCABG although it was not statistically significant different. So patients with this condition are advised to undergo OPCAB.

Keywords: left ventricular dysfunction, ischemic burden, off-pump coronary artery bypass grafting

ID: **346**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

COMPARISON OF INCENTIVE SPIROMETRY AND ACAPELLA DUET FOR PULMONARY REHABILITATION AFTER CORONARY ARTERY BYPASS GRAFT SURGERY

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Background: The use of incentive spirometry (IS) is a common way of pulmonary rehabilitation after cardiac surgery to reduce postoperative complications. The Acapella duet is a device developed for airway clearance that produces a combination of high-frequency oscillations and positive expiratory pressure. The purpose of the study is to compare the effects of IS and Acapella duet on arterial blood gas changes and pulmonary complications after CABG surgery.

Materials and Method: Thirty adult patients who underwent isolated CABG surgery from April 2019 to December 2019 were retrospectively evaluated. The patients were divided into two groups on the basis of IS (n=15) and Acapella duet (n=15) use for pulmonary exercise. The arterial blood gases were measured preoperatively on the1st, 2nd and 3rd postoperative days after extubation. Functional exercise capacity was measured by 6-minute walk test (6MWT).

Results: Arterial blood gases showed a significant improvement in Acapella duet group when compared to IS group on the 2nd and 3rd postoperative days. 6MWT was also significantly improved in Acapella duet group. Both intensive care unit and hospital stay times were lower in Acapella duet group ($p<0.05$).

Conclusions: The results of this preliminary study suggest that Acapella duet is a valid device compared with IS as an adjunctive therapy for pulmonary rehabilitation after CABG surgery

ID: **40**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

EARLY AND LONG-TERM RESULTS OF SURGICAL REPAIR OF ANOMALOUS CORONARY ARTERIES FROM THE PULMONARY ARTERY

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Objective: The aim of this study was to report early mortality and morbidity and long-term follow-up results of anomalous coronary arteries from the pulmonary artery operated in our hospital.
Materials and Methods: We retrospectively reviewed 22 consecutive patients with anomalous coronary artery originating from pulmonary arteries operated in our clinic between January 2013 and September 2019. Surgical outcome and complications were determined according to international standards [1]. Undesired re-operation, complete heart block requiring a permanent pacemaker implantation, need for mechanical support, diaphragm paralysis, sudden circulatory arrest, and death were considered as significant major adverse events (MAE).

Results: Mean age at operation was 22.3 months (2 months-21 years) and the mean weight was 15.3 kg (4.5-97). In 20 patients (90.9%) left main coronary artery was originated from pulmonary artery (ALCAPA). In 2 (9.1%) patients, the right coronary artery was originated from the pulmonary artery (ARCAPA). Pericardial hood method was used in 2 (9.1%) patients, Tekauchi method in 3 (13.6%) patients and direct reimplantation method was used in 17 (77.3%) patients. Major adverse event was observed in 1 patient (4.5%). No mortality was observed. During the mean follow-up period of 66.9 months (7 days-5.4 years), none of the patients required reoperation or reintervention. No patients died during follow-up period. Cardiac functions improved in all patients except 3 (13.6%) patients in the early postoperative period.

Conclusion: Anomalous coronary arteries from the pulmonary artery should be suspected in patients with low cardiac function and should be treated appropriately if diagnosed. 1-Jacobs ML, O'Brien SM, Jacobs JP et al (2013) An empirically based tool for analyzing morbidity associated with operations for congenital heart disease. J Thorac Cardiovasc Surg 145(4):1046–1057

ID: **514**

Topic: **Cardiovascular Surgery » Medical and Surgical Treatment of Heart Failure**

Presentation Type: **Oral**

A SINGLE-CENTER EXPERIENCE OF BEATING HEART CORONARY BYPASS SURGERY IN A VERY LOW EJECTION FRACTION

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Background

Heart failure (HF) is growing problem worldwide. Ischemic heart disease (IHD) is the most common cause of HF and prognosis in patients with ischemic cardiomyopathy is worse than with non-ischemic etiology. Impaired ventricular fraction is an important risk factor for mortality, associated with coronary artery bypass grafting. Current medical standards indicate the surgical way as a method of choice in treatment of patients with IHD. It is not a new, but an established treatment concept. Revascularization of ischemic myocardium by coronary artery bypass surgery improves left ventricular regional and global mechanical and metabolic function. To identify patients with IHD, who can benefit from revascularization surgery, modern diagnostics are based on dobutamine stress echocardiography and nuclear imaging (positron emission tomography and vascular magnetic resonance)

Methods

This article reviews our experience with coronary bypass grafting in patients with EF< 25%. All patients with very low ejection fraction have received optimal medical treatment during two months. To distinguish ischemic or non-ischemic HF has been performed coronary angiography and results of which showed three or four multivessels occlusion. The cardiac MRI was performed to define if the cardiac surgery can be beneficial to the patients. On cardiac MRI was confirmed myocardial viability. Considering risk factors and decreasing postoperative complication we prefer off-pump surgical revascularization. Postoperative period was characterized with low doses of inotrope support. Average ICU beds totaled two days. Patients were discharged home after 6-7 days.

Conclusion

Current recommendations in practice guidelines on heart failure suggest that revascularization should be considered for all patients with heart failure and coronary artery disease. However, the optimal treatment strategy remains unknown, our practice shows that by conducting off-pump CABG we can achieve significant reduction in mortality and morbidity of the patients with low EF

ID: **278**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

AGGRESSIVE NEO-INTIMAL HYPERPLASIA IS ASSOCIATED WITH IINCRESED TNF-A MRNA EXPRESSION IN A PIG ANIMAL CORONARY GRAFTING MODEL

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Background: Atherosclerosis is a chronic vascular and inflammatory disease condition that results in thickening and hardening of the affected blood vessels. Different risk factors contribute to the cause of atherosclerotic cardiovascular disease and increasing evidence implicates the immune system.

Intimal hyperplasia (thickening of the intimal vascular layer) will support the foundation of the atherosclerotic process and later on the progression of the formation of atheromatous plaque, and starts as early as few hours following coronary bypass surgery, and progress within the first one month post- operatively. In this study, we hypothesized that TNF-α mRNA expression levels were directly dependent on the severity of atherosclerosis to test our hypothesis.

Methods: Seven, 4 months old, 35 kilograms, domestic swine were proposed to be used in this study. Our pigs animal model, are planned to be subjected to coronary bypass surgery. The implanted vessels to be harvested at different time points 0 hour, 1 hour, 3 hours, 1 day, 4 days, 1 week and 2 weeks to calculate the development of intimal hyperplasia at vein to artery versus artery to artery implantation sites, based on the intimal area/ total circumference area (RI) ratio.

Results: Our expected results may be helpful to show that TNF-α mRNA expression and the development of the neo-intimal hyperplasia in providing the evidence of a direct pro-inflammatory cytokine signaling link between the biomechanical forces on the vessel wall and the remodeling response.

We are expecting that anastomosis of a vein graft to an artery will result in acute induction of intimal hyperplasia and expression of the TNF-α mRNA with an early increase within the first few hours, peaking at the first week post operatively. The expected high levels of TNF-α mRNA associated with the aggressive development of the intimal hyper plasia at the venous side of the anastomosis could be similar to human studies. The proposed study could be an important step for better understanding the pathogenesis of re-stenosis and the aggressive development of neo-intimal hyper plasia in association with the expression of TNF-α mRNA

Conclusion: the study proposed that aggressive neo-intimal hyperplasia in animal pig model can develop early, and is associated with increased recruitment of macrophages capable of expressing TNF-α mRNA producing TNF-α.

The above results may guide us to the use of arterial graft conduits in humans (total arterial revascularization) which could even be helpful in preventing the progression of the atherosclerotic process in the native coronary arteries.

Thus, it becomes rather obvious that part of the disease management and therapeutic approach entails the modulation of the innate immune responses to lipoproteins.

ID: **227**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

EFFECTIVITY OF DEXAMETHASONE IN PATIENTS UNDERGOING OFF PUMP CORONARY ARTERY BYPASS GRAFTING SURGERY: A RANDOMIZED DOUBLE BLIND CONTROLLED CLINICAL TRIAL

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Background: Based on a pilot study in National Cardiovascular Center Harapan Kita, systemic inflammatory response syndrome (SIRS) is more common in OPCAB compared to on-pump CABG, 67% vs 33% (30 samples, 2017). Based from this result, this research conducted a clinical trial to provide dexamethasone in patients undergoing OPCAB surgery.

Methods: Samples were collected consecutively in Harapan Kita between August 2018 - January 2019. Samples were randomized to dexamethasone group (n = 30) and placebo group (n = 30). Intervention using intravenous dexamethasone dose of 1 mg/KgBB (maximum 100 mg) or placebo using normal saline (0.9% NaCl). Statistical analysis were used independent t-test, Mann-Whitney test, fisher exact test and AUC.

Results: Major Adverse Cardiovascular Events (MACE) incidence in dexamethasone group compared to placebo group (RR 0.385, 95% CI: 0.157-0.945, p = 0.024). Clinical outcome of dexamethasone group was better than placebo group in duration of mechanical ventilation (6 (5-16) hours vs 8 (5-72) hours, p = 0.029), ICU length of stay (17.5 (12-32) hours vs 19 (13-168) hours, p = 0.028), hospital length of stay (5 (5-8) days vs 6.5 (5-30) days, p = 0.04) and VIS (0 (0-15) vs 5 (0-100), p = 0.045). As a result of the inflammatory markers, there was a significant mean difference between dexamethasone group compared to the placebo group in IL-6 (217.4 pg/mL, 95% CI: 107.9-326.8, p = 0.0001), PCT (3.41 µg/L, 95% CI: 2.1-4.71, p = 0.0001) and CRP (52.3 mg/L, 95% CI: 28.8-75.8, p = 0.0001). In the AUC analysis there was a significant association between inflammatory markers with the incidence of MACE in IL-6 (AUC 0.728, 95% CI: 0.585-0.871, p = 0.005) and PCT (AUC 0.723, 95% CI: 0.578-0.868, p = 0.007).

Conclusion: Preoperative dexamethasone OPCAB is effective to improving clinical outcome and controlling postoperative inflammatory reactions compared to placebo.

Keywords: OPCAB, SIRS, Dexamethasone, MACE, Inflammatory Markers

ID: **259**

Topic: **Cardiology » Coronary Artery Disease - CABG Surgery**

Presentation Type: **Oral**

SINGLE-CENTER RESULTS OF CORONARY ARTERY BYPASS GRAFTING ON BEATING HEART

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Introduction: Coronary artery bypass grafting (CABG) on beating heart (BH) has become recently a spreading technique. In recent studies, it has been shown that off-pump CABG technique, which is performed without using cardiopulmonary bypass (CPB), provides a remarkable decrease in operative trauma, intensive care unit and total hospital stay time. Some researchers emphasize significant reduction in the amount of bleeding and need blood and its components transfusions and postoperative complications as well.

Material and Methods: In this retrospective study, we aimed to analyze the experience with 1520 off-pump CABG cases performed in Department of Cardiac Surgery at Republican Research Center for Emergency Medicine, between 12 th September 2013 and 27th December 2019.

Results: 1195 (78.6%) of patients were male and 325 (21.4%) were female. In 94 (6.1%) patients left ventricle ejection fraction (LVEF) was lower than 30%, 677 (44.5%) patients had a history of diabetes mellitus (DM), 196 (12.8%) patients had a history of chronic obstructive pulmonary disease (COPD), and 524 (34.4%) patients had a history of hypertension (HT). Inotropic drug support was needed in 309 (20.3%) patients. Postoperatively 14 (0.9%) patients underwent revision surgery due to significant bleeding. Postoperative atrial fibrillation (AF) was observed in 13 (0.8%) patients. Mortality rate was 1.2% with eighteen patients, ten of whom had low cardiac output syndrome, and another one had massive pulmonary thromboembolism. Mean intensive care stay time was 1.5±1.4 days, and mean total hospital stay time was 7.1±2.7 days.

Conclusion: Off-pump CABG technique is effective and safe method for coronary revascularization with low mortality and relatively low postoperative morbidity, followed by significant shortness of intensive care unit and total hospital stay time.
Keywords: Coronary artery bypass grafting, beating heart, complication, mortality

ID: **440**

Topic: **Cardiology » Diabetes Mellitus and Cardiovascular Disease**

Presentation Type: **Oral**

OFF-PUMP CORONARY ARTERY BYPASS THROUGH MINISTERNOTOMY AT PATIENTS WITH DIABETES MELLITUS

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Objective: Estimation of the direct results off-pump coronary artery bypass through ministernotomy at patients with diabetes mellitus.

Material and methods: We have performed 40 operations off-pump coronary artery bypass. All operations were performed through ministernotomy with the using myocardial stabilizer. The age of patients varies from 32 to 60 years old. All patients were male. Unstable angina was diagnosed at 15 (37,5%) patients, and the rest of 25 (62,5%) patients had different class of stable angina. Arterial hypertension at 38 patients, coronary insufficiency at 11 patients. 34 patients had myocardial infarction in the anamnesis.
ECG data revealed ischemia at 25 patients. EchoCG: left ventricle ejection fraction under 40% at patients, under 50% at 22 patients and the rest of patients had a 55%. Blood glucose level was varied from 8 to 15 mmol/L and average mean composed of 11,2 mmol/L.
Angiography data revealed single-vessel disease at 25 cases and the other 15 patients had double-vessel disease.

Results: In all cases performed off-pump coronary artery bypass grafting. The use of internal mammary artery at 38 cases. By the means of reducing complications related to the diabetes mellitus in all cases performed inferior L-shaped ministernotomy.
After operation patients were extubated from 3 to 4 hours (average mean 3,4 hours). Mortality was 0%. After operation all patients were prescribed insulin infusion. Ejection fraction by EchoCG increased up to 6,65% averagely, at 35 (90%) cases were revealed improvement on coronary blood supply by ECG data. There wasn't revealed purulent-inflammatory complications at the nearest-term outcome after operation. Conclusion. Off-pump coronary artery bypass through ministernotomy at patients with diabetes mellitus in accordance with the insulin infusion reduces risk of intra- and postoperative complications such as complications of central nervous system and purulent-inflammatory processes.

ID: **533**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

OUR FIRST EXPERIENCE OF PERFORMING CORONARY ARTERY BYPASS GRAFTING ON A BEATING HEART IN PATIENTS WITH ISCHEMIC HEART DISEASE

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Purpose: Our first experience of performing coronary artery bypass grafting on a working heart in patients with coronary artery disease.

Materials and methods: In the Department of Cardiac Surgery, the Republican Specialized Scientific and Practical Center for Cardiology, from January 2019 to January 2020, 110 coronary artery bypass grafts were performed on a working heart.

The average age of the patients was 56.5 ± 8.8 (30 - 81) years. The group of patients over 65 years old accounted for 31% of cases. By gender, patients were distributed as follows: men - 90, which amounted to 81%; women -20, accounting for 19%. Most patients of the examined group had stable angina pectoris of various functional classes: I - II functional class (FC) - 20 (18%) patients, III FC - 60 (54)% of patients, IV FC - 15 (10%) patients. Patients with painless myocardial ischemia were operated on in 3% of cases. About 20 (18)% of patients with acute coronary syndrome were also subjected to surgical intervention: with unstable angina pectoris - 12 (11%) patients, with myocardial infarction at different times, usually with post-infarction angina pectoris. Myocardial infarction had a history of 70 (63%) patients.
The distribution of patients by the number of affected coronary arteries is presented in Figure 2.3. In the vast majority of cases, it was a multivascular lesion (82 patients) or damage to the pools of 2 leading coronary arteries (18 patients). The defeat of one vascular pool was detected in only 10 cases.

The most common lesion was observed in the main coronary arteries and first-order branches: the anterior interventricular branch of the LCA - 94.3%, the envelope branch - 79.3%, the right coronary artery - 84.6% of patients.
Results: Special selection for performing myocardial revascularization on a working heart was not performed. In addition to patients with medium and low risk of CABG, in our group there were patients with a high risk of cardiopulmonary bypass. In the vast majority of cases, operations were performed according to the OPCAB technique (98.7%), i.e. through median sternotomy.
Hospital mortality in the general group of patients was 0%. The conversion rate in our group of patients was 1%.

Conclusions: CABG surgery performed on a working heart through a median sternotomy makes it possible to achieve complete myocardial revascularization with multiple lesions of the coronary arteries involving three main pools.

Given the necessary experience and compliance with a number of tactical and technical features, it is possible to carry out the vast majority of operations of an isolated CG on a working heart (up to 99% of operations).

ID: **351**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

REDO OFF-PUMP CORONARY ARTERY BYPASS GRAFTING AVOIDING PREVIOUS WOUND ACCESS

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Background: Redo CABG is still remained as a major concern to cardiac surgeons due to high mortality and morbidity. Off-pump technique and minimally invasive approach thru avoiding redo-sternotomy are a safe combination modality to treat repeated coronary artery atherosclerosis. Therefore, we evaluate the feasibility of redo OPCAB thru avoiding previous wound, such as redo-sternotomy and its results.

Methods: From April 1998 to December 2019, 736 patients underwent CABG. Among them, we conducted OPCAB in 294 patients (40%) and redo CABG in 47 cases (6%). These 47 patients are the subjects of this study. Median age is 71 years old (range: 58-84) and all of them are male. Coronary access routes were Lt anterior small thoracotomy in 21, para-sternal vertical thoracotomy in 10, inverted U laparotomy in 9 and full-sternotomy (previous MICS) in 7. Time interval between 1st and redo is 10.0 years (range: 0.3-20.8 years). The timing of redo is early failure in 5 at median 8.4 months, midterm failure in 7 at 2.4 years and long-term failure in 35 at 10.6 years (range: 4.3-20.8 years). The reason of redo is newly-developed coronary lesion in 5 (11%), remained disease progression in 9 (19%) and previous graft failure in 33 (70%). Failed grafts were LIMA-to-LAD in 18, non-LAD arterial graft in 15 and non-LAD vein graft in 8.

Results: Median op time is 300 minutes (135-650), and there was no on-pump conversion during OPCAB surgery but intraoperative IABP support in 12 cases (26%). Postop ICU-stay and hospital-stay are 2 days and 14 days, respectively. There was 5 cases of 30-day operative mortality (11%) and 18 morbidities (38%). All-cause and cardiac death-free survival times are 4.206 (95% C.I. 3.483-4.928) and 5.121 years (4.656-5.586), respectively and 1-, 3-, 5-year survival rates of all cause and cardiac death-free are 77%, 71%, 71%, and 91%, 91%, 91%, respectively.

Conclusions: Conducting redo off-pump CABG surgery avoiding previous wound access is feasible and its results are acceptable.

ID: **559**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

WHICH HAS A BETTER OUTCOME? OFF-PUMP OR ON-PUMP CORONARY ARTERY BYPASS GRAFT

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Introduction: Coronary Artery Bypass Graft (CABG) Surgery with off-pump technique becomes an alternative instead of on-pump. Using CPB (Cardio Pulmonary Bypass) machine has many pathological effects that may be occurred and it will be increasing Major Adverse Cardiac Events (MACE) incidence, post-operative utilization, ICU length of stay and mortality rate. This study aims to predict the MACE incidence and mortality between the two groups.

Methods: This is an analytic observational study using clinical data, conducted between January 2018 – December 2019 in the National Cardiovascular Center Harapan Kita Hospital Indonesia. The subjects were divided into two groups, off-pump group and on pump group.

Results: There were total 1436 patients underwent CABG with 337 off-pump and 1099 on-pump procedure. We found that MACE incidence was fewer in off-pump compared to on-pump group (20[5.93%] vs 75[6.82%]; P=0.56). Mortality rate in off-pump was lower than in on-pump group but statistically not significant (9 [2.67%] vs 49 [4.46.%];P=0.97). Duration of ventilation in the off-pump group was significantly shorter compared to on-pump group (13.21 ± 21.28 vs 14.48 ± 20.76 hours, P <0.01). ICU length of stay also found to be significantly shorter on the off-pump group (28.56 ± 35.30 vs 35.76 ± 56.41, P=0.04).

Conclusion: We conclude that there were significantly shorter on duration of ventilation and ICU length of stay in patients with off pump than in on-pump CABG. However this study revealed no statistically significant difference in MACE and mortality, even the data showed fewer incidence in off-pump compared to on-pump CABG.

Keywords: *On-Pump, Off-Pump, CABG, MACE, Mortality, Duration of Ventilation, ICU length of Stay.*

Oral Presentation Session

Value Steps in Interventional Cardiology

Date: 31.10.2020 Time: 20:00 – 21:00 Hall: 4

ID: **52**

Topic: **Cardiology » Percutaneous coronary interventions**

Presentation Type: **Oral**

A PROSPECTIVE COMPARISON OF LEFT DISTAL RADIAL ARTERY ACCESS SITE WITH RIGHT AND LEFT FOREARM RADIAL ARTERY ACCESS SITE ON TRANSRADIAL CORONARY ANGIOGRAPHY, WHICH IS THE MOST RELIABLE PROCEDURE?

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OBJECTIVE: Transradial as a new method for coronary angiography (CAG) and interventions has recently increased its popularity. But endothelial dysfunction may occur after transradial CAG. We aimed to investigate the endothelial functions and the most reliable intervention through flow mediated vasodilatation (FMD) test in three different radial access sites: right forearm radial artery, left forearm radial artery and left distal radial artery.

METHODS: Transradial access was used in 70 patients scheduled for CAG and intervention from September 6-th 2017 and March 6-th 2018, prospectively. They were divided into 3 groups: group 1 left forearm radial (17 patients), group 2 left distal radial (27 patients) and group 3 right forearm radial artery (26 patients) access. Flow mediated endothelial functions were measured 3 times; on admission, 24 hours after and 2 months after the procedure. GE Healthcare Vivid E9 11L-D, 4.5-12 MHz linear probe was used for radial artery diameter measurement. Arm cuff inflation till 220 mmHg lasted for 5 minutes. After deflation radial artery diameter and their percentage change was recorded. All the data was evaluated by the IBM SPSS Statistics 21.0 programme. Kruskal Wallis test and Anova test was performed for comparison of variables.

RESULTS: Mean age was 58,8(±12,3) with male predominance 48(68%,5) and hypertension 54(77,1%). diabetes 28(40%) were the most common risk factors. Radial artery diameters and percent change reached the maximum level in the first minute of flow-through dilation test.
In the first 24 hours endothelial function is preserved in left distal intervention group compared to right ($p<0,001$) and left intervention group($p=0,043$).This preservation continued at 2 months after the procedure.
Radial artery thrombosis 6(8,6%),ecchymosis 4(5,7%) and radial artery occlusion 2(2,9%) were seen in patients but there was no statistical difference between the 3 groups. Only one complication(ecchymosis) was seen in the left distal radial artery access site. There was no statistically significant difference between the 3 groups at the time of fluoroscopy and stent implantation.

CONCLUSIONS: The radial artery endothelial function is impaired in the first 24 hours but endothelial function is protected by the attempts made in the distal left access compared to the attempts made by the method right-left conventional. Left distal radial access is a reliable method of angiography intervention with less risk of arterial vasospasm, occlusion, major bleeding, hematoma. Left distal radial coronary angiography is a method of CAG procedure in which patients are highly satisfied and can recommend to their relatives because the treatment comfort is high and the rate of causing pain that disturb daily activity is low.

Figure 1: Radial artery intervention

Figure 2: Study design

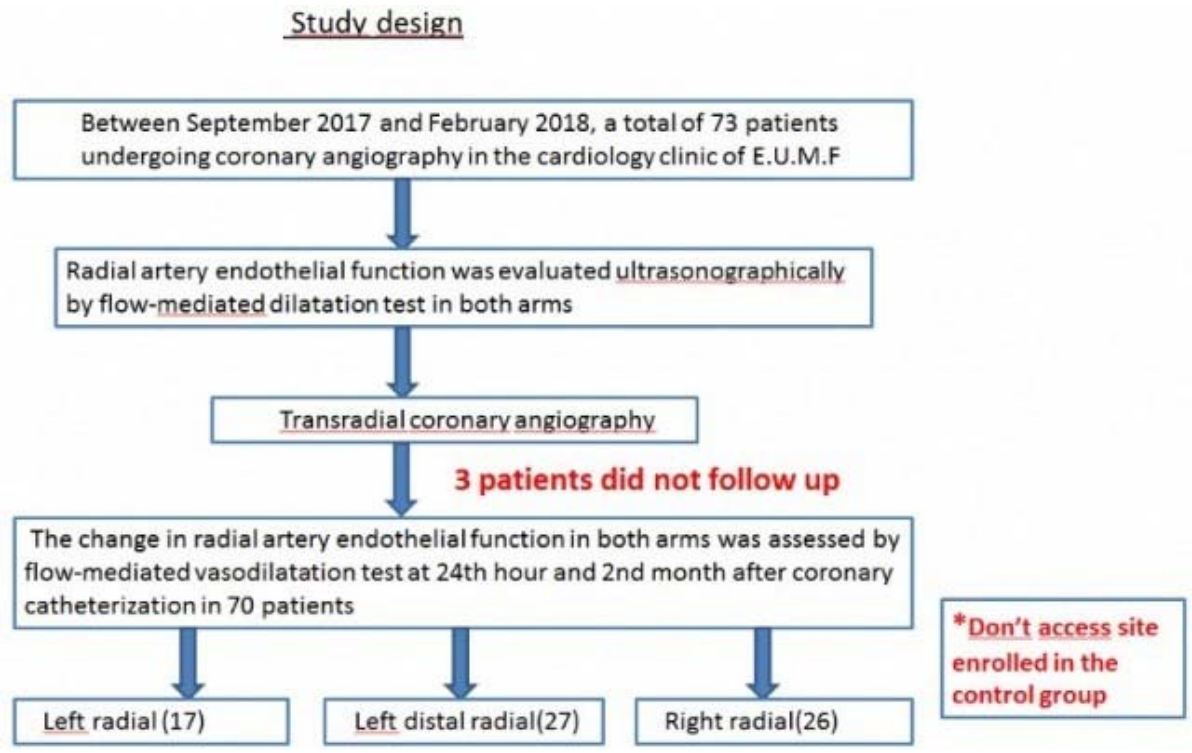

Table 1: Radial artery diameter and FMD change at the time before and after intervention

Radial USG and FMD test time	Left radial artery diameter (Percentage change)	Left distal radial artery diameter (Percentage change)	Right radial artery diameter (Percentage change)	P value
Before angiography	0,30 ±0,02 (13,2 ±2,2)	0,27 ±0,03 (13,66 ±2,16)	0,27±0,02 (12,30 ±3,53)	0,952

After 24 hours	0,32 ±0,02 (6,06 ±3,15)	0,31 ±0,02 (8,59 ±3,39)	0,30 ±0,02 (3,71 ±2,31)	Left distal-left0,043 Left distal Right0,001
After 2. month	0,30 ±0,03 (11,09 ±2,58)	0,28±0,02 (12,10 ±4,24)	0,29 ±0,02 (10,21 ±2,34)	0,079

Figure 3: Radial artery ultrasonography and FMD test

ID: **466**

Topic: **Cardiology » Percutaneous coronary interventions**

Presentation Type: **Oral**

EFFECT OF LOCALLY ADMINISTERED NITROGLYCERIN-LIDOCAINE MIXTURE ON THE DEVELOPMENT OF SPASM IN THE RADIAL ARTERY

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PURPOSE:

To perform coronary angiography via the radial artery, reduces the complication rate. However, radial artery spasm reduces the success of the procedure. In this study; we aimed to investigate the effect of nitroglycerine administration with local anesthetic agent on radial artery spasm.

METHODS:

The study was designed as prospective and randomized. Patients undergoing transradial coronary angiography were randomized to two groups. The first group (n: 45) received only 2% prilocaine as local anesthesia. In the second group (n: 50), patients received prilocaine and 400 micrograms of nitroglycerine.

RESULTS:

Baseline demographic and clinical characteristics were similar between 2 groups. Nitroglycerin significantly improved the palpability of radial pulse, reduced the number of punctures and shortened the time needed for successful access of radial artery. Radial artery spasm was seen in 4 patients in the first group and in 2 patients in the nitroglycerine group. ($p < 0.001$). Headache and hypotension were similar in both groups.

CONCLUSIONS:

The addition of nitroglycerin to the local anesthetic agent significantly reduces the rate of radial spasm.

ID: **469**

Topic: **Cardiology » Percutaneous coronary interventions**

Presentation Type: **Oral**

SERUM AMYLOID A DOES NOT PREDICT STENT RESTENOSIS IN STABLE ANGINA PATIENTS UNDERGOING PERCUTANEOUS CORONARY INTERVENTION

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BACKGROUND: Atherosclerosis is the leading cause of death despite improvements in the outcomes of cardiovascular diseases. More patients are surviving their first CVD event and are at high risk of recurrence. Percutaneous coronary intervention (PCI) is the most commonly preferred approach in most patients. In-stent restenosis (ISR), defined as >50% narrowing of stent lumen or coronary artery 5 mm adjacent to stent edges, is a restricting complication of PCI leading to repeat revascularization. Serum amyloid A's (SAA) function as a cytokine-like protein has become recognized in cell-cell communication as well as feedback in inflammatory, immunologic, neoplastic and protective pathways. SAA has a striking relationship to the acute phase response with serum levels rising as much as 1000-fold in 24 hours. In this study, we retrospectively analyzed the effect of clinical, angiographic, and biochemical factors on ISR in patients who underwent PCI for stable angina.

METHODS: Patients who had undergone control angiogram six months after bare metal stent (BMS) and nine months after drug eluting stent (DES) implantation for de-novo lesions were retrospectively analyzed. Gender, age, primary indication for PCI, creatinine, diabetes mellitus (DM), history of coronary artery disease (CAD), history of heart failure, history of cerebrovascular disease, dyslipidemia, tobacco use, and hypertension. In-stent restenosis was defined as >50% narrowing of stent lumen or coronary artery 5 mm adjacent to stent edges.

RESULTS: A total of 216 patients with a median age of 57 years were included in this retrospective study. In-stent restenosis occurred in 74 patients (34.2%) of the entire group. Table 1 compares the clinical, biochemical characteristics of patients with and without ISR. Table 2 compares the stent characteristics of patients with and without ISR. Tobacco usage was significantly more frequent among patients with ISR

	In-stent restenosis (+) N:74	In-stent restenosis (-) N:142	p
Stent diameter (mm)	3.2±0.3	3.3±0,4	0,09
Stent length (mm)	21.2±5.8	19.6±5.6	**0,05**
Drug-eluting stent (1st generation) N/%	16/21.6%	46/32.9%	0,085

. Dyslipidemia was significantly more common in patients without ISR. Serum amyloid A levels were non-significant between groups (SAA: median 18,9 vs 28 mg/L; p:0.83)

CONCLUSIONS: In-stent restenosis rates determined in our study was consistent with the literature. As an inflammatory mark, SAA was not found to be a predictor of ISR in stable angina patients.

	In-stent restenosis (+) N:74	In-stent restenosis (-) N:142	p	
Age (year) mean±SD	58.7±10.6	57.6±9.3	0,437	0,437
Gender (Female) N/%	12/16%	34/23%	0,188	0,188
Hypertension N/%	39/52.7%	87/61.3%	0,226	0,226
Dyslipidemia N/%	32/43.2%	89/62.7%	0,006	**0,006**
Diabetes mellitus N/%	19/25.7%	45/31.7%	0,358	0,358
Tobacco use N/%	47/63.5%	69/48.6%	0,037	**0,037**
eGFR (ml/min) mean±SD	83.4±18.4	84.9±19.3	0,609	0,609
SAA (mg/L) median	17	26	0,724	0,724

ID: **365**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

IMPORTANCE OF MYOCARDIAL DEFORMATION PARAMETERS FOR THE PREDICTION OF THE INFARCT-RELATED ARTERY IN PATIENTS WITH ACUTE CORONARY SYNDROMES

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Objective: Main treatment modality is early reperfusion therapy with primary percutaneous coronary intervention (PCI) of the culprit lesion in patients with acute coronary syndromes. In our study, we aimed to evaluate the association between myocardial deformation parameters and infarct-related artery occlusion in patients with acute coronary syndromes.

Methods: We prospectively included 50 patients admitted to our hospital with the first attack of acute coronary syndrome and underwent to primary coronary angiography and PCI. In addition to conventional echocardiographic measurements, global longitudinal strain (GLS) of left ventricle (LV), GLS of right ventricle (RV), left atrial strain were analyzed.

Results: Patients were divided into two group according to culprit lesion; group 1 (culprit lesion is LAD), group 2 (culprit lesion is non-LAD). Patients who had LAD occlusion as a culprit lesion were younger than non-LAD group (53.2 ± 11.7 vs 61.5 ± 10.8, p=0.02). As compared deformation parameters, LV GLS was significantly lower in patients with LAD occlusion as aculprit lesion (-12.1 ± 3.5 vs -14.3 ± 3.4, p=0.04). RV GLS was lower in patients with non-LAD occlusion as a culprit lesion (-17.5 ± 6.6 vs -12.6 ± 5.0, p=0.01).

Conclusions: LAD occlusion as a culprit lesion is the most important factor responsible from impairment of Lv GLS and, non-LAD occlusion as a culprit lesion is the most important factor induce impairment of Rv GLS. Myocardial deformation parameters are the valuable predictors of culprit lesion. Also, there was a tight correlation between Syntax score and LV GLS in our study population.

Table 1. Comparison of deformation parameters between two groups

	Culprit lesion LAD (n=18)	Culprit lesion non-LAD (n=32)	p value
LvGLS (%)	-12.1 ± 3.5	-14.3 ± 3.4	0.04
GCS (%)	13.1 ± 5.5	13.8 ± 6.1	NS
RvGLS (%)	-17.5 ± 6.6	-12.6 ± 5.0	0.01
ε s (%)	20.6 ± 6.7	23.3 ± 5.7	NS
ε e (%)	8.5 ± 4.3	10.6 ± 4.5	NS
ε a (%)	12 ± 5.1	12.7 ± 4.1	NS

ID: **702**

Topic: **Cardiology » Percutaneous coronary interventions**

Presentation Type: **Oral**

A NOVEL INDEX FOR CONTRAST-INDUCED NEPHROPATHY PREDICTION IN PATIENTS WITH ELECTIVE PERCUTANEOUS CORONARY INTERVENTION

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BACKGROUND AND AIM: To investigate the predictive value of contrast volume to left ventricular ejection fraction ratio (CV / LV EF) for contrast-induced nephropathy (CIN) development in patients with elective percutaneous coronary intervention (PCI).

METHODS:882 patients who underwent elective PCI in our clinic were evaluated prospectively in terms of CIN. CV / LV EF ratio = the amount of contrast used in the procedure / LV EF. The ACEF score was calculated by using the following formula: age/LV EF + 1 (if serum creatinine >2.0 mg/dl). GFR was calculated with Cockcroft-Gault formula; [(140-age) x body weight (kg)] / [72 x serum creatinine] (if women x 0.85). The definition of CIN includes absolute (≥0.5mg/dl) or relative increase (≥25%) in serum creatinine at 48-72 h after exposure to a contrast agent compared to baseline serum creatinine values. If serum creatinine values were ≥1.5 mg/dl, intraveneous hydration was performed with 0.9% sodium chloride (1 ml/kg/h) before the procedure.

RESULTS: CIN was detected in 13.5% (119 patients) of 882 patients. The patients with and without CIN are compared and showed that; age, LV EF, GFR, Contrast amount used, ACEF score and CV / LV EF ratio were significantly different between the two groups ($p<0.001$ for all). In the multivariate linear regression analysis for CIN prediction; age, LV EF, contrast amount used, GFR value, ACEF score and CV / LV EF ratio were evaluated. In multivariate lineer regression analysis, age (Beta: 0.205, t: 3.408, $p = 0.001$) and CV / LV EF ratio (Beta: 0.379, t: 2.769, $p = 0.006$) were found to be significant predictors for the development of CIN (table 1). The risk of CIN was calculated as: 0.725 + 0.205 x age + 0.379 x CV / LV EF ratio. In ROC analysis with CV / LV EF ratio and age variables; AUC = 0.686 (0.63-0.73) for CV / LV EF ratio, $p <0.001$, AUC = 0.65 (0.59-0.70) for age, $p <0.001$ (figure 1).

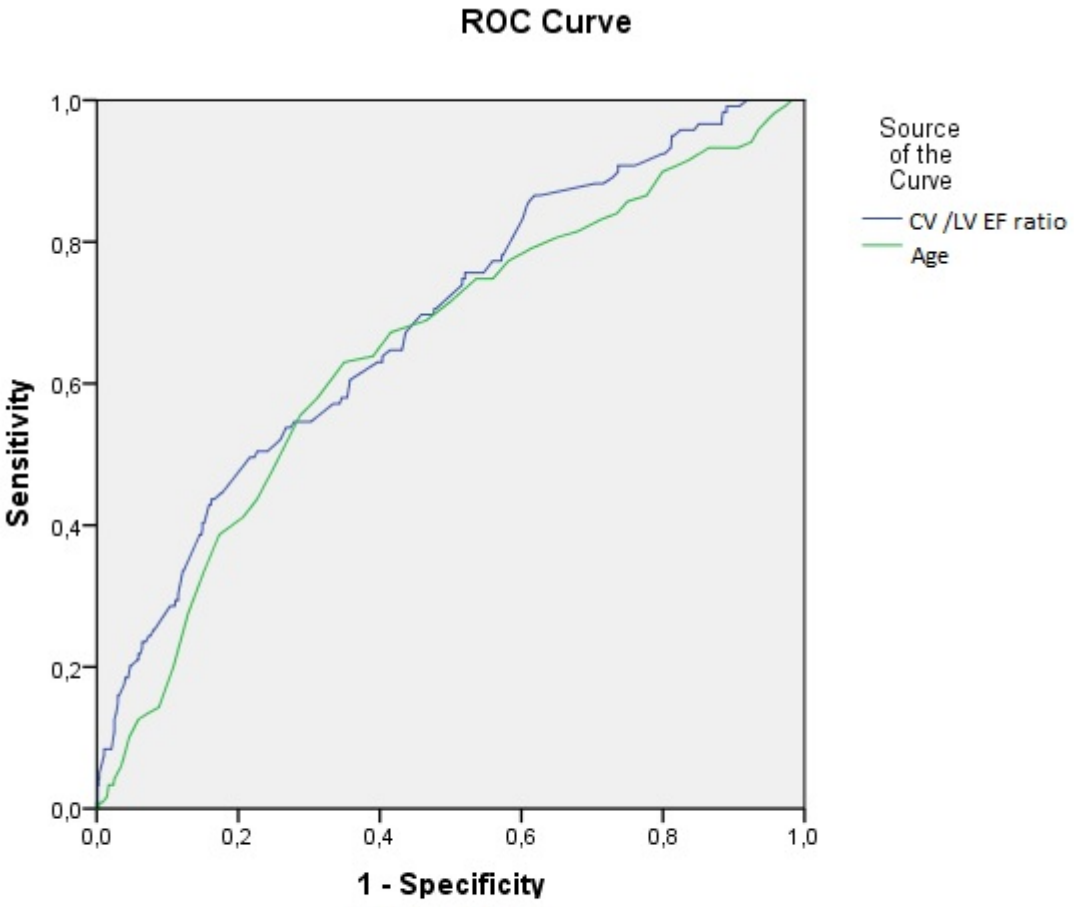
CONCLUSIONS: CV / LV EF ratio and age were independent predictors for CIN development in patients with elective PCI.

Table 1: Multivariate linear regression analysis

LV EF: Left ventricular ejection fraction, GFR: Glomerular filtration rate, CV: Contrast volume.

Variable	Standartize Coefficient Beta	t Value	P value
Age	0.205	3.408	0.001
LV EF	-0.208	-0.407	0.68
GFR	0.044	0.989	0.32
Contrast volume (CV)	-0.125	-1.027	0.304
CV / LV EF ratio	0.379	2.769	0.006
ACEF score	-0.099	-1.064	0.287

Figure 1:ROC of CV / LV EF ratio and Age.



Area Under the Curve[a]

Test Result Variable(s)	Area	Std. Error[b]	Asymptotic Sig.[c]	Asymptotic 95% Confidence Interval	
				Lower Bound	Upper Bound
CV / LV EF ratio	,686	,026	,000	,634	,737
Age	,650	,028	,000	,595	,704

Oral Presentation Session

Progress in Valvular Surgery: Techniques and Follow-up

Date: 31.10.2020 Time: 20:15 – 21:30 Hall: 5

ID: **173**

Topic: **Cardiovascular Surgery » Minimally Invasive and Robotic Cardiac Surgery**

Presentation Type: **Oral**

TOTALLY ENDOSCOPIC STENTED AORTIC VALVE REPLACEMENT

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BACKGROUND
Cardiac surgery is looking for new minimally invasive techniques while it is important to maintain the same efficacy, quality and safety as the conventional approach. A minimal invasive, non-sternotomy approach for aortic valve replacement by means of a totally endoscopic surgical technique is introduced. In this report we present our initial experience.

METHODS
From October 2017 to October 2019, 201 patients (59,7% males, mean age: 71.6 ± 11.7 years) underwent a totally endoscopic aortic valve replacement of whom 30.7% were octogenarians. The mean EuroSCORE II was 2.35 ± 3.82. All patients underwent the procedure due to severe aortic valve stenosis. With the patient in the supine position, the aorta was accessed through a 20 mm working port in the right 2nd intercostal space and additional three 5 mm trocars were placed. Standard zero-degree optics were used in all cases. Cardiopulmonary bypass was initiated after femoral cannulation. Transthoracic aortic cross-clamping followed by antegrade administration of a single shot cold mixed blood cardioplegia was assessed. After aortotomy, the stenotic aortic valve was excised, and a stented aortic valve was implanted in supra-annular position. Closure of the aorta was followed by placement of external pacemaker wire.

RESULTS
A total endoscopic approach was successful in all cases without conversion to sternotomy. Mean cross-clamp and cardiopulmonary bypass times were 62 ± 14 and 94 ± 25 minutes, respectively. The mean length of stay at the intensive care unit was 69.4 ± 149.6 hours while patients spend 9.6 ± 10 days at the hospital. In contrast the mean hospital stay in the last two months was 6.1 days (26 patients, 12.9%), due to our new fast track protocol. The average postoperative blood loss (24h) was 251 ± 298 mL. Re-exploration in endoscopic way was needed in 10 patients (4.9%). None of them had a surgical bleeding focus. At discharge no paravalvular leakages was detected. In addition, 10 patients (4.9%) underwent a pacemaker implantation postoperatively whereas 4 patients (1.9%) suffered from a stroke. Finally, the 30-day mortality was 2.0%.

CONCLUSIONS
Our results of the first patients undergoing totally endoscopic aortic valve replacement are promising, with acceptable aortic cross clamp times and low morbidity and mortality rates. This report shows that this technique is safe and feasible. We are aware that our hospital admission results in our institution might be long but with the introduction of the fast track protocol this could be improved. Long term results are to be awaited.

ID: **155**

Topic: **Cardiovascular Surgery » Pregnancy and Hearth Valve Disease**

Presentation Type: **Oral**

THROMBOSIS OF HEART VALVE PROSTHESIS IN PREGNANT WOMEN: WHAT TO DO? ABOUT 31 CASES

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Introduction: Pregnancy in carrier women of prosthesis mechanical heart is a high-risk pregnancy. Indeed, the risk of accidents thromoemboliques even on well led anti-coagulation therapy remains high due to the presence of the state of hypercoagulability, mechanical prosthesis and the peri-partum hemorrhage. Multidisciplinary follow-up is essential.

The prescription of anticoagulant therapy must comply with the principles and consensual indications in order to minimize maternal and fetal complications.
The aim is to define treatment modalities and to maintain optimal obstricale in a patient with mechanical heart valve prosthesis.

Methods: It is a monocentric and retrospective study from January 2000 to October 2019. Among230 cardiac prosthesis thrombosis census, there are 31 pregnant women. 25 have been operated under cardiopulmonary bypass with four abortion and 06 receiving anticoagulant therapy with two abortions.

Results: We deplore no death for the second group and 02 deaths in the first group with 02 abortions in each group.

Conclusion: Pregnancy in carrier women of cardiac prosthesis should remain exceptional domain from the point of view of cardiac surgeons. For the obstretiens it is sometime difficult to ban the grosses in nullipara. The discussion will be on a case by case basis taking into account the cultural and social level of the patient.

ID: **405**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Oral**

RESULTS OF MITRAL VALVE SURGERY WITH PULMONARY ARTERIAL HYPERTENSION: ANALYSIS OF A RETROSPECTIVE STUDY

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Introduction: Rheumatic heart diseases are redoubtable complication of acute articular rheumatic. Without treatment, pulmonary hypertension and right heart failure may occur. This pulmonary hypertension was admitted as predictor of worse outcome after surgery. The aim of our study is to value the results after mitral surgery in patients with moderate and severe pulmonary hypertension.

Methods: This is an observational descriptive retrospective study between January 2006 and December 2012; a total of 201 patients were operated for mitral or mitro-tricuspid disease with pulmonary arterial hypertension in "Djeghri Mokhtar" hospital. These patients are divided into two groups according to preoperative pulmonary hypertension (PAH) degree: (Group A: 102 patients in moderate PAH, 40 ≤ sPAP<60 mmHg; Group B: 99 patients in severe PAH, Spap ≥ 60 mmHg). In our study, sPAP was measured with doppler echocardiography. Preoperative, operative and postoperative data collection included age, sex, functional class, type of surgery and cardiopulmonary bypass. Pulmonary arterial systolic pressure, left atrial diameter, left ventricular end-diastolic diameter, and left ventricular ejection fraction were recorded and compared.

Results: The follow up is in mean of 61.73 months (from 30 to 108 months). The functional class was improved in majority of patients. There is a significant decrease in mean sPAP during follow up:(48.72 ± 5.85 versus 29.12 ± 8.29 mmHg in group A;77.90 ± 15.62 versus 28.87 ± 10.61 mmHg in group B). Global hospital mortality is 0.49% (0% in group A, 0.98% in group B). Late mortality is 2.48%(3.92% in group A; 1.01% in group B). Survival at 05 years is 96.5%.

Conclusion: Pulmonary arterial systolic pressure decreased near normal value in most patients after surgery. Severe pulmonary hypertension must not be an absolute contraindication for mitral surgery, the out improved by developing cardiopulmonary bypass, myocardial protection and anesthetic technique.

ID: **343**

Topic: **Cardiovascular Surgery » Heart Valve Repair**

Presentation Type: **Oral**

SURGICAL OUTCOMES OF CONCOMITANT CABG AND MITRAL VALVE SURGERY IN PATIENTS WITH MODERATE ISCHEMIC MITRAL REGURGITATION

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BACKGROUND: We retrospectively evaluated perioperative and midterm outcomes of patients undergoing concomitant CABG and mitral valve surgery in patients with moderate ischemic mitral regurgitation.

METHODS: This study enrolled 35 patients (63.4+/-9.5 years) with moderate ischemic MR undergoing CABG with concomitant mitral valve surgery between October 2015 and December 2018. Of these, 27 (77.1%) patients underwent a concomitant MV repair (MVP) and 8 (22.9%) had a concomitant MV replacement (MVR). We evaluated clinical and echocardiographic outcomes of these patients before and after the surgery.

RESULTS: Except 1 patient, all the patients survived to discharge. Mean aortic cross clamping time was 43 ± 7 minutes; mean cardiopulmonary bypass time was 55 ± 9 minutes. 29 patients had mild inotrope support while weaning off CPB. IABP was implanted in 1 patient whose CPB time was 190 minutes, whose weaning off CPB was possible with high inotrope support. Intensive care unit stay 34± 8 hours in 29 patients and 72 ± 38 hours in 6 patients. 1 patient had dialysis due to acute renal failure, which relieved after 3 days. There was decrease in left ventricle dimension and increase in NYHA function compared to preoperative data ($p<0.001$). Recurrent (3+ or above) mitral regurgitation was found in 3 patients (8.6%) at late follow-up.

CONCLUSIONS: The addition of concomitant mitral valve surgery to coronary artery bypass grafting may improve long-term durability of surgery in patients with moderate ischemic mitral regurgitation. Taking into account the disadvantages of anticoagulation therapy and improvement benefits in cardiac remodeling the mitral valve repair should be the surgery of choice preferable in well experienced center.

Keywords: ischemic mitral regurgitation, coronary artery bypass grafting, cardiac remodeling.

ID: **26**

Topic: **Cardiovascular Surgery » Heart Valve Repair**

Presentation Type: **Oral**

SURGERY FOR TRICUSPID VALVE ENDOCARDITIS WITHOUT INVOLVEMENT OF THE LEFT HEART: TEN-YEAR CLINICAL EXPERIENCE

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Background: Isolated infective endocarditis of the right heart is a rare clinical entity. We review our twelve-year experiences of the perioperative features and surgical treatment of isolated right sided infective endocarditis (IRSIE), and long-term outcomes.

Patients and Methods: Between January 2005 and June 2017, a total of 58 patients have been were operated for an IRSIE in two tertiary centers. Congenital heart defects were the main reasons of IRSIE. Previous pacemaker leads insertion, cardiac catheterization, use of central vein catheters for hemodialysis, and intravenous drug abuse were another risk factors. Seven patients have had a history of active intravenous drug use (12 %). The patients' mean follow-up was 24.7±6.1 months.

Results: 3 patients died after surgery (5.1 %) due to postoperative low cardiac out-put syndrome (LOS), and uncontrolled septic shock after surgery. Two patients had chronic kidney disease, and one have had IVDU. Tricuspid valve repair or replacement was performed in 29 patients (50%). Mechanical and bioprosthetic heart valves were replaced in eight patients (13.7 %). De Vega, Kay's annuloplaty, or bicuspudisation was performed in 21 patients (36.2%). Coagulase-negative staphylococci, S. epidermidis, Streptococcus viridans, Staphylococcus epidermidis, and Meticiline Resistance Staphylococcus aureus (MRSA) were the most common microorganisms in preoperative blood cultures in patients with congenital heart defects. The patients who have a history of central venous catheter, intravenous drug abuse, or pace-maker lead insertion, Enterococcus and fungus were the most common cause of IRSIE Enterococcus and fungus were the most common causes of IRSIE in the patients who had a history of central venous catheter, intravenous drug abuse, or pacemaker lead insertion. Two patients required reoperation because of the recurrence of endocarditis within one year after the first operation. The survival rate after operation was 30 day, and 1-, 2-, 5-, and 10 year 94.2 %, 88.9 %, 82.5 %, 81 %, and 80 %, respectively.

Conclusions: Surgical outcomes of patients with IRSIE who underwent surgery in the early time is favorable. We suggest extensive and an aggressive intervention when the patient had hemodynamic instability or the right heart failure which resistant to medical treatment or large vegetation. Postoperative antibiotic treatment, and medication are the key factors to avoid mortality and morbidity.

ID: **283**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Oral**

NEUROLOGICAL PRESENTATIONS IN ENDOCARDITIS, EFFECT ON MORTALITY AND TIME TO SURGERY

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Introduction: Endocarditis is associated with significant comorbidity including cerebral emboli. Timing of surgery in patients with endocarditis who have suffered an embolic stroke remains a matter of debate.

Methods: We collected data retrospectively between 2012 and 2015 from patients diagnosed with Infective Endocarditis. This data was collected from 198 patients over the 4 year period. Demographic and clinical details were gathered from the patient medical records.

Results: In our cohort 8.6% (n=17) presented with neurological symptoms of which 82% (n=14) were male, 18% female with a mean age of 55.4 (21-79) years old. Of patients presenting with neurological symptoms, 35% (n=6) died and 65% (11) survived all of which were operated. The mean length of time waited before an operation was 17 days (0-51) Vs 11 days (0-62) in other presentations. Of the patients with neurological symptoms that had an operation, 27% (n=3) died compared to 50% (n=3) of those that did not have an operation. The survival rates for differing lengths of wait time for surgery were 80% for £7 days, 85.7% for £14 days, 75% for £28 days and 70% for £ 42 days.

Conclusion: Our findings suggest surgery within 14 days of admission provides the best outcomes for patients in terms of survival. It also shows that surgical treatment has a better survival rate

ID: **617**

Topic: **Cardiovascular Surgery » Heart Valve Repair**

Presentation Type: **Oral**

A COMPARISON OF POSTOPERATIVE GRADIENT BIOPROSTHESIS AND PERCEVAL AORTIC VALVE REPLACEMENT

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Introduction: Aortic valve replacement (AVR) is the treatment of choice for aortic valve stenosis when it is a symptomatic severe aortic stenosis (≤1 cm2/m2) or an asymptomatic with left ventricular dysfunction or combined with other cardiac surgery procedure. The aim of this study is to compare preoperative and postoperative transaortic gradients in patients undergoing perceval and bioprosthetic AVR.

Methods: Patients who underwent AVR between 2014 and 2019 in our clinic for aortic valve disease were evaluated within the scope of the study. Patients using bioprosthetic aortic valve or Perceval were included in the study. Patients who needed other valve operations with aortic valve replacement were excluded from the study. A total of 37 patients were included in the study.

Results: Bioprosthetic aortic valves were used in 35.1% (n = 13) of the patients included in the study and Perceval aortic valves were used in 64.9% (n = 24). CABG operation was performed in 18.9% (n=7) of the patients in the same session. CABG was performed in 1 patient in the group using bioprosthetic aortic valve and 6 patients in the group using Perceval. The mortality rate was 16.2% (n = 6) in all study groups and 15.4% (n = 2) in the group using the Bioprosthetic aortic valve, and 16.7% (n = 4) in the group using Perceval. There was no statistically significant difference between the groups in terms of mortality.

The mean of transaortic gradient values measured in the echocardiography examination performed in the preoperative period was 71 + 1.41 / 39 + 4.24 mmHg in patients using a bioprosthetic valve and 63 + 3.80 / 40.8 + 2.68 mmHg in patients using Perceval. Transaortic gradients measured in the echocardiographic evaluation performed in the postoperative period were 54 + 18,38 / 25,50 + 2,12 mmHg in the group using the Bioprosthetic aortic valve, and 18,20 + 8,4 / 10,40 + 6,02 mmHg in the group using Perceval. In the statistical evaluation for transaortic gradients measured in echocardiographic evaluations performed in the preoperative and postoperative period, both max. transaortic gradient and mean transaortic gradient were significantly lower in patients using Perceval (p = 0.02).

Discussion: This study showed that the Perceval sutureless bioprosthesis is safe. The use of the Perceval valve allowed for implantation of larger diameter prostheses, resulting in lower transvalvular gradient, and there was no difference in the mortality between groups.

Oral Presentation Session

Catheter Ablation of Arrhythmias: Clinical Evaluation and Outcomes

Date: 01.11.2020 Time: 08:00 – 09:00 Hall: 4

ID: **21**

Topic: **Cardiology » Management of Atrial Fibrillation**

Presentation Type: **Oral**

CLINICAL EVALUATION OF PAROXYSMAL AND PERMANENT ATRIAL FIBRILLATION PATIENTS IN CARDIAC INPATIENT UNIT

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Aim: Atrial fibrillation (AF), a supra-ventricular arrhythmia, is characterized by a rapid and irregular heart rate, for which electrocardiography is the diagnostic tool. Hypertension is the most common cause of AF. In this study, we aimed to evaluate the paroxysmal AF and permanent AF patients' symptoms, medical history, and clinical characteristics in the inpatient unit.

Methods: 115 patients (30 patients with paroxysmal AF and 85 patients with permanent AF) were enrolled in the study. All patients' detailed histories were taken; physical examination, routine biochemical tests, electrocardiographies, and transthoracic echocardiographies were performed. CHA2DS2-VASc (Congestive heart failure/left ventricular dysfunction, Hypertension, Age ≥75 years, Diabetes Mellitus, Stroke/transient ischemic attack/systemic embolism, Vascular Disease, Age 65-74 years, Sex Category) scores were recorded.

Results: Permanent AF patients were older (70.0 (10.5) vs 61.4 (15.8); P=0.01) and had a lower ejection fraction (41.0 (11.9) vs 53.3 (11.2); P=0.01) than paroxysmal AF patients. CHA2DS2-VASc scores were similar between the two groups (3.0 (1.5) vs 2.7 (1.3); P=0.24). In hematological analysis, prothrombin time (15.3(1.3-106.4) vs 13.6(11.0-75.5); P=0.03) and international normalized ratio (1.2(0.9-16.0) vs 1.1(0.9-6.0); P=0.01) values were higher in permanent AF patients compared to those with paroxysmal AF. Rhythm regulation was performed to paroxysmal AF patients. Rate regulation was performed significantly more frequently in permanent AF patients than paroxysmal AF patients (74(87%)) vs (12(40%)); P=0.01).

Conclusion: This study demonstrated that permanent AF patients had more comorbidities compared to paroxysmal AF patients. Rhythm control was the principal treatment strategy in paroxysmal AF, whereas rate control was the treatment of choice in permanent AF.

ID: **233**

Topic: **Cardiovascular Surgery » Surgical treatment of AF**

Presentation Type: **Oral**

THORACOSCOPIC LEFT ATRIAL POSTERIOR WALL AND PULMONARY VEIN ISOLATION IN PATIENTS WITH LONG STANDING PERSISTENT ATRIAL FIBRILLATION: A SINGLE-CENTER EXPERIENCE

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BACKGROUND: This single-center study was designed to evaluate short-term and medium-term efficacy of totally thoracoscopic left atrial (LA) posterior wall and pulmonary vein isolation combined with LA appendage resection in patients with long standing persistent atrial fibrillation (LSPAF).

METHODS: Ninety patients (male 80%) with LSPAF were included in our study. 37 (41.1%) of them had previous transcatheter ablation performed with no effect on rhythm. Some of patients' characteristics are shown in the Table. All patients underwent totally thoracoscopic LA posterior wall and pulmonary vein isolation combined with LA appendage resection (April 2017 – October 2019). Median duration of AF before the procedure was 38 months (min 14; max 186). We used bipolar clamping device Cardioblate Gemini-S (Medtronic, USA). We modified the original technique known as GALAXY procedure (by Doty et al.) and significantly increased the number of ablations to perform a total of 20 lesions on each side with frequent position changing. We change the curvature of the device after 10 lesions in order to achieve complete conduction block. LA appendage is removed with an Endo GIA stapler (Medtronic, USA).

RESULTS: The procedure was successfully completed, and conduction block was confirmed in all patients. There was no operative mortality, no myocardial infarction. There were one stroke and one transient ischemic attack. Two patients survived median sternotomy (major bleeding and heart dislocation), none of them required cardiopulmonary bypass connection. In two cases, left anterolateral thoracotomy was needed due to bleeding from pulmonary vein. One patient required prolonged ventilation for transient bilateral phrenic nerve palsy (pulmonary function restored 1 week after the procedure). Right phrenic nerve injury was diagnosed in two patients without any signs of recurrent pulmonary infections postoperatively. Median follow-up was 12 months (range, 2-30 months). At last follow-up, 85 patients (94.4%) were in sinus rhythm, as documented by 24-hour Holter monitoring. Beta-blockers and amiodarone were discontinued in sinus rhythm patients after routine examination (24-hour Holter monitoring) 3 months after the surgery. 7 days later, routine examination was repeated in order to exclude cardiac rhythm disorders. Three patients reverted to AF, two patients reverted to atrial flutter. Cardioversions, amiodarone and sotalol were not successful.

CONCLUSION: Totally thoracoscopic left atrial posterior wall and pulmonary vein isolation is a safe procedure which can be effectively used in patients with LSPAF. Frequent position changing and increased number of applications help to achieve complete conduction block, especially in patients with LSPAF.

Duration of atrial fibrillation, months (median [min; max])	38 [14; 186]
Left ventricle ejection fraction, Simpson, % (median [min; max])	50 [35; 64]
Drugs refractory tachycardia (> 90/min), Number of pts (N [%])	49 [54.4%]
Endocardial RFA of pulmonary veins in the past, Number of pts (N [%])	23 [25.5%]
Endocardial RFA of cava-tricuspid isthmus in the past, Number of pts (N [%])	14 [15.5%]

ID: **116**

Topic: **Cardiology » Transcatheter ablation for tachyarrhythmias - Atrial fibrillation**

Presentation Type: **Oral**

LONG-TERM OUTCOMES OF PATIENTS WITH ATRIAL FIBRILIATION UNDERGOING CRYOBALLON CATHETER ABLATION

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Background: Atrial fibrillation (AF) is the most common arrhythmia encountered in clinical practice and it is associated with an increased risk of mortality and morbidity. Catheter ablation of AF is a favorable therapeutic option for the treatment of patients, who are symptomatic despite antiarrhythmic medication. As an alternative to the radiofrequency ablation cryoballoon method has found widespread application area. Nowadays cryoballoon therapy is being performed efficiently and safely worldwide. The aim of this study was to investigate the long-term (mean 1184 days) follow-up results of AF patients who underwent cryoballoon ablation in our clinic.

Method: In our study; 153 patients who underwent successful cryoballoon ablation for symptomatic AF between 2012 and 2016 were included. The medical records of the patients were retrospectively reviewed. Patients were also investigated for late complications related to the procedure such as stroke, pulmonary stenosis, death occurred during the follow-up period and acute complications related to ablation. Clinical success was defined as freedom from AF, atrial flutter or atrial tachycardia recurrence >30-s following the 3-month blanking period.

Result: 129 patients with paroxysmal AF and 24 patients with persistent AF underwent cryoballoon ablation. Recurrence occurred in 39 (25.4%) patients. In the univariate analysis, female gender left atrial diameter AF type and procedure time were statistically significant in terms of recurrence ($p < 0.05$). In multivariate analysis, AF type ($p = 0.014$; 95% CI: 1.023-1.057) and left atrial diameter ($p = 0.023$; 95% CI: 1.007-1.208) were found to be the most important independent predictors of recurrence. Complications developed in 9 patients (5 patients with transient phrenic nerve paralysis, 1 patient with pericardial tamponade, 1 patient with pseudoaneurysm. 2 patients with transient ischemic attack)

Conclusion: Pulmonary vein isolation (PVI) with cryoballoon is safe and effective treatment option of symptomatic AF. Left atrial width and AF type were found to be the most important independent predictors for recurrence after cryoablation.

ID: **150**

Topic: **Cardiology » Management of Atrial Fibrillation**

Presentation Type: **Oral**

THE IMPACT OF ATRIAL FIBRILLATION ABLATION ON ECHOCARDIOGRAPHIC PARAMETERS: SINGLE CENTER EXPERIENCE

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INTRODUCTION: It is known that atrial fibrillation catheter ablation provides clinical improvement in patients. Positive effects of catheter ablation in patients with impaired cardiac function have also been proven in recent studies. The aim of our study is to show the effect of catheter ablation on echocardiographic parameters.

METHODS: Ninety-seven consecutive patients diagnosed with AF were included in the study. Basal and 6th month echocardiographic data of the patients were compared. Echocardiographic data of patient groups with or without recurrence were also compared.

RESULTS: The mean age of 97 patients included in the study was 65.2 ± 8.6 years. The majority of the patients was paroxysmal AF patients (50/97, 51%). The mean LVEF of the patients was found 48.7 ± 11.4%. Left ventricular ejection fraction (LVEF) increased statistically significant compared to the basal value in the 6th month (53.1 ± 10.1 and 48.7 ± 11.6, p = 0.001). No significant difference was shown among the other values. Moreover, a statistically significant increase was observed in LVEF values of the patients without recurrence in the comparison of their basal and 6th-month values. (48.3 ± 12.2 and 54.4 ± 9.9, p = 0.008). D

CONCLUSION: AF catheter ablation was observed to have positive effects on LVEF and partly on LVESD. Large-scale randomized studies are required to detect its clinical repercussion.

ID: **148**

Topic: **Cardiology » Transcatheter ablation for tachyarrhythmias - Atrial fibrillation**

Presentation Type: **Oral**

ONE-YEAR OUTCOME FOLLOWING THE CATHETER ABLATION OF ATRIAL FIBRILLATION: SINGLE-CENTER EXPERIENCE

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Background: Catheter ablation is a cornerstone treatment strategy in atrial fibrillation (AF). We sought to investigate the impact of catheter ablation on recurrence rate of AF.

Methods: Ninety-seven consecutive patients diagnosed with AF were included in the study. Demographic and echocardiographic parameters were obtained at the beginning of study. Results were straified according to presence and absence of recurrence. Predictors of AF recurrence were also assessed.

Results: The mean age of 97 patients included in the study was 65.2 ± 8.6 years. The distribution of patients with paroxysmal and persistent AF was comparable (50 vs. 47 patients, respectively). The majority of the patients was paroxysmal AF patients (50/97, 51%). The mean LVEF of the patients was found 48.7 ± 11.4%. Analysis of patients with and without recurrences revealed that baseline demographic and echocardiographic parameters were comparable among the groups. Recurrence rate of patients with paroxysmal and persistent AF were also comparable. Only LVEF was slightly lower in patients with AF recurrence compared to without AF recurrence (p=0.09). Left atrial diameter, LVEDD, and the presence of persistent AF showed a trend to predict AF recurrence, however this did not reach statistical significance.

Conclusions: Despite technological improvements recurrence rate of AF still remains high. Further improvements and new approaches should be tested in large-scale randomized studies in order to improve outcome of catheter ablation of AF.

ID: **711**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

IDIOPATHIC RIGHT BUNDLE BRANCH BLOCK, INNOCENT OR GUILTY?

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Background:

Idiopathic right bundle branch block (RBBB) is known as an innocent and common finding in the population. Idiopathic RBBB is diagnosed after excluding possible underlying pathologies, including arrhythmogenic and congenital diseases. Although idiopathic RBBB is interpreted as innocent, there are studies indicating that this disorder may impair right ventricle (RV) functions including the interventricular septum (IVS). At the same time, distortion in the twist, torsion and rotation of the left ventricle (LV) can be observed due to the dyssynchrony of the IVS. Speckle tracking echocardiography (STE) can provide very detailed information about the RV and LV mechanics. STE provides easy and reliable parameters that are difficult or impossible to measure with conventional echocardiographic methods. Therefore, we sought to investigate RV and LV functions of patients with idiopathic RBBB by comparing to control group.

Methods:
Echocardiographic images focused on RV and LV were obtained from 20 patients with idiopathic RBBB and 20 healthy control subjects. RBBB is defined as having a QRS complex >120ms with RSR appearance in leads V1 and V2 on electrocardiogram. Conventional echocardiographic parameters (LV ejection fraction (EF), RV fractional are change (FAC), tricuspid annular plane systolic excursion (TAPSE), tricuspid annular S' velocity. etc) were measured. 2D speckle tracking strain analysis was used to assess deformation indices. LV global longitudinal strain (GLS), RV GLS, IVS longitudinal strain (LS), RV free wall LS, LV torsion, LV and RV mechanical dispersion were measured. Mechanical dispersion was defined as the standard deviation of time to peak longitudinal strain of 6 segments for RV and 18 segments for LV. Approval was obtained by the local ethical committee.

Results:
20 patients with idiopathic RBBB (28.7 ± 7.9 years of age, 10 f) and 20 healthy subjects (29.1 ± 7.5, 10 f) were included. No difference was observed in chamber dimensions of LV (4.4 ±1.0 vs 4.3 ± 0.9, p=0.74) and RV (3.0 ±.0.7 vs 2.9 ± 0.8, p=0.68) between groups. LV EF (63 ± 5.9% vs. 61 ± 6.2%, p=0.35), RV FAC (47.2 ± 3.5 vs. 46.8 ± 4.6, p=0.76), TAPSE (2.1 ±. 0.9 vs. 2.0 ± 0.7, p=0.70) measurements of groups were similar. However, LV GLS (-25.5 ± 5.7% vs. -22.1 ± 4.2%, p<0.05), RV GLS (-26.9 ± 4.6% vs. -24.0 ± 4.4%, p<0.05), IVS LS (-24.3 ± 4.9% vs. -19.1± 4.2%, p<0.05), were lower (less shortening) in patients with idiopathic RBBB compared to controls. Significant differences were also observed in LV [15 (5-30) vs. 30 (20-60), p<0.05) and RV [18 (7-35) vs. 36 (24-80), p<0.05] mechanical dispersion by being more evident for RV between groups. LV torsion (2.1 ± 0.6 vs. 1.6 ± 0.5, p<0.05) was also lower in patients with idiopathic RBBB.

Conclusion:
Our results demonstrate that idiopathic RBBB have a substantial impact on longitudinal strain and dyssnychrony of LV and RV. Prospective studies with larger number of subjects are required to elucidate further the impact and importance of electrical and mechanical dyssynchrony caused by idiopathic RBBB on the clinical outcome.

ID: **749**

Topic: **Cardiology » Electrocardiography and Non invasive electrocardiology**

Presentation Type: **Oral**

THE EFFECT OF HYDROXYCHLOROQUINE ON JTP AND JT INTERVAL IN PATIENTS WITH COVID-19

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Objectives: Hydroxychloroquine(HCQ) used in the treatment of COVID-19 is known to prolong the QT interval. QT prolongation has been found to cause ventricular arrhythmias such as torsades de pointes. Prolonged JT and JTp intervals, which are among the parameters of ventricular repolarization, are associated with ventricular arrhythmias such as prolongation of the QT interval. In this study, we aimed to examine the effect of HCQ on JT and JTp intervals in patients hospitalized for COVID 19.

Methods: 130 hospitalized patients with COVİD-19 whose diagnosis was confirmed by RT-PCR were included in the study. The patients were divided into two groups as those using HCQ(HCQ-group, n=74) and those not using HCQ (Control-group, n=56). Patients using azithromycin and with negative RT-PCR were excluded. The electrocardiographic measurements (QT, QRS, JT, JTp) was performed on the admission and at the 3rd-day after treatment. JT and JTp intervals were corrected for the effects of heart rate using a modified Bazzet's formula (JTC and JTpC).

Results: The median age was 48(37-66 IQR) and 69(53%) of patients were female. Demographic, clinical, laboratory and electrocardiographic finding of patients were given in Table 1. The median JTpC-admission was 215 ms (195-230 IQR) and JTC-admission 320 ms (301-334 IQR) whereas the JTpC-3rd-day was 220 ms (195-238 IQR) and JTC-3rd-day was 328 ms (306-343 IQR). JTC (9 ms (-2-22 IQR), p<0,001) and JTpC (8 ms(0-23 IQR), p<0,001) intervals were significantly prolonged after treatment in the HCQ-group, but no significant change was observed JTC (-2 msn (-11–14 IQR), p=0,940) and JTpC (-3 ms (-15¬-13 IQR), p=0,466) intervals in the control-group. There was a significant relationship between JTC-3rd-day and HCQ, SIRS, JTC-admission by multivariable linear regression analysis (respectively β=2,373, 95% CI 1,316- 14,589, p=0,019, β=-2,589, 95% CI 2,384-17,894, p=0,011, β=10,423, 95%CI 0,572- 0,840, p<0,001). Also there was a significant relationship between JTpC-3rd-day and HCQ, corrected-calcium, JTpC-admission.(respectively β=2,195, 95% CI 759- 14,752, p=0,030, β=-2,134, 95% CI -140,79 - -0,523, p=0,035, β=11,677, 95% CI 0,676- 0,952, p<0,001).

Conclusion: Prolonged JTC and JTpC intervals have been found to be associated with ventricular arrhythmias. The JTC interval can be used as an alternative to the QTC interval, especially in patients with bundle branch block. HCQ blocks the hERG potassium channel and can contribute to the prolongation of the QTC interval. In our study, a significant prolongation was observed in JTC and JTpC intervals. In addition to the QT interval, the monitoring of these parameters will be useful in predicting the development of arrhythmia in COVID-19 patients using HCQ. İn conclusion, a significant prolongation was observed in the JTC and JTpC intervals after HCQ treatment.

Table 1. Baseline characteristics, clinical, laboratory and electrocardiographic findings of patients

	Total (n=130)	HCQ Group(n=74)	Control(n=56)	p value
Age, years	48(37-66)	46(31-66)	50(39-66)	0,156
Gender (female), n (%)	69(%53)	36(%49)	33(%59)	0,245
Hypertension, n (%)	31(%24)	15(%20)	16(%29)	0,372
Diabetes mellitus, n (%)	25(%19)	12(%16)	13(%23)	0,437
Smoking, n (%)	38(%29)	20(%27)	18(%32)	0,660
Congestive heart failure, n (%)	3(%2)	1(%1)	2(%4)	0,577
Coronary artery disease, n (%)	14(%11)	7(%10)	7(%13)	0,789
Chronic respiratory disease, n (%)	8(%6)	6(%8)	2(%4)	0,465
Myocardial injury, n (%)	5(%4)	3(%4)	2(%4)	0,887
SIRS criteria ≥2, n (%)	33(%25)	18(%24)	15(%27)	0,908
Length of hospital stay, dats	6(5-9)	6(5-9)	5(6-10)	0,842
Intensive care unit admission, n (%)	12(%9)	7(%10)	5(%9)	0,943
Loop diuretic use, n (%)	3(%2)	1(%1)	2(%4)	0,577
Temperature, °C	37(36,7-37,5)	37,1(36,6-37,5)	37,1(36,7-37,6)	0,633
Systolic blood pressure, mmHg	110(105-120)	110(100-120)	110(106-120)	0,442
Diastolic blood pressure, mmHg	70(70-80)	70(70-80)	70(69-80)	0,702
White blood cell, 103/uL	6,06(4,57-7,49)	6,31(4,79-8,46)	5,62(4,52-7,02)	0,151
Hemoglobin, g/dL	12,6(13,5-14,9)	13,7(12,6-14,9)	13,4(12,6-14,9)	0,703
C-reactive protein, mg/L	11(2-47)	6,1(2-47)	27(4-49)	0,015
Procalsitonin, ng/mL	0,06(0,04-0,1)	0,05(0,04-0,1)	0,08(0,05-0,11)	0,98
D-dimer, ng/mL	169(114-283)	163(97-259)	192(120-316)	0,246
Creatinine, mg/dl	0,79(0,71-0,96)	0,77(0,69-0,94)	0,8(0,71-1,14)	0,063
Albumin, g/L	39(36-43)	42(38-45)	37(34-40)	<0,001
Total calcium, mg/dL	8,7(8,2-9,1)	8,8(8,5-9,1)	8,55(8-8,97)	0,033
Corrected calcium, mg/dL	8,67(8,42-8,96)	8,61(8,35-8,87)	8,72(8,48-9,18)	0,076
Potassium , mmol/L	4,0(3,8-4,3)	4,0(3,8-4,3)	4,1(3,7-4,3)	0,832
Heart rate admission, beat/min	90(78-99)	90(76-99)	90(79-98)	0,539
Heart rate at 3rd day, beat/min	80(73-88)	82(73-89)	80(73-89)	0,871
QRS duration admission, ms	90(83-100)	94(84-104)	88(83-96)	0,020
QRS duration 3rd-day, ms	92(86-104)	97(86-104)	90(85-100)	0,131
QT interval admission, ms	358(340-377)	357(340-378)	358(340-374)	0,778
QT interval 3rd-day, ms	375(358-400)	380(362-402)	370(355-393)	0,132
JT interval admission, ms	262(240-283)	260(237-283)	267(254-283)	0,402
JTp interval admission, ms	175(151-196)	170(148-194)	182(161-196)	0,022
JT interval 3rd-day, ms	280(264-305)	281(262-305)	278(265-307)	0,880
JTp interval 3rd-day, ms	186(168-210)	185(163-210)	189(175-210)	0,331
JTC interval admisson, ms	320(301-334)	317(293-331)	322(314-338)	0,025
JTpC interval admission, ms	215(191-230)	203(183-228)	223(209-236)	<0,001
JTC interval 3rd-day, ms	328(306-343)	329(304-342)	328(309-344)	0,929
JTpC interval 3rd-day, ms	220(195-237)	219(191-238)	221(206-238)	0,293
JTC interval delta, ms	6(-6 , 18)	9(-2 , 23)	-2(-11,14)	0,006
JTpC interval delta, ms	6(-8, 20)	8(1, 23)	-4(-15, 13)	<0,001

Continuous variables are presented given as median (interquartile range) and categorical variables were expressed as number (%). SIRS, Systemic Inflammatory Response Syndrome

ID: **744**

Topic: **Cardiology » Arrhythmias and antiarrhythmic therapy**

Presentation Type: **Oral**

PROPAFENONE INDUCED TAKOTSUBO CARDIOMYOPATHY: FIRST CASE

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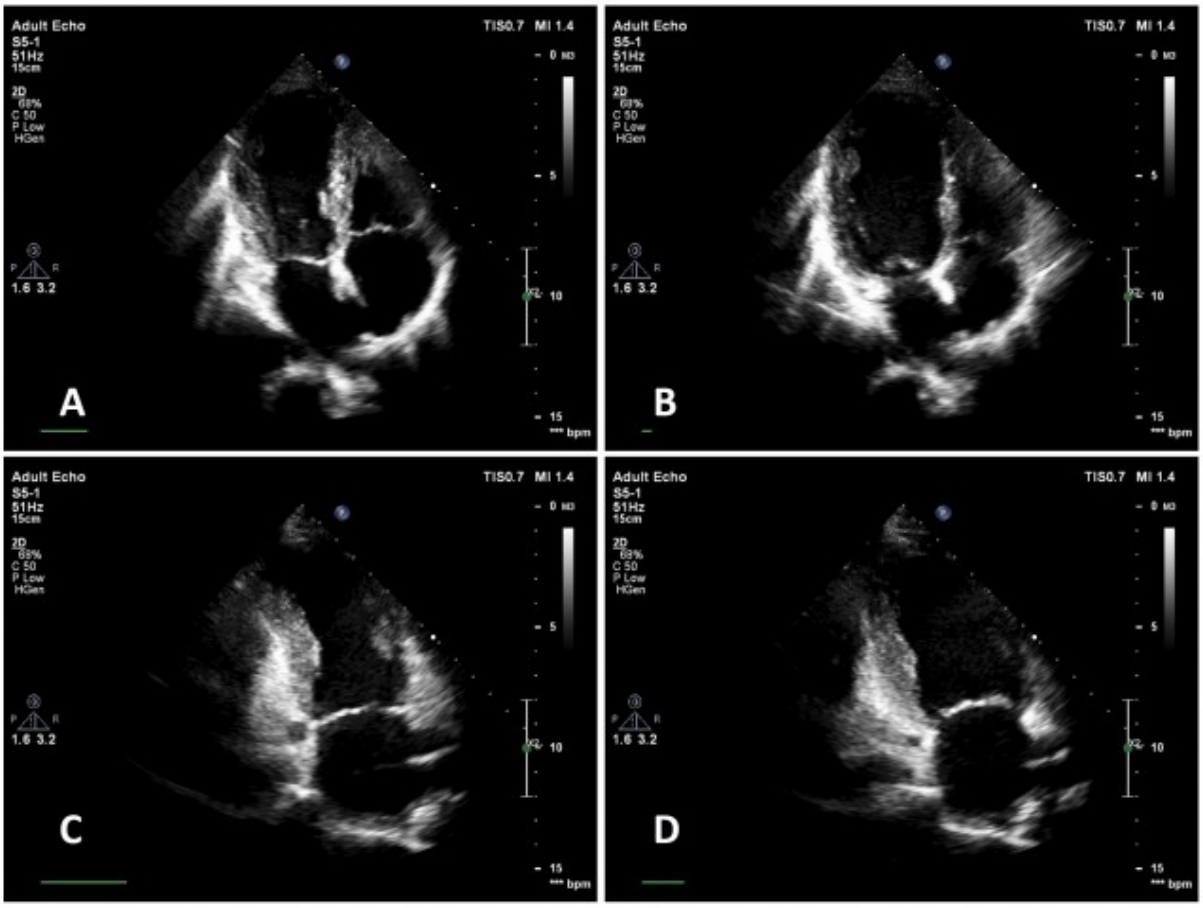
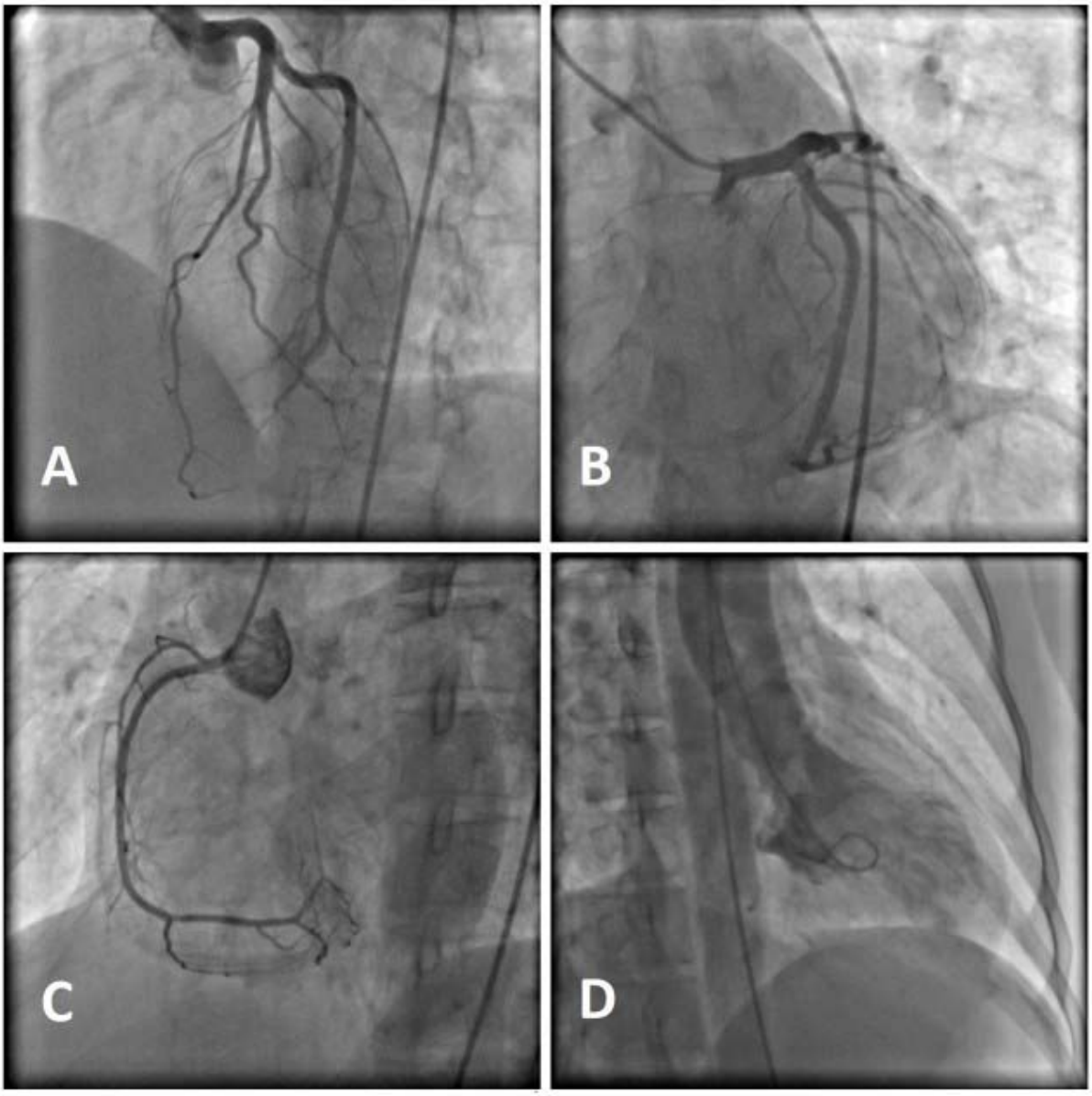
Propafenone is a class 1C antiarrhythmic drug that blocks sodium channels. It can be used in the treatment of ventricular and supraventricular tachycardia. It can also be used as a pill-in-the-pocket because of its cardio-toxic effects in long-term use. Although propafenone use is known to cause syncope, QRS enlargement and suppression of left ventricular functions, development of takotsubo cardiomyopathy is unknown. In this case, we presented a 37-year-old female patient who developed takotsubo cardiomyopathy and cardiogenic shock secondary to propafenone use for the first time and recovered with medical therapy.

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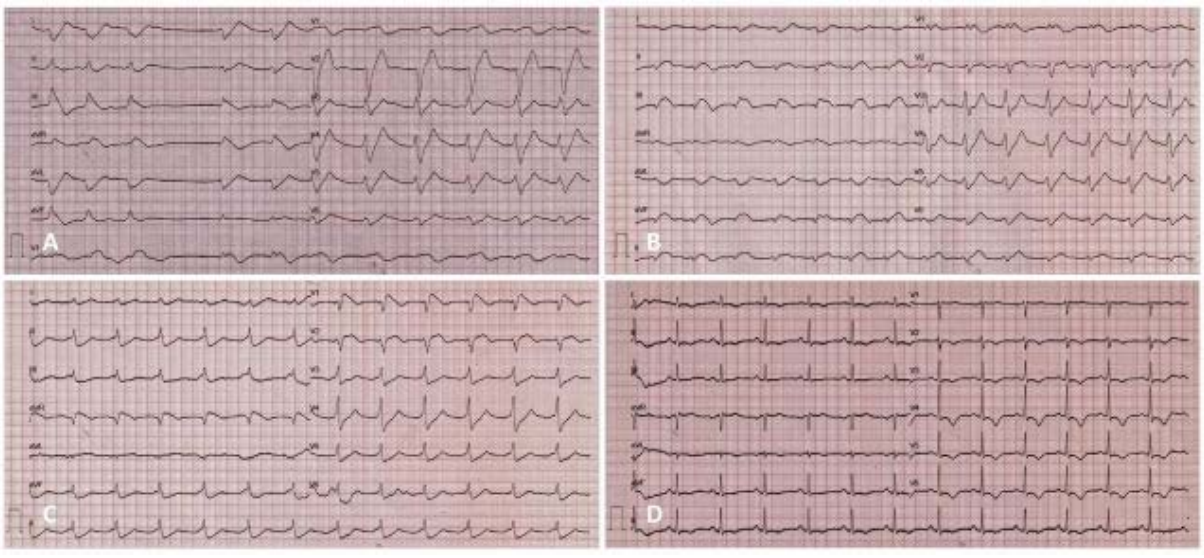
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ID: **747**

Topic: **Cardiovascular Surgery » Risk Management in Cardiovascular Diseases**

Presentation Type: **Oral**

A SUBACUTE RIGHT VENTRICLE PERFORATION AFTER ICD IMPLANTATION AND SUCCESSFUL PERCUTANEOUS LEAD EXTRACTION STRATEGY

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INTRODUCTION

Cardiac perforation of the right ventricle associated with a pacemaker(PM) or implantable cardioverter-defibrillator (ICD) leads is rare but a potentially life-threatening complication of device implantation. The optimal therapeutic strategy is still uncertain. We described a case about a subacute right ventricular perforation by ICD lead and successful treatment using a percutaneous lead extraction strategy

CASE

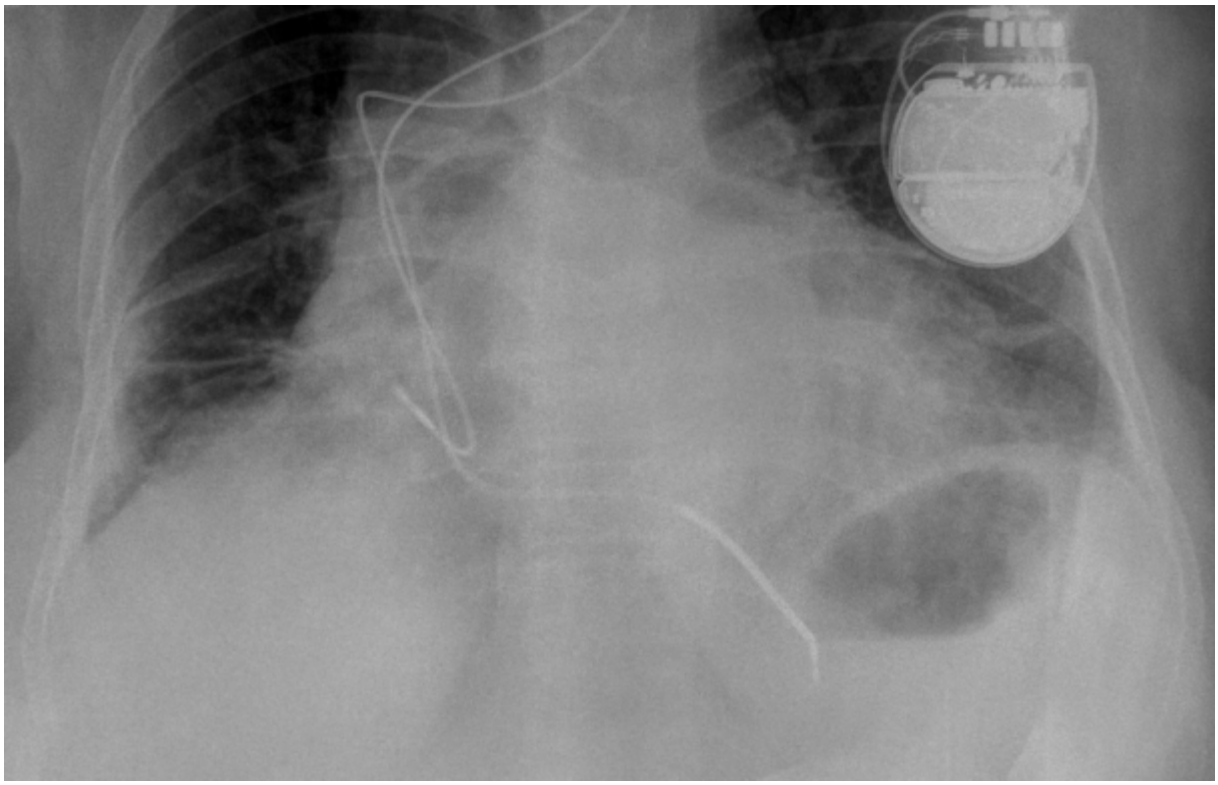
A 70-year old female with ICD placed for primary prevention of sudden cardiac death for ischemic cardiomyopathy presented to the emergency with sharp chest pain and shortness of breath. Her medical history included two revisions for lead reposition after the first implantation one month ago. Her blood pressure was 140/80 mmHg with a regular heart rate. Physical examination revealed no abnormalities except the softening of heart sounds. Chest X-ray showed a displacement of the lead, with its tip located on the cardiac silhouette border towards the diaphragm (Figure 1). Transthoracic echocardiography showed moderate pericardial effusion with no evidence of cardiac tamponade. In the next step, computed tomography of the chest is performed. It revealed the tip of the right ventricle lead penetrating the right ventricle wall and migration to the diaphragm(Figure 2). The perforating lead was an active fixation model. After a discussion with cardiothoracic surgeons, we planned a percutaneous lead extraction strategy with surgical backup. Percutaneous lead extraction was performed in the operating room under surgical backup. After extraction, pericardial effusion didn't progress, and it regressed in the follow-up. The lead had been dislocated and repositioned two times during the patient's previous procedures. So we thought the tissues might be fragile, and the patient refused further interventions. Therefore, the ICD re-implantation was not planned. The patient was discharged home in a stable condition and was doing well on follow up one month later.

DISCUSSION

Cardiac lead perforation, although relatively rare, is a potential complication of PM and ICD implantation. Ventricular perforations are mostly recognized during or shortly after implantation, but subacute and delayed lead perforations have also been reported. The lead perforation rate with PM has been reported to range between 0.1% and 1%, whereas with ICD, the status is said to be 0.6%-5.2%. The most commonly employed therapeutical approach is surgical removal, but percutaneous lead extraction with standby cardiothoracic surgery has been widely reported as in our patient.

CONCLUSION

We reported a rare ICD implantation complication in which the lead perforated right ventricle and migrated to the diaphragm and successful treatment with percutaneous extraction.

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ID: **842**

Topic: **Cardiology » Management of Atrial Fibrillation**

Presentation Type: **Oral**

SYSTEMIC IMMUNE-INFLAMMATION INDEX PREDICTS NEW ONSET ATRIAL FIBRILLATION AFTER ST- ELEVATION MYOCARDIAL INFARCTION

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Objective: Atrial fibrillation (AF) is a supraventricular arrhythmia that is frequently seen in ST segment elevation myocardial infarction (STEMI). It has been shown a close relationship between the development of AF and the inflammatory state in STEMI patients. The systemic immune inflammatory index (SII) is an easy-to-calculate parameter that reflects the inflammatory state, and has been recently introduced. Its usefulness in predicting AF in the development of AF in patients presenting with STEMI is unknown. In this study, we investigated the relationship between SII and AF development following STEMI.

Methods: This study included a total of 293 patients who developed 60 atrial fibrillation. Baseline clinical, demographic, laboratory and echocardiographic data of patients' were recorded. SII of the patients was calculated and the results were compared.

Results: SII was found to be higher in patients who developed atrial fibrillation. However, age, systolic blood pressure, weight, and left atrium diameter were found to be independent markers of newly developed atrial fibrillation.

Conclusion: SII may be used as a novel, simple and reliable inflammatory biomarker in the prediction of developing AF in patients with STEMI.

Keywords: inflammation, atrial fibrillation, ST segment elevation myocardial infarction

ID: **754**

Topic: **Cardiology » Arrhythmias and antiarrhythmic therapy**

Presentation Type: **Oral**

SEASONAL VARIATION IN ATRIOVENTRICULAR BLOCK: A SINGLE CENTRE STUDY IN THE THRACE PART OF TURKEY

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AVB onadmission (n=386)	Spring (n=93)	Summer (n=104)	Autumn (n=116)	Winter (n=73)	p value
Age group (n) (young / elderly / very elderly)	22/51/19 (23.9. / 55.4 / 20.7 %)	22/63/18 (21.4 / 61.2 / 17.5 %)	33/49/34 (28.4.3 / 42.2.7 / 29.3%)	16/39/17 (22.2 /54.2 /23.6 %)	0.17
Gender (n)(male)	43 (46.2 %)	48 (46.2 %)	62 (53.4 %)	31(42.5 %)	0.47
AVB degree (n) (Mobitz type 1/ type 2 /complete)(%)	1/9/83 (1.1 / 9.7 / 89.2 %)	0/12/92 (0.0 / 11.5 / 88.5 %)	1/14/101 (0.9 / 12.1 / 87.1 %)	0/11/62 (0.0 / 15.1 /84.9 %)	0.82
Accompanying ACS (n)	19 (20.4 %)	18 (17.3 %)	15 (12.9 %)	10 (13.9 %)	0.47
In-hospital cardiovascular mortality (n)	13 (14 %)	8 (7.8 %)	9 (7.8 %)	10 (13.7 %)	0.29

Objective: AVB (atrioventricular block) is a spesific form of bradyarrhythmic condition with a significant morbidity in the clinical setting particularly in the elderly population. The current study was devised to investigate the potential seasonal distribution as well as seasonal characteristics (including in-hospital mortality) of AVB admissions in a single centre in the European part of Turkey.

Methods: Study subjects (those with an advanced AVB on admission) were selected retrospectively among a total of 10877 admissions during a particular 10-year period. Overall AVB admissions (386 subjects eligible for the analysis) were then categorized into four groups according to the season of admission: spring, summer, autumn and winter groups. Thereafter, comparison among season groups were made with regards to number of admissions, demographic and clinical characteristics.

Results: Overall AVB admissions were characterized by an autumn peak and a winter trough (autumn: 116, summer:104, spring: 93, winter: 73) with a statistically significant seasonal variation ($p<0.001$). Seasonal variation also appeared to be significant across all gender and age subgroups ($p<0.001$ for all). However, notwithstanding a persistent winter trough pattern across all subgroups, autumn peak pattern was most prominent in males, in the young-middle aged and very elderly subjects (80 years and over), but was found to diminish substantially in females and in the elderly subjects leading to a summer-autumn or a summer peak (65 to 79 years) in these subgroups. Clinical outcome including in-hospital mortality did not exhibit any seasonal variation among the overall AVB admissions.

Conclusion: AVB admissions might potentially exhibit a sesonal variation along with a gender and age difference in this variation. Among a variety of proposed mechanisms, season spesific viral triggers seem to be the most plausible explanation to this seasonal pattern in AVB admissions.

Key words: Seasonal variation, atrioventricular block, viral triggers.

FIGURE AND TABLE LEGENDS:

Figure 1- Seasonal distribution of AVB admissions among the overall population.

Table 1- General comparison of demographic and clinical features among season groups.

Oral Presentation Session

Surgery for Aortic Dissection: Dissemination of Experiences

Date: 01.11.2020 Time: 08:00 – 09:15 Hall: 5

ID: **261**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Oral**

THE EFFICIENCY OF THE CELL SAVER USAGE FOR BLOOD CONSERVATION IN OPEN REPAIR OF AORTIC ANEURYSM AND AORTIC DISSECTION AND AORTOBIFEMORAL BYPASS GRAFTING

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Objective: During the open surgical treatment of aortic aneurysm or aortic dissection, substantial amount of blood loss occurs. The aim of the study is to determine the efficiency of the cell saver device usage for blood conservation in open surgical repair of aortic aneurysms, aortic dissections and aortobifemoral bypass grafting.
Methods: Fifty patients were enrolled to the study and they were divided into two subgroups. The Group 1 involves twenty-five patients who were operated by using cell saver and their datas collected prospectively. The second group (Group 2) involves 25 patients who were operated without cell saver and their datas obtained retrospectively from the hospital records.
The local ethical committee approved the study. Statistical analyses were performed using the SPSS software version 22. Descriptive analyses were presented using means and standart deviation. A p value of less than 0.05 was considered statistically significant. In the comparison of patients' characteristics and the other cathegorical variables x2 test was used. The Student's t-test was used to compare the transfusion amounts and the costs.

Results: The patients' characteristics and risk factors in the groups were similar. The total amount of allojenic red blood cell ($p<0.01$) and total blood products ($p=0.02$) transfusions were significantly lower in the first group. Also, the cost of red blood cell ($p <0.01$) and total transfusions ($p=0.04$) were lower in the first group. In-hospital morbidity and mortality rates of the groups were similar.

Conclusions: As a result, we showed a significant association between the use of cell saver and reduced need for red blood cell and total blood product transfusion amounts. When considering the price of the cell saver set, total costs are comparable between groups. The use of cell saver is safe and efficient in reducing allogenic blood transfusions in major vascular surgeries related to the aorta.

ID: **230**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Oral**

NEW TECHNICAL SOLUTIONS IN CUSTOM-MADE AORTIC STENT GRAFT DEVICE. A STEP FORWARD FOR EASIER ENDOVASCULAR REPAIR OF COMPLEX THORACOABDOMINAL ANEURYSMS? FIRST EXPERIENCE IN EUROPE

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Background: In Complex Aortic Anatomy, surgical debranchings, fenestrations, branched devices or parallel grafts, are needed for anchoring, sealing and visceral arteries perfusion, but these techniques are time and skills demanding, with increase of morbidity and mortality. We present our preliminary experience with a new custom-made Aortic Stent Graft device, 18 – 22 Fr external for up to 50 mm in diameter.

Methods: The variable disposition of the stents, Dacron collars and patches interconnecting the areas of uncovered stents, modulate the radial force and adapt the ASG to the aortic anatomy with effective sealing and anchoring. The Circumferential Fenestrations preserve the patency of the collateral branches (Fig. 1). Internal or external branch are available when visceral arteries take off from the aneurysmal sac. In the last 24 months, this new ASG was employed in 7 pts thoraco-abdominal aortic aneurysm: 1 type I, 2 type II, one of which post type B dissection, 2 type IV, one of which post type B dissection and abdominal aortic aneurysm: 2 pararenal). The anatomic complexity features were as follow: 2 Aortic Arch type 3, 2 radius of curvature < 28 mm, 2 angle < 78°, 1 proximal landing zone 0 and 1 zone 2, 2 proximal aortic neck length < 28 mm, 2 descending thoracic aorta tortuosity index > 1.5, 1 α angle of 90°, 4 distal landing zone length < 95 mm, 1 distal landing zone diameter > 39 mm. The primary end-point was defined as the absence of proximal type 1 endoleak, the effective perfusion of the collateral vessels and the absence of any major adverse event.

Results of the study: We obtained 86% postoperative technical success. All the side branches were patent but 1 branched left renal artery that irreversibly thrombosed because a technical procedural failure. The angio-CT showed the good patency of the ASG reconstruction and the absence of type 1 endoleak. At the 8 months mean follow up all the pts are alive, with absence of type 1 endoleak and correct patency of collateral vessels.

Conclusions: This preliminary experience, with a new custom-made ASG for the treatment of CAA, shows that the modulation of the radial force by the particular uncovered stents and the free-flow, allow an efficient anchoring and sealing; the large fenestrations assure the side branches patency reducing the need of debranching. These innovative technical features could simplify the TEVAR procedure.

ID: **251**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Oral**

FATE OF DILATED AORTIC ROOT AFTER REPAIR OF ACUTE TYPE-A AORTIC DISSECTION

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Purpose: Management of the aortic root in type-A acute aortic dissection is still an open debate. This study evaluated the long-term outcome of patients treated with aortic root replacement compared to those who underwent conservative approach for acute type-A aortic dissection (ATAAD).

Methods: Between 1990 and 2015, out of 213 patients discharged after repair for ATAAD, 95 showed aortic root diameter ≥40mm. Among them, aortic root was replaced in 37 (group A, 35 received mechanical valved conduit) and preserved in 58 patients (group B).

Patients in group A were younger (median age 55.5 vs 60 years, p=0,079). Median aortic root diameter and incidence of ≥moderate aortic regurgitation was 47.5 mm vs 45 mm and 62% vs 41% in A and B groups, respectively. Survival, causes of death and re-operations were analyzed during a median follow-up of 10 years (min 6 months, max 23 years).

Results: The survival rates after discharge were 86±6, 66±8 and 61±9 in group A vs 95±3, 76±6 and 68±9% in group B at 5, 10 and 15 years, respectively (p=0.75).

Aortic related deaths were 3 vs 2 (21% vs 13%, p=0.56) and deaths due to congestive heart failure were 1 vs 5 (7% vs 33%, p= 0.08) in group A vs group B, respectively. Major bleeding-related death was 1 for both groups. 6 patients of group A (16%) required re-operations, with no operative deaths: 2 for pseudo-aneurysm of the proximal anastomosis and 4 due to progression of distal dissection. In group B, 12 (21%, p= 0.7 vs group A) patients required re-operations: 10 for progression of aortic root or aortic valve disease (58% of those with ≥moderate aortic regurgitation at discharge, p= 0.001 vs others), with 1 death, 1 for pseudo-aneurysm of the distal suture line, and 1 for expansion of distal false lumen.

Conclusions: conservative aortic root repair of acute type -A aortic dissection shows acceptable long-term outcomes. Nevertheless, a more aggressive approach seems to be justified in younger patients in presence of a moderate aortic regurgitation.

ID: **412**

Topic: **Cardiology » Diseases of aorta**

Presentation Type: **Oral**

THE EXPERIENCE OF "DR. DJAGHRI MOKHATR HOSPITAL" IN ASCENDING AORTA ANEURYSMS SURGERY AND / OR AORTIC ARCH: ABOUT 160 PATIENTS

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Introduction:

The aortic aneurysm corresponds to a localized dilation with loss of parallelism of the edges. of various etiologies (atheromatous, congenital, dystrophic, inflammatory, even infectious). Aortic aneurysm is the 13th leading cause of death in Western countries. The incidence of aneurysms of the thoracic aorta is estimated at 4.5 cases per 100,000.

The aim of this work is to present the epidemiological, clinical, paraclinical and therapeutic characteristics of 160 patients operated for aneurysms of the ascending aorta and or aortic arch.

Methods:

This is a retrospective mono-centric study between 2001 and 2019 concerning 160 patients operated for thoracic aortic aneurysm (ascending and / or arch) collected in the Ehs Djaghri Mokhtar Constantine / Algeria cardiac surgery department. The age from 06 to 78 years with a mal majority. The atheromatous etiology is the most frequent with 40 cases of hypertensive patients and 11 cases with Marfan disease. The operative procedure consisted in replacing the ascending aorta with or without valve replacement with or without replacing the aortic root.

Results:

cardiopulmonary bypass surgery: Deep hypothermic circulatory arrest: 15; Moderate hypothermia: 41; Normothermia: 104; axillary cannulation: 06. CBP exit under hemodynamic support drugs in 65 patients, ICU stay> 48 hours: 81 patients, Post-operative stay> 07 days in 118 patients. The follow-up was simple in 131 patients. Conclusion:

Conclusion:
The diagnosis of aortic aneurysms is based on medical imaging. Treatment is based on surgery, the indications of which depend on several parameters. with good postoperative results.

ID: **400**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Oral**

SURGERY OF AORTIC DISSECTION: RESULTS ABOUT 96 PATIENTS

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Introduction: Aortic dissection is a life-threatening emergency, the incidence of which is not well understood. Currently, medical imaging allows for increasingly precise and early diagnosis. The aim of this work is to present the epidemiological, clinical, paraclinical and therapeutic characteristics of 96 cases operated for Stanford type A aortic dissections.

Methods: Between January 2000 and December 2019, 96 patients operated for aortic dissection Stanford class A. These were 39 women and 57 men with ages ranging from 16 to 81 years. 65 patients were hypertensive.

The evolution of symptoms varies from less than 24 hours to 4 months. Functional class varies from I to IV of NYHA. The diagnosis was clinically suspected and confirmed by echocardiography and / or thoracic angio TDM. All patients were operated under CPB with open distal repair in 14 cases. The most practical gesture is the replacement of the ascending aorta with a supracoronary tube in 78 cases associated with gesture on the aortic valve in 15 cases.

Results: Hospital morbidity: 14 cases of various complication: Tamponade, rhythm disorders, left ventricular dysfunction and restless awakening. Hospital mortality in the order of 24 cases of various causes.

Conclusion: Serious affection. Its management calls for multidisciplinary skills. It requires early diagnosis and urgent surgical management.

Key words: Dissection, aortic surgery, cardio-pulmonary bypass.

ID: **258**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Oral**

TIMING OF ENDOVASCULAR INTERVENTION IN BLUNT THORACIC AORTIC INJURY

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Objective:

Timing of the endovascular intervention is undetermined issue in Blunt thoracic aortic injury (BTAI).
Priority of the endovascular intervention generally effected by coexisting trauma induced organ damage. In this abstract, we shared our two years experience of the aortic injury in multitrauma patients.

Methods:

This study analysed the early and mid-term results of patients with BTAI in the last two years. The study involves 15 patients (13 male and 2 woman) who applied to our tertiary healthcare service with BTAI. The data is retrospectively collected from the hospital records. According to Society for Vascular Surgery grading system of BTAI, we performed close surveillance and best medical therapy in grade I patients. We chose delayed intervention according to priority of the associated injuries in grade II and III patients. For grade IV BTAI or free rupture of the thoracic aorta we performed emergency repair.

Results:

The mean age of the patients was 48±17 year-old. The most common cause of the trauma was motor vehicle accident (66%). The other reasons were falling from high (6%), landslide (6%) and acceleration and deceleration injuries related to other traumas. Eleven patients were treated by thoracic endovascular aneurysm repair (TEVAR) and four patients with minor BTAI were treated with best medical therapy and close surveillance. Mean duration of stay in intensive care unit was 4±3 days and hospitalization was 9±5 days. There was no in hospital mortality. Two endoleaks occurred in two patients treated by TEVAR. Three patients subclavian artery had to be closed because of inadequate proximal landing zones. Low-dose heparin was used for the patients who have intracranial or other visceral organ damage, in the TEVAR procedure. The oversizing of the stent graft was below 10%.

Conclusions:
Blunt thoracic aortic injury (BTAI) is a rarely encountered, lethal injury. It has 75% mortality rate and is the second most common cause of dead in trauma patients after intracranial hemorrage. TEVAR is the optimal, less invasive and rapid treatment modality for patients with blunt aortic injuries. It has lower mortality and morbidity rates than open surgery and enables a quick hemodynamic stabilization of polytrauma patients. The timing of the intervention should be decided acording to severity of the aortic injury and the other organ damages.

ID: **107**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Oral**

SURGERY OF TRAUMATIC RUPTURE OF THE AORTIC ISTHMUS: ABOUT 03 CASES

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Introduction: The traumatic rupture of the aortic isthmus represents major problems in the assumption of responsibility of the polytraumatized patient; in 90% of the cases, deceleration is the principal mechanism of the lesions of the isthmus. It is fatal on the spot of the accident in 50 to 80% of the cases and 8 to 10% die in the six hours following the accident .In 80% of the cases, it is associated with other lesions ; often it is about a complete rupture bringing into play the vital prognosis; It happen that the rupture is of insidious evolution (rupture), it is discovered at the stage of aneurism, the natural trend of these false aneurysms being expandre gradually until the rupture. The early surgical treatment a long time remained the rule in spite of rightening operational complications perished. The emergency and the development of the endovascular treatment of these lesions up set the assumption of responsibility, we report 03 clinical cases.

Methods: Between 2001et 2019, three patients (34, 29 and 43 year old) operated in our establishment. A patient had an acute traumatic aortic rupture; two had a chronic traumatic aneurism of the aortic isthmus. The diagnosis was raised at a patient by the appearance of raucous way, with the radiological examination at a patient and in the continuations of the trauma for the last in front of the observation of a pleural outpouring and widening of the mediastin. The diagnosis was confirmed by the practice of an angiothoracic CT. Repair was practiced under femoro-femoral assistance circulation, the aneurysm was approached by left thoracotomy posterolaterale. Repair consisted in a resection of the aneurism and retablissement of continuity by prosthetic tube.

Result: No hospital death, no neurological complications and no patient were taken again for haemorrhage. A patient developed a secondary acute renal insufficiency with one rhabdomyolyse of the lower extremity.

Conclusion: The traumatic rupture of the aortic isthmus is a serious complication bringing into play the vital prognosis often on the spot of the accident, with the passing of the various authors, for certain category of patients the surgical treatment can be delayed in the guise of a medical care, this under medical supervision strict. The advent of the endovascular technique changed the forecast of these patients (operational mortality and neurological complications).

Keywords: Rupture, traumatic, isthmus, aorta, surgery, endovascular.

ID: **496**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Oral**

A RARE CATASTROPHE: THREE CASES OF AORTIC ROOT DEHISCENCE AFTER SURGERY AND REVIEW OF THE LITERATURE

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Background

Ascending aorta pathologies may be life threatening. Aneurysms have a tendency to rupture or dissect Emergency surgery may decrease the mortality rate of acute aortic dissection -which is 50 if left untreated- to %15-26. However, cases undergone elective surgery have lower mortality rate (%3-5). Here we present three cases of aortic root dehiscence that we managed in our clinic.

Methods

We experienced 3 different cases on the matter. First patient was a 51-year-old male patient was administered to our hospital with the diagnosis of type 1 aortic dissection. After the primary surgery, he was successfully discharged at postoperative 12th day. The patient applied to emergency service suffering from acute severe dyspnea after a symptom free period of 6 months. Root was dehiscenced. Redo Bentall was performed, he died due to intracranial hemorrhage.

Second patient was 45-yearl-old male patient treated for thoracic aorta aneurysm. He was successfully discharged. 2 weeks later he admitted to the emergency room with mild fever. Contrasted thorax computed tomography revealed dehiscence. He was operated and successfully discharged.

Third patient was 69-year-old male patient, he was operated for ascending aorta aneurysm and coronary artery disease. He was discharged uneventfully. 2 months later he admitted to a neurological clinic with hemiplegia. Later on, he was diagnosed as infective endocarditis with aortic root dehiscence. His history revealed dental abscess. Redo Bentall procedure was performed, he was successfully discharged and now under physical therapy.

Result

The time interval of dehiscence after the surgery may differ. Two of our cases presented within 2 months after the surgery. One of them was due to infection. One of them was a chronic steroid user and the other one was with connective tissue disorder.

All three patients underwent reoperation Bentall procedure. We used Cevat Yakut's flanged modification of Bentall procedure. Dr. Yakut showed this new modification of his enables the aortic root to enlarge. Also, you can repair iatrogenic subvalvular defects.

Conclusion

Aortic root dehiscence after aortic root surgeries is an extremely rare but mortal complication. Redo surgery is mandatory due to high risk of spontaneous rupture. We prefer use of flanged technique of Bentall procedure for reoperations after root dehiscence, because it's more physiologic than the other modified Bentall procedures. This phenomenon should be considered in case of vague complaints or suspicious echocardiography findings.

ID: **719**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Oral**

CONVENTIONAL AND ENDOVASCULAR TREATMENT IN COMPLICATED TYPE A DISSECTION AND OUR STRUGGLE WITH COMPLICATION

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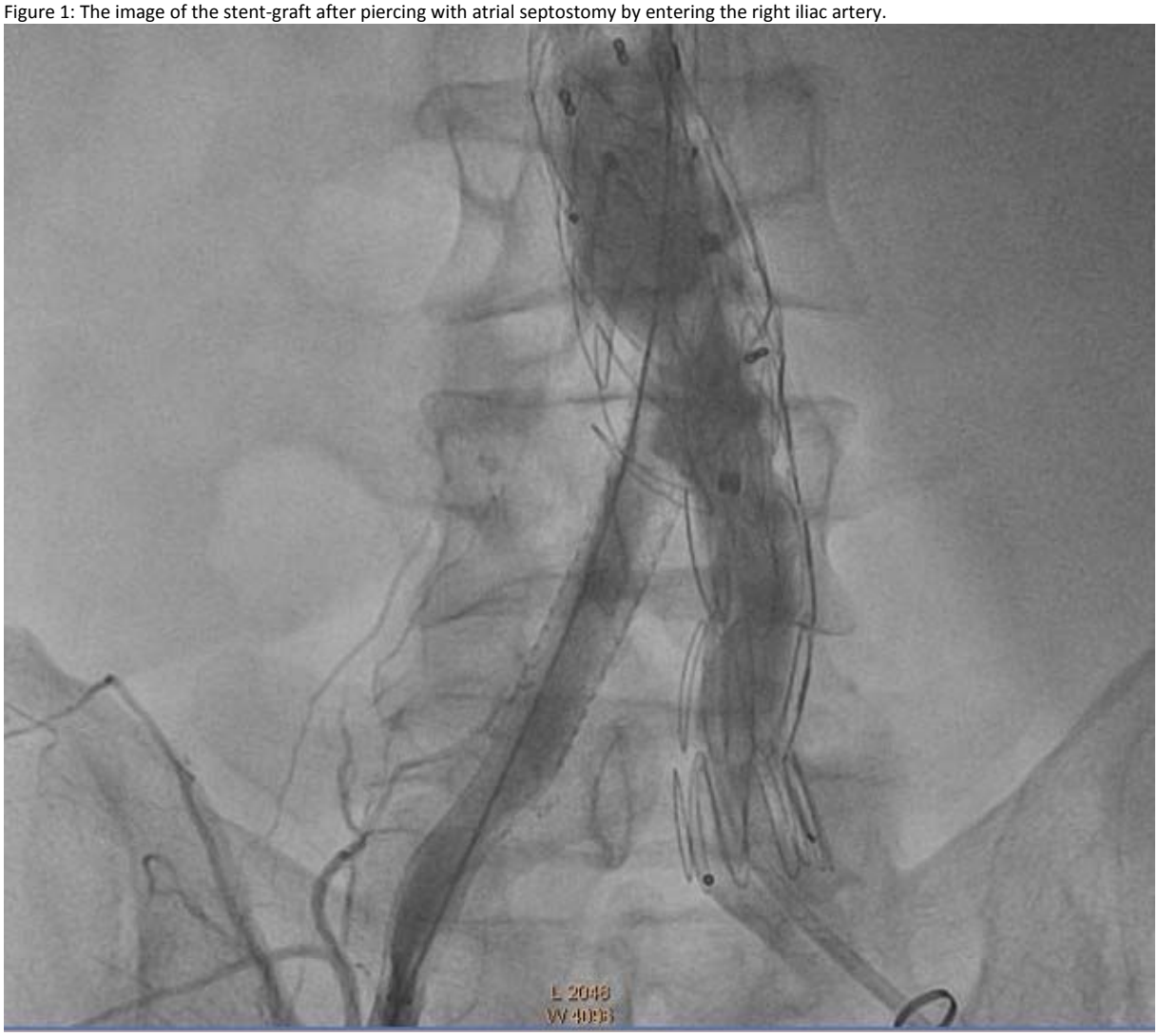
OBJECTIVE: We aimed to discuss the late period complications and endovascular treatment options following a surgical repair of type A dissection.
METHODS: An emergency surgery decision was made with a double-lumen appearance compatible with acute dissection starting from the ascending aorta to the iliac bifurcation level in the computed tomography aortography of a fifty-two-year-old male patient, who was admitted to the emergency department with chest and back pain that started suddenly after exertion. The patient had no abnormality in blood values and the echocardiographic evaluation left ventricular functions were normal and aortic valve insufficiency was found to be minimal. Supracoronary tubular graft implantation + hemiarcus replacement with 28 no dacron graft was performed in the operation. In the second month postoperatively, as the patient continued to have back and abdominal pain, a CT angiography was performed and dissection was observed in the area including the thoracic aorta and the proximal part of the abdominal aorta, starting from the distal of the Arcus aorta. A TEVAR with a tubular stent-graft to close the left subclavian artery was performed concurrently with EVAR with a tubular stent-graft terminated infrarenal before bifurcation. In the postoperative 9th month, the patient presented with weakness in the right lower extremity. On CT angiography, it was observed that after thoracic TEVAR graft re-entry, the false lumen suppressed the real lumen and the lumen formed by the EVAR graft, and the circulation was disturbed in both iliac arteries, being evident on the right. The graft was opened distally because the patient's blood pressure increased while the TEVAR graft was extended. The recollection was attempted, but when it was unsuccessful, it was pulled up to the left iliac artery and remained proximally within the EVAR graft. The plastic cap detached from the system was removed by entering through the 26 F sheat with laparoscopic forceps. The stent-graft was punctured with an atrial septostomy instrument through the right iliac artery, and a 10 mm PTFE-covered stent was placed, and blood flow was restored (Figure 1).
RESULTS: Our patient was discharged in good health.
CONCLUSION: Complicated Type A dissections that cannot be resolved with surgery can be treated with endovascular approaches with lower mortality and morbidity rates. Problems that arise during endovascular applications can be resolved positively with teamwork and experience.

Figure 1: The image of the stent-graft after piercing with atrial septostomy by entering the right iliac artery.



Oral Presentation Session

STEMI in 2020

Date: 01.11.2020 Time: 09:15 – 10:15 Hall: 4

ID: **392**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

ANTIINFLAMMATORY EFFECT OF TICAGRELOR IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION

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BACKGROUND

Ticagrelor is an antiplatelet agent with proven pleiotropic effects. It is believed to exert these effects through adenosine and nitric oxide-related mechanisms and is known to improve endothelial function and exhibit anti-inflammatory activity. Leucocyte count is a very inexpensive and widely used method for observing systemic inflammatory response. Therefore, many studies investigating the anti-inflammatory efficacy of ticagrelor have performed white blood cell count at long-term follow-up, but no significant changes have been detected. MI is a dynamic process with acute and chronic phases. Systemic inflammatory response and white blood cell count elevation in acute phase have been shown in previous studies. In our study, in order to investigate the anti-inflammatory efficacy of ticagrelor, we examined how leucocyte count changes in the early and late stages of MI differ between prasugrel and ticagrelor users.

METHODS

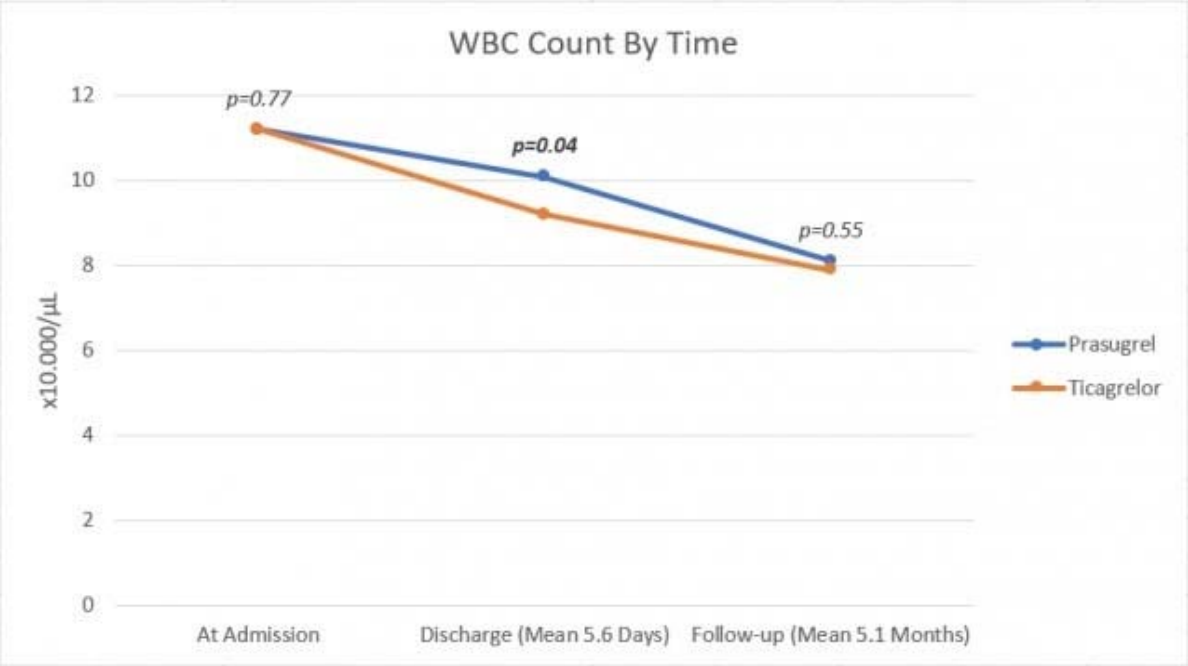
109 patients who were admitted to our clinic with acute MI and confirmed coronary angiographically, without contraindications for the use of prasugrel or ticagrelor and who underwent successful percutaneous intervention within the first 24 hours were included in our study. Demographic, clinical, ECG, coronary angiographic data and detailed echocardiographic evaluations were performed and laboratory analyzes of the patients were performed. In the analysis, the first measurement was made when the patient was admitted to the emergency department, the second measurement was made before the discharge phase, which was still the acute phase of the inflammatory process, and the last measurement was performed 5.1 months after the acute period and chronic changes were completed. After a mean follow-up of 5.1 months in groups that similar on demographic, clinical, and medicine use, analysis was performed on 78 patients who were not included in the exclusion criteria such as non-control, non-compliance, or switch to clopidogrel.

RESULTS

There was no significant difference between prasugrel and ticagrelor group in the first white blood cell count performed at the time of emergency presentation. On the other hand, in the ticagrelor group, white blood cell count was found to be lower than first measurement after 5.6 days (mean discharging time), and the difference was statistically significant. In the control measurements performed after a mean of 5.1 months, the difference was re-equalized. Values are presented in the form of the table and graph.

CONCLUSION

Myocardial infarction is a dynamic process involving acute damage and healing processes, in which acute and chronic phases of inflammation are observed. Ticagrelor is an antiplatelet agent that may exhibit anti-inflammatory activity, possibly through nitric oxide-related mechanisms. In our study, it was demonstrated that the increased white blood cell count in the acute phase of MI was significantly suppressed by ticagrelor. This finding is a new observation. Severe inflammatory processes can lead to remodeling and devastating consequences that are detrimental to the healing tissues. The results of ticagrelor group in another arm of our study showing the success of myocardial tissue healing may be related with this acute inflammatory suppressed response.



	Prasugrel	Ticagrelor	*p*
Age	53.3 ±10.6	56.3 ±10.8	*0.24*
Male	25 (80.6)	35 (74.5)	*0.72*
At Admission			
WBC (10^3/µL)	11.2 ±3.2	11.2 ±3.5	*0.77*
Hemoglobin (g/dL)	14.5 ±1.7	14.3 ±1.7	*0.53*
Hematocrit %	43.6 ±4.5	42.9 ±4.5	*0.57*
Platelets (10^3/µL)	292.7 ±81.7	263.5 ±95.0	*0.90*
Discharge (Mean 5.6 Days)			
WBC (10^3/µL)	**10.1 ±2.3**	**9.2 ±2.5**	***0.04***
Hemoglobin (g/dL)	13.4 ±1.8	13.0 ±1.7	*0.24*
Hematocrit %	40.0 ±4.7	38.8 ±4.8	*0.22*
Platelets (10^3/µL)	271.9 ±74.2	236.9 ±66.6	*0.05*
Follow-up (Mean 5.1 Months)			
WBC (10^3/µL)	8.1 ±2.2	7.9 ±2.0	*0.55*
Hemoglobin (g/dL)	14.0 ±1.9	13.9 ±1.6	*0.48*
Hematocrit %	41.1 ±5.2	40.9 ±4.4	*0.42*
Platelets (10^3/µL)	269.8 ±87.3	244.8 ±81.3	*0.14*

ID: **135**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Oral**

CORRELATION OF 25-HYDROXYVITAMIN D LEVELS WITH SYNTAX AND SYNTAX2 SCORES IN ST SEGMENT ELEVATION MYOCARDIAL INFARCTION PATIENTS

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Objective:
Low vitamin D status has been shown to be associated with increased risk of developing cardiovascular disease, hypertension, diabetes mellitus (DM), metabolic syndrome, obesity and inflammation. We evaluated the relationship between 25-Hydroxyvitamin D levels and the burden of coronary artery disease as assessed by the SYNTAX and SYNTAX2 scores in patients with ST segment elevation myocardial infarction (STEMI).

Methods:
Patients with 25-Hydroxyvitamin D level measurement during the index hospitalization were retrospectively recruited. All analyses were performed considering the effect of seasonal variation on Vitamin D levels. Bivariate correlation analyses were performed and r values were reported. Initial coronary angiography findings were used to calculate SYNTAX and SYNTAX2 scores. SYNTAX scores were categorized as 0-22 (174 cases); ≥23 (58 cases) and SYNTAX2 was categorized as (<25 (115 cases) and ≥ 25 (117 cases).

Results:
232 patients were recruited for the study. Vitamin D levels were significantly lower in patients with higher SYNTAX category (16.7 ± 8.4 vs. 12.3 ± 5.8 ng/mL, $p < 0.01$) but was not different between SYNTAX2 categories (15.9 ± 7.9 vs. 15.2 ± 8.1 ng/mL, p=0.504). When seasonal variation is considered, the difference between SYNTAX categories persisted (Table 1). But Vitamin D levels were not different between SYNTAX2 categories. In univariate correlation analysis, Vitamin D level was inversely correlated with SYNTAX scores (r= -0.174, p=0.008) but was not correlated with SYNTAX2 scores (r= -0.096, p=0.146).

Conclusion:
We have found that in patients with higher SYNTAX scores, 25-Hydroxyvitamin D levels were significantly lower through the year, irrespective of seasonal variation. This correlation was not true for SYNTAX2 scores.

Keywords: 25-HYDROXYVITAMIN D, SYNTAX Score, SYNTAX2 Score, STEMI

Table 1. Distribution of 25(OH) Vit D3 levels between SYNTAX and SYNTAX2 categories considering the seasonal variation of measurements.

	25(OH) Vit D (ng /mL)*				
	Winter	**Spring**	**Summer**	**Autumn**	**Total**
SYNTAX					
0-22 (n=174)	14.2±9.5	16.5±9.3	20.4±6.5	15.8±6.9	16.7 ± 8.4
≥23 (n=58)	8.6 ± 2.3	11.2±5.3	13.6±5.9	15.6±6.4	12.3 ± 5.8
P value	0.046	0.022	< 0.01	0.924	< 0.01
SYNTAX 2					
0-25 (n=174)	14.6±11.2	14.7±7.1	19.7±7.3	16.1±6.9	15.9 ± 7.9
≥23 (n=58)	11.2±5.4	15.6±9.1	18.3±6.4	15.4±6.6	15.2 ± 8.1
P value	0.172	0.656	9.479	0.664	0.504

*Normal values of 25(OH) Vit D. Autumn and Winter: 6.2-45.5 Spring and Summer:7-53.5

ID: **500**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Oral**

THE RELATIONSHIP BETWEEN METABOLIC SYNDROME AND CONTRAST NEPHROPATHY IN PATIENTS WITH ST-ELEVATION MYOCARDIAL INFARCTION

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OBJECTIVE: We aimed to determine the relationship between the presence of metabolic syndrome and development of contrast nephropathy following ST-elevation myocardial infarction (STEMI).

METHODS: A total of 360 patients with ST-elevation myocardial infarction who underwent primary coronary angioplasty were included in the study. Patients were divided into two groups according to American Heart Association and National Heart, Lung and Blood Institute (AHA / NHLBI) criteria. Groups were followed for the development of contrast nephropathy. Patients were divided into groups according to the presence of metabolic syndrome and compared for the development of contrast nephropathy.

RESULTS: In this study, contrast nephropathy was detected in 21% of patients and Metabolic syndrome was found in 76% of patients. The incidence of contrast agent nephropathy was higher in patients with metabolic syndrome than patients without metabolic syndrome (26.7% and 9.9%, respectively, p = 0.001).According to univariate analysis, the presence of metabolic syndrome was found to be a predictor for contrast nephropathy (Odds ratio [OR] = 3.32; 95% confidence interval [CI] = 1.52-7.23; p = 0.003).

CONCLUSIONS: There is a high risk for the development of contrast nephropathy in patients with metabolic syndrome and STEMI patients after percutaneous coronary intervention. In individuals with metabolic syndrome, greater attention should be paid to reduce unwanted cardiovascular risk factors and the development of future cardiovascular events.

Keywords: Metabolic Syndrome, contrast nephropathy, ST-elevation myocardial infarction

ID: **239**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

INFECTION DURING HOSPITALIZATION IS ASSOCIATED WITH LONG-TERM MORTALITY IN PATIENTS WITH ST SEGMENT ELEVATION MYOCARDIAL INFARCTION

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Background: Long term outcomes of infection during hospitalization, is a condition about which there is little published data. In our study, we aimed to assess the impact of infection on mortality in patients with STEMI.

Methods: In this retrospective cohort study, we analyzed the data of 859 STEMI patients who received primary percutaneous coronary intervention (pPCI). All-cause mortality was defined as the primary endpoint of the study.

Results: Overall 84 patients (9.7 %) had an infection (mean age 65.2 ± 12.6 and 75.0 % men) along with STEMI. Compared with the patients without infection, patients with infection were significantly older, had higher prevalence of diabetes mellitus and hypertension (p values are <0.001, 0.021 and <0.001, respectively). There were no differences between two groups in angiographic features (Table 1)

The mean duration of follow-up was 34.1 (±11.8) months. All cause mortality rate was 8.1% (6.2% of without infection vs 26.2% of with infection; p<0.001). It demonstrated that infection during hospitalization [hazard ratio (HR): 1.96, 95% confidence interval 1.121-3432, p=0.018], age [HR: 1.05, %95 CI: 1.033-1.080, p<0.001], diabetes mellitus [HR: 1.68, %95 CI: 1.008-2.800, p=0.046] and left ventricular ejection fraction [HR: 0.945, %95 CI: 0.920-0.971, p<0.001] were independent predictors of long-term mortality. Kaplan-Meier analysis revealed that patients who had infection during hospitalization had worse survival rates.

Conclusion: Patients with infection during hospitalization should be monitored closely for long-term adverse events.

Table 1. Baseline Clinical, Laboratory and Angiographic Characteristics of Patients with ST Segment Elevation Myocardial According to Infection

Variables	Overall n: 859	No Infection n: 775	Infection n: 84	P value
Age, years	57.0 ± 12.2	56.1 ± 11.8	65.2 ± 12.6	**<0.001**
Age>75, % (n)	9.9	8.0	27.4	**<0.001**
Mortality, % (n)	8.1	6.2	26.2	**<0.001**
Sex, male % (n)	82.8	83.6	75.0	0.066
Diabetes, % (n)	31.0	29.8	42.2	**0.021**
Hypertension, %(n)	45.3	43.2	65.1	**<0.001**
Dyslipidemia, % (n)	38.1	39.0	29.6	0.117
History of CAD, % (n)	18.3	17.7	23.8	0.167
Hgb, g/dL	14.4 ± 1.9	14.5 ± 1.8	13.8 ± 1.9	**0.003**
WBC, ×109 /L	12.1 ± 3.9	11.9 ± 3.8	13.0 ± 4.4	**0.021**
Neutrophil, ×109 /L	7.7 ± 0.5	7.6 ± 0.5	8.5 ± 0.6	0.374
Lymphocyte, ×109 /L	3.2 ± 0.4	3.2 ± 0.4	3.3 ± 0.6	0.343

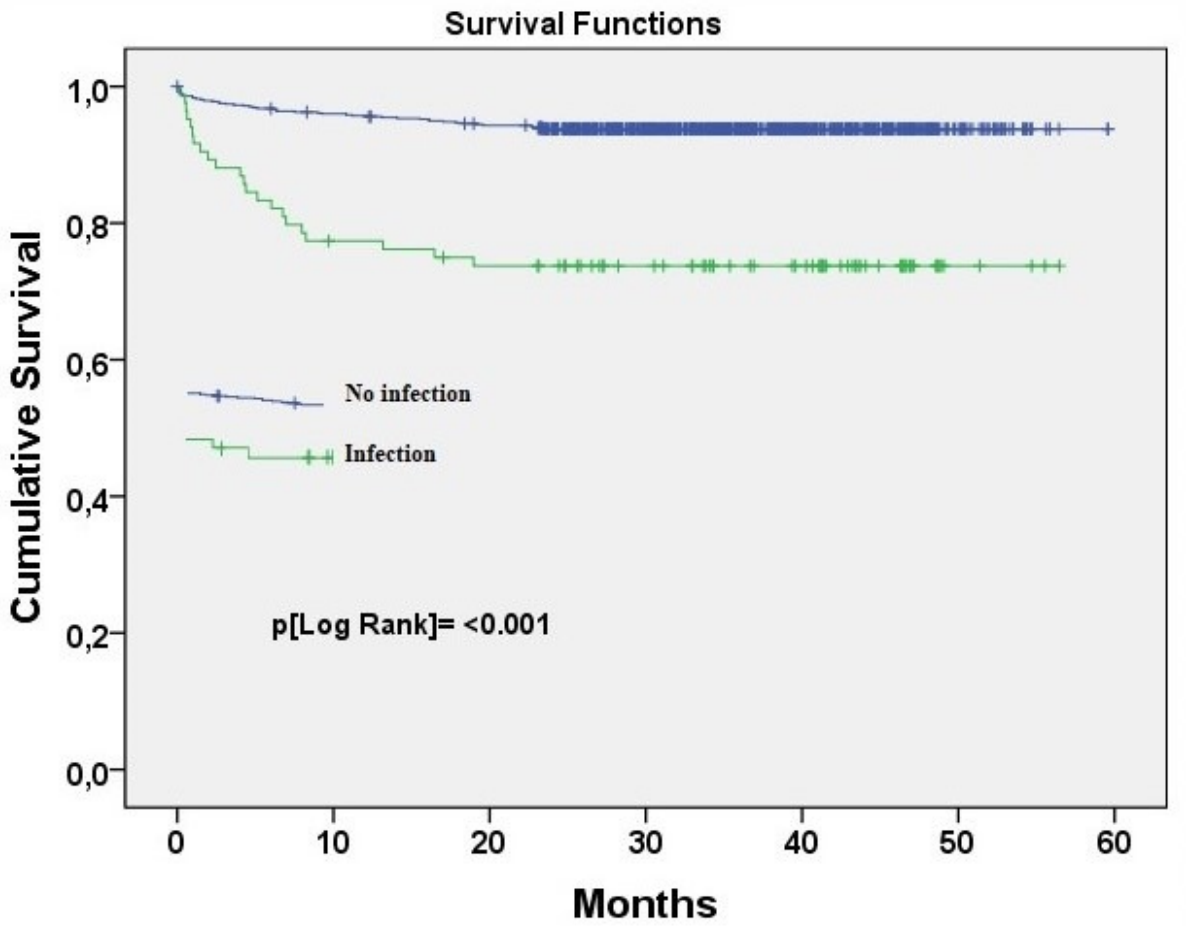
PLT count, ×109 /L	251.6 ± 72.0	251.6 ± 73.2	251.3 ± 60.0	0.974
RDW, %	13.6 ± 1.1	13.5 ± 1.1	13.9 ± 1.2	**0.020**
GFR<60mL/min/1.73m2,%	7.9	6.1	25.0	**<0.001**
Admission Crea, mg/dl	0.9 ± 0.2	0.8 ± 0.2	1.0 ± 0.3	**<0.001**
Total cholesterol, mg/dL	188.4 ± 45.4	189.0 ± 45.3	182.2 ± 45.8	0.197
LDL cholesterol, mg/dL	119.7 ± 40.2	120.0 ± 40.1	116.4 ± 42.1	0.451
HDL cholesterol, mg/dL	40.0 ± 10.5	39.7 ± 10.4	42.4 ± 11.4	**0.028**
Triglyceride, mg/dL	150.3 ± 100.0	153.0 ± 103.2	125.2 ± 57.1	**0.018**
Hemoglobin A1c, %	6.5 ± 1.7	6.5 ± 1.7	6.7 ± 1.5	0.345
LV EF at 24thhour, %	46.9 ± 9.6	47.6 ± 9.2	41.0 ± 10.4	**<0.001**
Angiographic features, % (n)				
Anterior MI	43.0	41.9	52.4	0.081
LMCA	0.3	0.3	1.2	0.266
LAD	46.0	44.9	56.0	0.065
LCx	18.7	19.2	14.3	0.306
RCA	35.3	35.9	29.8	0.282
1 vessel disease	49.9	50.7	42.9	0.206
2 vessels disease	32.8	32.6	34.5	0.715
3 vessels disease	17.1	16.5	22.6	0.170
Stent count >1	37.1	36.9	39.3	0.722

Table 2. Univariate and Multivariate Cox Regression Analysis of Long-Term Survival

	Univariate			Multivariate		
	HR	95% CI	p	HR	95% CI	p
Infection	4.80	2.899-7.960	**<0.001**	1.96	1.121-3.432	**0.018**
Age	1.07	1.056-1.093	**<0.001**	1.05	1.033-1.080	**<0.001**
DM	1.95	1.221-3.128	**0.005**	1.68	1.008-2.800	**0.046**
HT	2.41	1.475-3.958	**<0.001**			
LVEF*	0.92	0.898-0.947	**<0.001**	0.945	0.920-0.971	**<0.001**
Hgb	0.83	0.766-0.912	**<0.001**			
CRF**	3.57	2.017-6.322	**<0.001**			
3 vessels CAD	1.45	0.831-2.537	0.190			

* at 24th hour, ** GFR<60mL/min/1.73m²

Abbreviations: DM, diabetes mellitus; HT, hypertension; LVEF, left ventricular ejection fraction; Hgb, hemoglobin; CRF, chronic renal failure; CAD, coronary artery disease


Survival Functions
Cumulative Survival
1,0
0,8
0,6
0,4
0,2
0,0
No infection
Infection
p[Log Rank]= <0.001
0
10
20
30
40
50
60
Months

ID: **383**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

EFFECT OF POTENT ANTIPLATELET THERAPIES ON LEFT VENTRICULAR MYOCARDIAL TISSUE FUNCTION IN PATIENTS WITH ACUTE CORONARY SYNDROME

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BACKGROUND

Ticagrelor is an antiplatelet agent with proven pleiotropic effects. It is believed to exert these effects through adenosine and nitric oxide-related mechanisms and is known to improve endothelial function. It has been shown in several previous studies that ticagrelor may reduce cardiovascular mortality and regulate neointimal proliferation after stent implantation due to the pleiotropic effects. How this antiplatelet agent influences myocardial tissue performance during the recovery process is a subject that has not been studied yet. In our study, we investigated whether pleiotropic effects at tissue level contribute to myocardial healing after acute MI. The direct effect of ticagrelor on myocardial tissue was investigated by strain measurements with speckle tracking echocardiography.

METHODS

109 patients who were admitted to our clinic with the diagnosis of acute MI and confirmed coronary angiographically, without contraindications for prasugrel or ticagrelor, and who underwent successful percutaneous intervention within the first 24 hours were included in our study. Demographic, clinical, laboratory, ECG and coronary angiographic data and detailed echocardiographic evaluations were performed. In addition to 2D measurements of cardiac structures, blood flow-related dynamics, tissue Doppler evaluations, strain-based evaluations for left and right ventricle and left and right atrium were performed. After a mean follow-up of 5.1 months in groups that similar on in demographic, clinical, and medicine use, analysis was performed on 78 patients who were not included in the exclusion criteria such as non-control, non-compliance with medicine, or switch to clopidogrel.

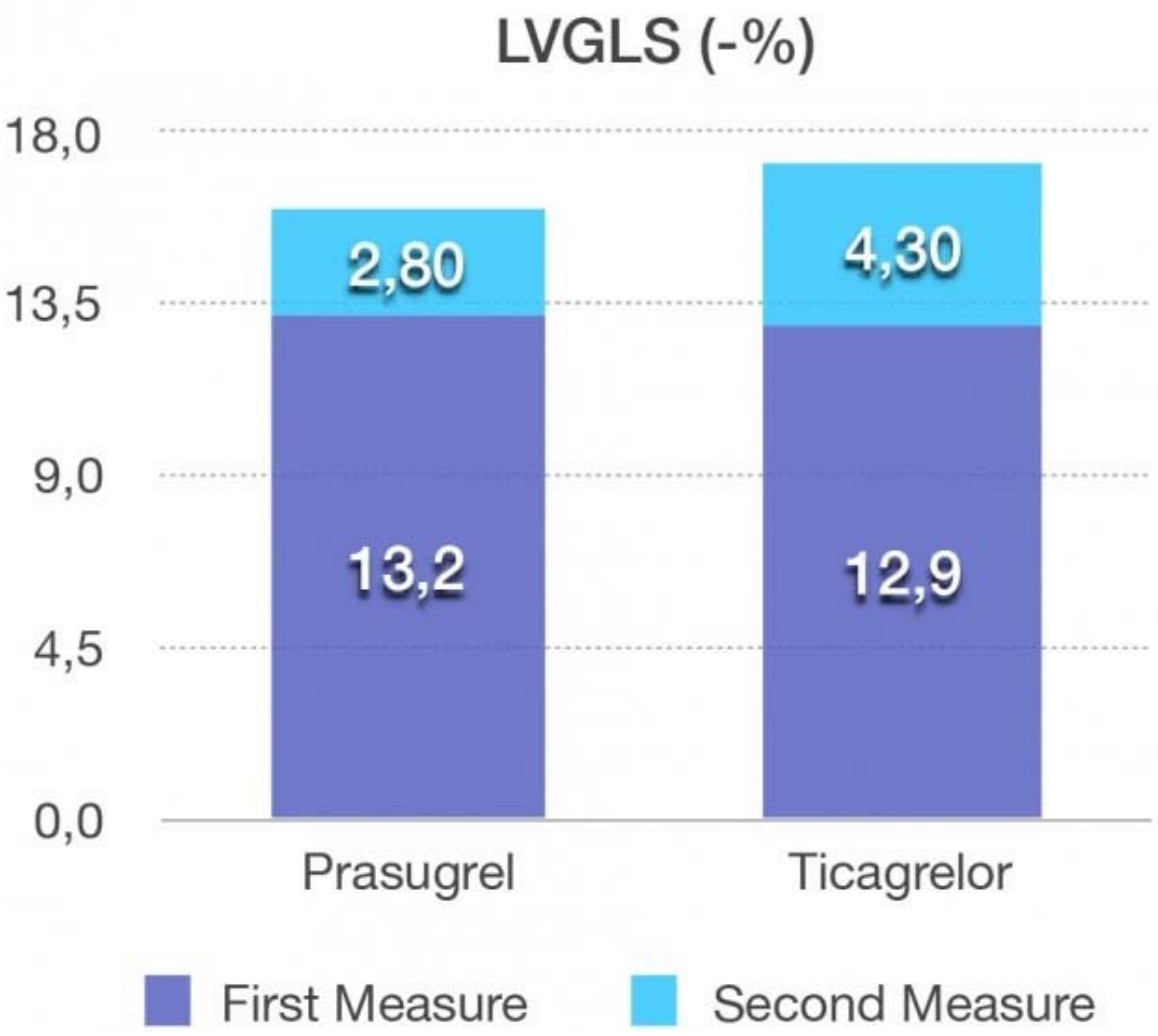
RESULTS

Conventional echocardiographic parameters and strain measurements were similar in the first measurements after acute MI. The initial measurements of left ventricular global longitudinal strain (LVGLS) (-%) were 13.2 ±2.5 in the prasugrel group and 12.9 ±3.3 in the ticagrelor group (Table). LVGLS (-%) values were observed as 16.0 ±2.2 in prasugrel group and 17.2 ±2.8 in ticagrelor group (p = 0.02) after follow-up period. A similar trend was maintained when the percent change from baseline (Percent change in LVGLS measured as 18.1 ±11.2 for prasugrel and 24.8 ±12.7 for ticagrelor, p = 0.03) (Figure).

CONCLUSION

According to the PLATO study, some of the successful results of ticagrelor were attributed to their pleiotropic effects. While coronary artery disease risk factors, acute disease severity and demographically similar groups were compared with prasugrel and ticagrelor, conventional echocardiographic data were equal, whereas strain-based examinations at the myocardial tissue level showed significant superiority of ticagrelor in LVGLS measurement. Thus, the direct effect of ticagrelor on myocardial tissue was demonstrated by strain measurements at tissue level.

	First Measurement			Second Measurement		
	Prasugrel	**Ticagrelor**	***p***	**Prasugrel**	**Ticagrelor**	***p***
Age	53.3 ±10.6	56.3 ±10.8	*0.24*	-	-	-
Male	25 (80.6)	35 (74.5)	*0.72*	-	-	-
LVEF (%)	52.4 ±11.1	49.2 ±10.5	*0.21*	57.5 ±8.5	54.2 ±11.6	*0.36*
LVGLS (-%)	13.2 ±2.5	12.9 ±3.3	*0.52*	**16.0 ±2.2**	**17.2 ±2.8**	***0.02***
LVGLS Ratio (%)	-	-	-	**18.1 ±11.2**	**24.8 ±12.7**	***0.03***
RVGLS (-%)	17.7 ±4.8	16.6 ±4.2	*0.39*	18.3 ±4.0	18.1 ±3.6	*0.97*



ID: **561**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

SERUM THIOL LEVELS AND ACUTE ST ELEVATION MYOCARDIAL INFARCTION

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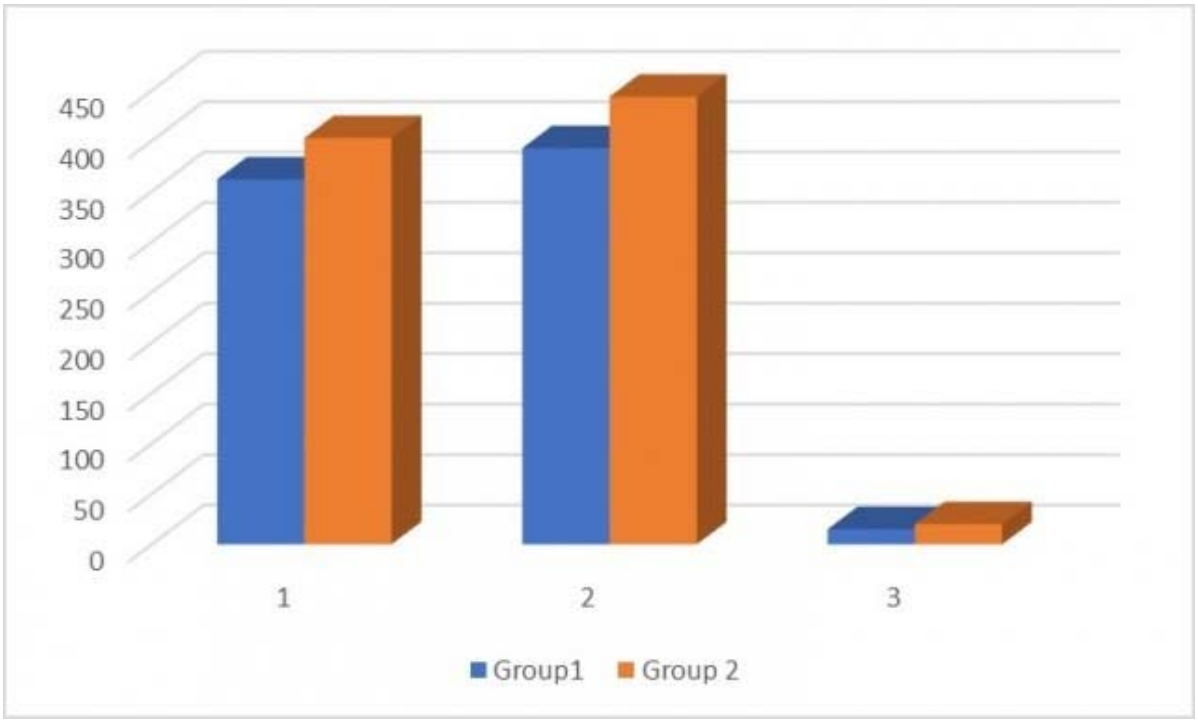
Background: The oxidative stress has been reported as one of the underlying mechanisms atherosclerosis and related disorders. Plasma thiols are constituting an important part of the antioxidant defense system. We aimed to investigate the relation of serum thiol levels and the acute ST elevation myocardial infarction.

Methods: Sixty-six patients with acute ST elevation myocardial infarction patient and 41 patients with control patient were included in the study. Plasma total thiol levels, native thiol levels and disulfide levels were measured. Thiol disulfate values, which are antioxidant markers, were compared between the groups.

Results: There was no significant difference between basal characteristics. Due to the presence of NonST MI patients, there was a difference in ejection fraction from echocardiography parameters. Plasma native thiol levels (362.04 ±73.69 µmol/L vs. 403.62±62.36 µmol/L, p =0.02), total thiol levels (393,.69± 74.15 µmol/L vs. 444.17 ±65.53 µmol/L, p<0.0001) and disulfide levels (15.82 ± 6.97 vs. 20.27 ± 8.10, p = 0.03) were significantly lower in patients with in in acute ST elevation myocardial infarction than control patients

Conclusions: Antioxidant marker changes were significantly lower in ST ST elevation myocardial infarction patients. In line with this result, the contribution of ST ST elevation myocardial infarction to antioxidant system disorder has been shown. Our results suggest that thiol levels could be a good biochemical marker in STEMI patients.

Figure1. Native thiol, total thiol and disulfide values between two groups



Oral Presentation Session

Surgical Techniques in Complex Cardiac Anomalies: An Expert View

Date: 01.11.2020 Time: 09:30 - 10:45 Hall: 5

ID: **317**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

BEDSIDE CLOSURE OF PATENT DUCTUS ARTERIOSUS THROUGH LEFT ANTERIOR MINI-THORACOTOMY IN PREMATURE INFANTS

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Objective:

Patent ductus arteriosus (PDA) is commonly seen in premature infants which has a number of complications including chronic pulmonary disease (CPD), intraventricular hemorrhage, necrotizing enterocolitis (NEC), and renal failure. Medical agents have been the first choice of treatment in preterm infants with symptomatic PDA. If it fails, surgical ligation is the definitive therapy. However, the transport of premature neonates to the operating room (OR) has significant risks. These risks include inadequate monitoring, tracheal extubation, hypo/ hyperventilation, discontinuation of life-sustaining infusions, acute hemodynamic deterioration and hypothermia. In this study, we report our experience of surgical PDA closure in the neonatal intensive care unit (NICU) through left anterior mini-thoracotomy.

Materials and Methods:

From May 2017 to December 2019 17 premature infants, who underwent bedside PDA ligation were retrospectively analyzed. Transthoracic echocardiography studies were performed by pediatric cardiologists. All infants were on mechanical ventilators. To achieve ductal closure, ibuprofen or paracetamol was administered by neonatologists. In cases of failure or contraindication for medical treatment, bedside PDA ligation was performed. Operations were performed in neonatal incubators. The patient was placed in a supine position. The PDA was approached through left anterior mini-thoracotomy. In all cases, the PDA was clipped and the surgical incision was closed without a chest tube (Figure 1 and 2). No surgery-related mortalities occurred.

Results:

Median birth weight was 990 gr (645-2010 gr), median gestational birth age was 28 weeks (24-32 weeks). There were two mortalities. One patient (800 gr) died from renal failure and one patient (645 gr) died from sepsis.

Conclusion:

Bedside surgical PDA closure through left anterior mini-thoracotomy is a safe and effective therapeutic approach in premature infants, and it may eliminate the risks associated with transportation.

ID: **404**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

SURGICAL MANAGEMENT OF THE ARTERIAL DUCT IN THE ERA OF PERCUTANEOUS CLOSURE

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Introduction: Percutaneous closure of the patent ductus arteriosus is currently the method of choice; however, certain adverse socioeconomic conditions mean that surgery remains the only treatment. Aim. To evaluate the place of surgery versus percutaneous closure.

Materials: From January 2001 to January 2018, 254 patients were operated in Djeghri Mokhtar hospital. The age has varied between 1 and 48 years. Female sex is predominant. Surgical approach was left posterolateral thoracotomy in 252 patients and sternotomy in 2 patients.

Results: Treatment consisted of a suture-section of canal in 244 patients and a ligation in 10 patients. The total duration of hospitalization was on average 9.5 days. Early and late mortality is zero.

Discussion: Over the last 20 years, percutaneous closure has become the main approach to the treatment of arterial canals. However, not all patients are eligible for this type of treatment. In the presence of a high pulmonary arterial hypertension, many authors are in favor of surgery, the risk of embolization of the material is very high if percutaneous closure is considered. In preterm infants, the current therapeutic strategy is thoracotomy surgical ligation; percutaneous closure has recently been proposed as an alternative to surgery to avoid thoracotomy.

Conclusion:
Percutaneous closure of persistent arterial canals has overshadowed surgery; however, adverse socioeconomic conditions in some countries make the percutaneous closure of arterial canals often illusory and therefore, arterial canal surgery still holds its place.

Keywords: patent ductus arteriosus, percutaneous closure, surgery.

ID: **350**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

MORTALITY AND MORBIDITY OF VENTRICULAR SEPTAL DEFECT CLOSURE IN CHILDREN LESS THAN 1 YEAR OF AGE

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Objective: Ventricular septal defect (VSD) closure is the most common pediatric cardiac procedure performed. Various complications related to VSD closure can be seen. We reviewed the effects of body weight and age during the operation to mortality and morbidity.

Methods: We reviewed a consecutive series of patients who were admitted to our institution for surgical VSD closure who were under 1 year of age, between 2015 and 2019. Mechanical ventilation (MV) duration more than 24 hours, intensive care unit (ICU) stay longer than 3 days, and hospital stay longer than 7 days were defined as “extended”. Unplanned re-operation, complete heart block requiring a permanent pacemaker implantation, sudden circulatory arrest, and death were considered as significant major adverse events (MAE).

Results: VSD closure was performed in 245 patients. The median age was 6 (1-12) months. Prolonged MV was seen in 62 (25.3%) patients. Five patients (2%) required permanent pacemaker implantation. Extracorporeal membrane oxygenator-cardiopulmonary resuscitation (E-CPR) was performed in one (0.4%) patient. Mortality was seen in one (0.4%) patient. Small age (<6 months) ($p<0.01$) and prolonged CPB time ($p=0.03$) were found to prolong MV. Low body weight at the operation was associated with the MAE ($p=0.03$).

Conclusion: Small age and low body weight were found to adversely affect the results of VSD closure. As a conclusion for patients who are scheduled to undergo VSD closure, body weight and age during the operation should be taken into consideration.

ID: **210**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

CONGENITAL MITRAL STENOSIS: REPORT OF 26 CASES

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INTRODUCTION: Congenital mitral stenosis is defined as any obstacle to diastolic filling of the left ventricle due to abnormal development of the structures that form the mitral apparatus (ring, immediately supravalvular area, cords and pillars).It is a rare congenital malformation, its prevalence is estimated at 4 in 1000 children diagnosed with congenital heart disease and it constitutes 0.6 to 1.2% of autopsied congenital heart defects.

OBJECTIVE: Clinical, epidemiological and prognostic aspect of CMS.

METHODS: We conducted a retrospective study collected in the cardiology department of CHU of Casablanca, between September 2009 and January 2018, involving 26 patients.

Inclusion Criteria: Included in the study were all children referred to our institution for cardiac evaluation and diagnosed with congenital mitral stenosis at echocardiography.

RESULTS: During the study period we diagnosed 2678 congenital heart defects. CMS was present in 26 patients, a prevalence of 0.97%. Population consisted of 13boys and 13girls, a sex ratio of 1 and the average age was 6 years. The symptomatology was dominated by dyspnea (17 cases) and recurrent bronchitis (8 cases). The echocardiography found an isolated RMC in 3 cases, the etiology were dominated by the supramitral ring (14cases) and parachute mitral valve (8cases). The CHD associated with RMC was VSD(9cas). The others associated with RMC were: coarctation of the aorta (6cases), TGA (4cases), pulmonary stenosis (4cases), aortic bicuspid (4cases), left superior vena cava (3cases), ASD (2cases), supra valvular aortic stenosis (2cases), PDA (2cases), Shon syndrome(1cases). Pulmonaryhypertension was present in 50% ,2 of which were in eisenmenger. Surgery was indicated in 13; 4 benefited from curative surgery; 4 are lost sight of; 4 patients with CMS considered to be unstiffened had no indication for surgery. 5 died, 1 of them inoperative, 3 refusing their parents surgery and one in extra hospital. Good surgical outcome in patients who received curative surgery

ID: **459**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

PULMONARY VALVE SPARING IN TOTAL CORRECTION OF TETRALOGY OF FALLOT: PERSPECTIVE OF RESOURCE CONSTRAINED MEDICAL ENVIRONMENT

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Objectives: To study the postoperative outcomes of pulmonary valve sparing procedure in the total correction of tetralogy of Fallot, by examining the pre-operative patient factors, intra-operative management, the immediate postoperative outcomes and follow up data of patients that underwent pulmonary valve sparing techniques during the total correction of tetralogy of fallot.

Methods: From July 2015 to August 2019, 52 patients were operated for total correction of tetralogy of Fallot, 30 (57.7%) male and 22 (42.3%) female. Preoperative echocardiographic findings of the RVOT, pulmonary valve, Main Pulmonary artery and its branches were examined to evaluate the feasibility of a pulmonary valve sparing procedure preoperatively in patients that met the criteria. 32 (61.5%) patients that underwent Total correction for Tetralogy of fallot had a pulmonary valve sparing repair. Their pre-operative, peri-operative, post-operative and follow-up data were retrospectively examined.

Results: The median age at surgery for Total correction of tetralogy of Fallot was 46.4 months (range 22.5 – 192.6 months). Their mean BSA was 0.65 ± 0.3 m2. The mean pulmonary valve annulus was 11.9 ± 2.5 mm giving a mean pulmonary valve Z-score of -1.7 ± 1.6. The mean Prv/Plv ratio immediately after surgery was 0.58 ± 0.1.
3 patients (9.3 %) required reinitiating cardiopulmonary bypass for re-exploration. 4 patients (12.5%) had residual stenosis postoperatively of which 2 patients were re-operated during their follow up period. 2 patients (6.2%) died postoperatively, 30 patients (93.7%) that had a valve sparing procedure are alive. Long-term follow up has demonstrated good biventricular function post-surgery with normal RVEDD.

Conclusions: Pulmonary valve sparing for children undergoing total correction of tetralogy of Fallot in low income countries presents advantages to avoid late onset of complications associated with pulmonary valve regurgitation and future pulmonary valve replacement surgery. Pulmonary valve sparing should always be prioritized in patients that meet the criteria of adequate valve annulus and valvular apparatus.

Key words: Congenital Heart Disease, Tetralogy of Fallot, Pulmonary valve sparing.

ID: **618**

Topic: **Cardiology » PI for SHD - Others**

Presentation Type: **Oral**

BALLOON ANGIOPLASTY PERFORMED BY CORONARY BALLOONS IN FIVE NEWBORNS WITH SEVERE COARCTATION OF AORTA. A SINGLE CENTER EXPERIENCE

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BACKGROUND

Balloon angioplasty, which is an alternative intervention to surgical treatment in neonatal aortic coarctation, is applied despite the high rate of recoarctation. Especially in patients with marked left ventricular dysfunction and multiorgan failure, the number of procedures performed for palliative purposes is gradually increasing. Generally, transfemoral approach is used. Factors such as size of arterial sheath and balloon, duration of operation can cause anxiety in terms of complication of the intervention region.

METHODS

In this article, we aimed to present the results of angioplasty procedures performed by coronary balloon in 5 newborns with severe systemic circulatory disorders due to aortic coarctation, retrospectively.

RESULTS

All of the patients were termed, age 7, 16, 21, 15, 9 days old. Their body weights were 4100 gr, 3500 gr, 3850 gr, 3200 gr, 2450 gr, respectively. All patients had moderate left ventricular systolic dysfunction and pulmonary hypertension. Ejection fraction (EF) was 36, 45, 52, 50, 38, respectively. 4 F sheaths were introduced to all patients from the right femoral artery and coarctation balloon angioplasty was performed by monorail coronary balloons (5 mmx12-20 mm) over 0.014 coronary guide-wire. No complications were observed during and after the procedure. While 4 of the patients were discharged with normal cardiac functions in the first week after the procedure, one patient was given to the surgery on the 10th day without being discharged due to recoarctation. It was observed that the 4 patients were normal for left ventricular systolic function in the first week after discharge. Two weeks later two patients had an increased gradient in the coarctation region. In the one-month follow-up, two patients with good general condition, both of them had normal systolic function and no pulmonary hypertension, were given to surgery because of the coarctation gradient was 45 mmHg and 65 mmHg. The echo findings were completely normal in the postoperative controls.

CONCLUSIONS

Aortic coarctation is a life-threatening anomaly in the neonatal period and early intervention is important for survival. Unfortunately, newborn with coarctation of aorta, because of being the most missed congenital cardiovascular anomaly, can be diagnosed in critical condition. We think that balloon angioplasty in neonatal coarctation will be beneficial especially in such patients. Although the balloons used for coarctation need a smaller sheath day by day, but they couldn't be always available in an emergency. On the contrary, coronary balloons can be accessed at any time, it can work from smaller sheath, it can also be more economical. That's why coronary balloons can be used for palliative purposes in critically ill newborns who are not be able to undergo to early surgical correction of aortic coarctation.

ID: **760**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

BENEFITS OF NORMOTHERMIC BYPASS IN PATIENTS WITH LOW EF

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Objective: Despite improvements in myocardial preservation techniques, coronary artery bypass grafting in patients with low ejection fraction is still a debated issue. The aim of this study is to investigate that whether normothermic bypass is superior to mild hypothermia in defibrillation rates, postoperative requirements of cardiac pacing, other morbidity issues and mortality.

Method: The datas are collected retrospectively from 63 patients with low ejection fraction undergoing primary elective coronary artery bypass surgery between January 2012 and January 2017. Preoperative echocardiography and cardiac catheterization were performed in all patients. Comorbidities such as diabetes mellitus, hyperlipidemia, peripheral arterial disease, chronic obstructive pulmonary disease, chronic renal failure, hypertension, postoperative inotropic and intraaortic balon pump requirements were noted. All operations were performed under cardiopulmonary bypass and cardiac arrest was obtained with antegrade blood cardioplegia. Patients operated at temperatues below 34ºC were group 1 and above 34 ºC were group 2. All allocated datas were compared and $p< 0.05$ was considered significant.

Results: Preoperative and operative patient characteristics related with the study groups were shown at Table 1. There was no statistically significant difference between groups in terms of preoperative patient characteristics. Also there was no statistically significant difference between groups in terms of postoperative atrial fibrillation, stroke and renal failure development. Intraaortic baloon pump requirement was higher in group1. Even longer aortic cross clamp time and total bypass time among group 2, they had less defibrillation rates after aortic declamping compared to group 1. Group 2 also had less postoperative pacing requirement. Hospital mortality was not affected in both groups.

Conclusion : Surgical revascularization by multivessel bypass grafting can be performed safely, with satisfactory hospital mortality in patients with low ejection fraction. Normothermia enables less requirements of defibrillation after aortic declamping and postoperative cardiac pacing in primary elective coronary bypass operations for patients with low ejection fraction.

Table 1. Preoperative and operative patient characteristics

.	Group 1 Number of patients (%)	Group 2 Number of patients (%)
Age	62±8.6	62.2±9.2
Sex (male/female)	32 (27/5)	31 (25/6)
Hypertension	14 (43.7)	13 (41.9)
Hyperlipidemia	13 (40.6)	17 (54.8)
Smoking	9 (28.1)	9 (29)
Chronic obstructive pulmonary disease	2 (6.2)	3 (9.7)
Chronic renal failure	1 (3.1)	1 (3.2)
Peripheral arterial disease	3 (9.3)	2 (6.4)
Myocardial infarction	16 (50)	15 (48.3)
Left main coronary artery disease	11 (34.3)	8 (25.8)

Body mass index	26.5±4.4	26.7±4.4
Ejection fraction	26.7±3.6	26.8±3.7
NYHA class 3/4	13 (40.6)	12 (38.7)
Diabetes mellitus	9 (28.1)	12 (38.7)
Intraaortic baloon pump requirement	5 (15.6)	1 (3.2)
Total bypass time	104.8±33.2	117.4±39.4
Cross clamp time	58.3±21	61.5±22.5
Number of grafts	3.2±0.9	3.5±0.8
Postoperative atrial fibrillation	9 (28.1)	11 (35.4)
Postoperative stroke	2 (6.2)	1 (3.2)
Postoperative renal failure	1 (3.1)	1 (3.2)
Temporary pacemaker	2 (6.2)	0 (0)
Defibrillation	23 (71.8)	7 (22.5)
Mortality	1 (3.1)	1 (3.2)

Oral Presentation Session

Advances in Cardiac Imaging

Date: 01.11.2020 Time: 10:30 – 12:00 Hall: 4

ID: **17**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

THE CORRELATION BETWEEN MITRAL ANNULAR CALCIFICATION AND PROGNOSTIC NUTRITIONAL INDEX

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Objective: The relationship between nutritional status and mitral annular calcification (MAC) has not been established before. The prognostic importance of prognostic nutritional index in other diseases like colorectal cancers, postoperatively septic complications and ST elevation myocardial infarction has been shown before. The aim of this study is to determine the relationship between the presence of PNI and MAC.

Methods: A total of 398 patients who admitted to echocardiography laboratory were included in this retrospective study. The study group was conducted with 310 patients with MAC (+) and control group was conducted with 88 subjects with MAC (-). Demographic features like age and sex, presence of hypertension and diabetes mellitus were similar between groups. Laboratory and echocardiographic examination were performed to all patients. The prognostic nutritional status of all patients was calculated with the PNI values: 10 × serum albumin (g / dl) + 0.005 × total lymphocyte count (per mm3).

Results: Serum albumin levels were found to be significantly lower in the MAC (+) group compared to the control group (3.76 ± 0.57; 4.12 ± 0.31, p <0.001). Lymphocyte count of MAC group was lower than the control group (1.86 ± 0.63; 2.02 ± 0.66, p = 0.05). Prognostic nutritional index of the MAC (+) group were significantly lower than the MAC (-) group (38.5 ± 5.8; 42.2 ± 3.1; p <0.001). In correlation analysis, PNI value was found to be negatively correlated with presence of MAC. (r:-0.285; p<0.001))

Conclusion: We found that the presence of MAC is significantly associated with lower levels of PNI.

Table 3 Correlation analysis parameters associated with MAC positivity		
	r	**P value**
LVED Diameter	0.182[b]	<0.001
Left Atrial Diameter	0.338[a]	<0,001
sPAP	0.364[a]	<0.001
Fasting blood glucose	0.154[a]	0.001
Blood Urea Nitrogen	0.148[a]	0.002
Calcium	-0.209[a]	<0.001
Phospuor	0.233[a]	<0.001
Hemoglobin	-0.210[b]	<0.001
RDW	0.213[a]	<0.001
PNI	-0.285[b]	<0.001

LVED = left ventricul end diastole ;sPAP= Pulmonary artery systolic pressure;RDW= Red blood cell distribution width; r= rho correlation coefficient;

ID: **120**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

ASSOCIATION BETWEEN VITAMIN D LEVELS AND CARDIOMETABOLIC RISK FACTORS AND ECHOCARDIOGRAPHIC PARAMETERS AMONG POSTMENOPAUSAL WOMEN

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Objective
Menopause is a period of increased cardiac risk for women due to hormonal changes. It is important to investigate additional clinical conditions that may affect cardiac risk during this period. Although vitamin D (Vit D) deficiency and cardiovascular disease risk have been studied previously, there are limited data in the literature on how this affects cardiometabolic risk factors and echocardiographic parameters in postmenopausal (PMO) women. We aimed to evaluate association between Vit D levels and cardiometabolic risk factors and echocardiographic parameters in PMO women.

Method
200 PMO women enrolled in this study and the study patients. Prevalence of 25-0H Vit D deficiency was 67% (n=134/200) (severe deficiency 29.5 %, n=59/200). Demographic data (age, body mass index, and waist circumference), serum Vit D levels, cardiometabolic risk factors (blood pressure, serum glucose, insulin, HOMA, total cholesterol, HDL, LDL, triglycerides and CRP) and echocardiographic parameters of study population were recorded. The relation between serum levels of Vit D and cardiometabolic risk factors and echocardiographic measurements were analyzed. Correlation analysis and linear regression were used to estimate the association between Vit D status and cardiometabolic risk factors and echocardiographic parameters.

Results
Mean age of study population was 56, 26 (±5, 37) years. Left ventricular end diastolic diameter (LVEDD), BMI, triglyceride levels were higher; HDL levels were significantly lower in patients with lower Vit D levels. Linear regression analysis showed that 25-OH Vit D was negatively correlated with LVEDD (p=0,0097), isovolumic relaxation time (IVRT) (0,0207), RVEDD (p=0,0328) and triglyceride (0,0052); and was positively correlated with HDL (p=0,0010), E value (p=0, 0352). After adjustment for age and BMI; 25-OH Vit D was found to be an independent predictor for LVEDD (p=0,0470), IVRZ (p=0,0327), triglyceride (p=0,0019) and HDL (p=0,0010). With t-test, it was seen that Vit D levels were lower in the presence of diastolic dysfunction (DDF) (p=0,0283). However, after adjustment with age and BMI, no association was found between Vit D levels and DDF.

Conclusions
This study demonstrates that Vit D deficiency is related to impairment of cardiometabolic risk factors such as triglyceride and HDL and found to be an independent predictor for LVEDD, IVRZ. Although the frequency of DDF in Vit D deficiency increased, an independent relationship between Vit D and DDF could not be demonstrated. We suggest that future cardiac risk may be prevented by revealing and understanding the effect of 25-OH Vit D deficiency on cardiometabolic risk factors and subclinical cardiac findings.

Table 1. Demographic and Clinical Characteristics of study population

Parameter	Mean ± Standard Deviation			p Value
	Vit D≤10 ng/ml (N=59)	10 < Vit D≤20 ng/ml (N=75)	Vit D > 20 ng/ml (N=66)	
BMI, kg/m2	30,69±4,96	31,21±5,91	28,68±5,04	0,0159
Age, years	55,81±5,14	57,19±5,88	55,59±4,89	0,1606
SBP, mmHg	122,03±16,17	120,13±13,51	119,55±13,86	0,607
DBP, mmHg	74,58±11,50	73,16±12,85	75,44±10,69	0,5098
Waist circumference, cm	103,44±10,65	103,67±11,48	97,73±12,17	0,0038
FBG, mg	110,73±33,79	104,01±20,34	104,91±22,11	0,2791
Insulin, mg	12,08±6,81	11,37±5,48	11,65±7,88	0,8445
CRP, mg	5,37±6,42	4,30±4,72	3,96±4,47	0,3512
LDL, mg/dl	125,98±27,03	134,31±34,58	133,63±41,56	0,3441
Triglyceride, mg/dl	199,31±120,69	154,60±71,21	152,89±78,12	0,0063
VLDL, mg/dl	38,74±24,38	32,53±21,68	33,31±22,49	0,2642
HDL, mg/dl	49,81±12,12	55,15±12,24	57,38±13,20	0,0034
TC, mg/dl	218,28±36,05	222,85±38,80	225,91±46,09	0,5803
HR, bmp	74,54±13,22	72,40±13,88	73,11±11,33	0,6297
LVEF, %	65,17±3,09	65,33±4,08	65,59±3,41	0,802
LVEDD, cm	4,58±0,26	4,54±0,36	4,41±0,31	0,0087
LVESD, cm	3,14±0,33	3,04±0,43	3,00±0,41	0,1206
E, m/s	0,78±0,16	0,82±0,16	0,81±0,16	0,2433
A, m/s	0,79±0,13	0,81±0,14	0,81±0,12	0,6983
IVRZ, ms	79,34±12,65	78,68±16,78	73,55±12,77	0,0436
IVCZ, ms	67,85±13,40	66,31±12,45	68,80±16,43	0,5717
E', cm/s	9,10±2,58	9,87±2,29	10,11±2,74	0,0729
A', cm/s	10,92±2,38	11,04±2,29	11,12±2,45	0,8883
DT, ms	195,15±43,47	187,89±45,98	194,30±53,15	0,6188
LAEDD, cm	3,32±0,36	3,20±0,42	3,22±0,40	0,1832
RAEDD, cm	3,09±0,42	3,12±0,42	3,00±0,45	0,291
RVEDD, cm	2,24±0,25	2,21±0,21	2,13±0,21	0,0204
TAPSE, cm	1,98±0,38	2,02±0,36	2,03±0,40	0,764
E/E'	8,96±2,39	8,68±2,28	8,55±2,42	0,6105

ID: **75**

Topic: **Cardiology » Hypertrophic Cardiomyopathy**

Presentation Type: **Oral**

RELATIONSHIP BETWEEN GLOBAL LONGITUDINAL STRAIN AND MYOCARDIAL FIBROSIS DETECTED BY CARDIAC MAGNETIC RESONANCE IN HYPERTROPHIC CARDIOMYOPATHY

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Background: Hypertrophic cardiomyopathy (HCM) is the most common genetic cardiomyopathy. However, echocardiography is the first line diagnostic tool, cardiac magnetic resonance (CMR) with contrast is a powerful imaging modality for the characterization of the heterogeneous phenotypes in HCM. CMR provides relevant diagnostic and prognostic information not identifiable with traditional echocardiography. Late gadolinium enhancement (LGE) which shows myocardial fibrosis can identify high risk patients for sudden death independent from other high-risk features. Speckle tracking echocardiography based on tissue displacement and gives information about myocardial mechanics and left ventricular function. The aim of our study was to investigate whether assessment of left ventricle global longitudinal strain (LV GLS) can detect the extent of myocardial fibrosis detected by CMR and serve as a novel prognostic parameter in HCM patients.

Methods: Present retrospective study recruited 23 consecutive patients with HCM who underwent comprehensive echocardiographic examination including LV GLS and CMR with contrast study. Study population was divided into two groups according to the presence of late gadolinium enhancement which shows fibrosis. Then the relationship between LGE extent and LV GLS was evaluated.

Results: LGE was detected in 13 (56.5%, mean age 51.6±9.3, 76.9% male) of the 23 patients. No significant differences were found between baseline characteristics of HCM patients with or without LGE except sex. Male sex and LV mass index were found to be significantly higher (p: 0.040, p:0.028 respectively) and LV GLS was significantly lower (p:0.008) in LGE (+) group. Mean number of LV segments with LGE was 4.00±3.44. Negative correlation was detected between LV GLS and number of LV segments with LGE ($p<0.001$, r:0.683) which showed association between LV GLS and the extent of myocardial fibrosis. In regression analysis male sex and LV GLS were found to be significantly associated with LGE in HCM patients. ROC analysis showed GLS >18.4 had 70% sensitivity and 76.9% specificity (AUC 0.819, 95% CI 0.643-0.995, $p < 0.001$).

Conclusion: Male sex and LV GLS were found to be significantly associated with LGE in HCM patients. LV GLS may provide useful information on myocardial fibrosis and can be used for risk stratification in HCM beyond well known risk factors.

Keywords: Hypertrophic cardiomyopathy, myocardial fibrosis, cardiac magnetic resonance, global longitudinal strain

ID: **174**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

THE IMPORTANCE OF THE GRADE OF LEFT ATRIAL ECHO CONTRAST ON CARDIAC OUTCOMES

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Background: Systemic thromboembolism is a serious morbidity and mortality cause for patients with rheumatic mitral stenosis (RMS). Previously conducted researches showed that spontaneous echo contrast (SEC) found in the left atrium (LA) can constitute a risk factor for thrombus formation and thromboembolism. Underlying conditions are associated with low blood flow velocities in the LA. We sought to determine to evaluate the role of LA SEC grade on hospitalization for transient ischemic attack (TIA) in patients with moderate–severe RMS.

Methods: This retrospective study includes 104 patients (mean age 67 years, range 31-77) who were diagnosed with moderate–severe RMS and underwent trans-esophageal echocardiography between 2011 and 2014, but without any intra-cardiac mass. RMS was graded using by WILKINS criteria. They were then divided in two groups depending on SEC presence; a SEC negative group and a SEC positive group. Data regarding baseline parameters, treatment and clinical features during follow-up were gained based on hospital and out-patient clinic and telephone interviews. The end point of the study at follow-up 12 months was hospitalization for TIA.

Results: Of the 104 patients, 71 (68%) patients had LA SEC on echocardiography. Both groups had similar demographic parameters, and conventional echo parameters such as LVEF and LV volumes ($p>0,05$). Total of 27 hospitalizations have been recorded during follow-up (Log Rank $p<0.001$) (Figure 1), besides LA thrombus was present in 7 patients, all of whom had LA SEC. In linear regression analysis, positive correlations were found between grade of LA SEC and WILKINS criteria ($r2=0.548$, $p<0.001$) (Figure 2), and LA SEC correlated with higher probability of TIA ($p=0,01$). LA SEC and intra-cardiac thrombus were significant risk factors for the development of TIA with univariate analysis. However, LA SEC was the only strong predictor for TIA on multivariate analysis.

Conclusion: In RMS patients, coexisting LA SEC was associated with higher risk for TIA and was predictive of poor long-term hospitalization outcome.

Figure 1.

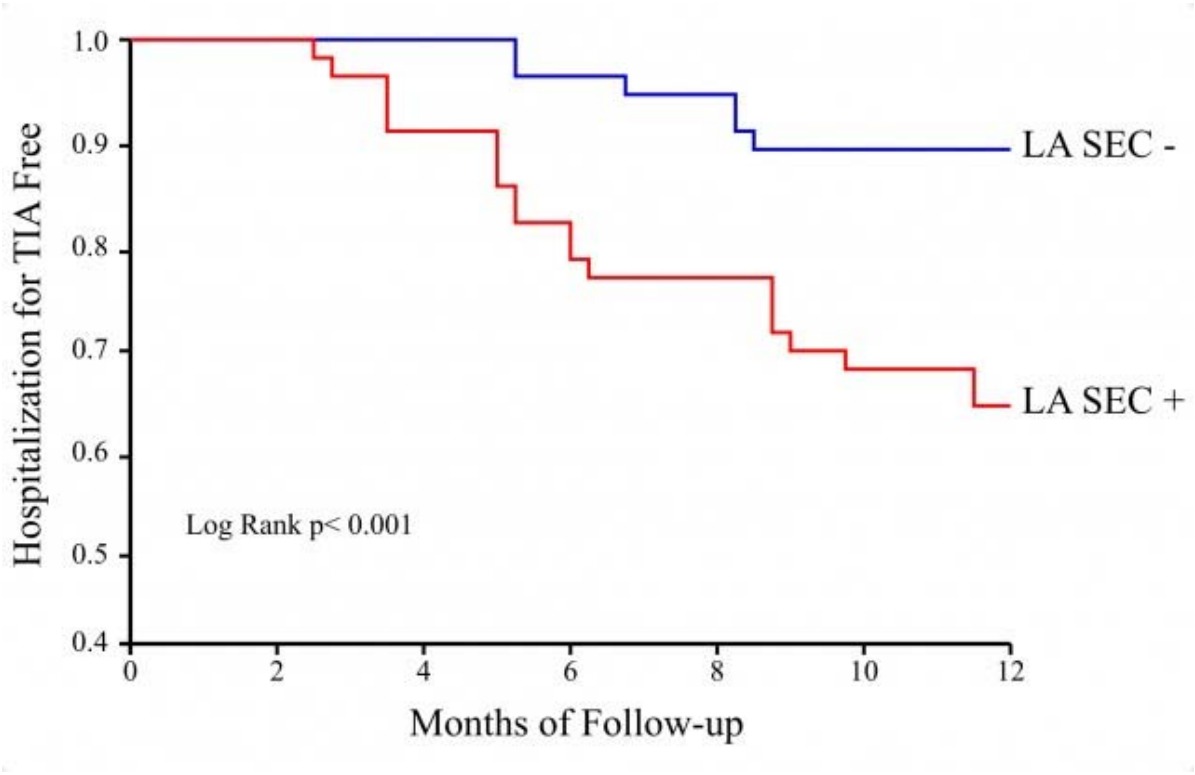
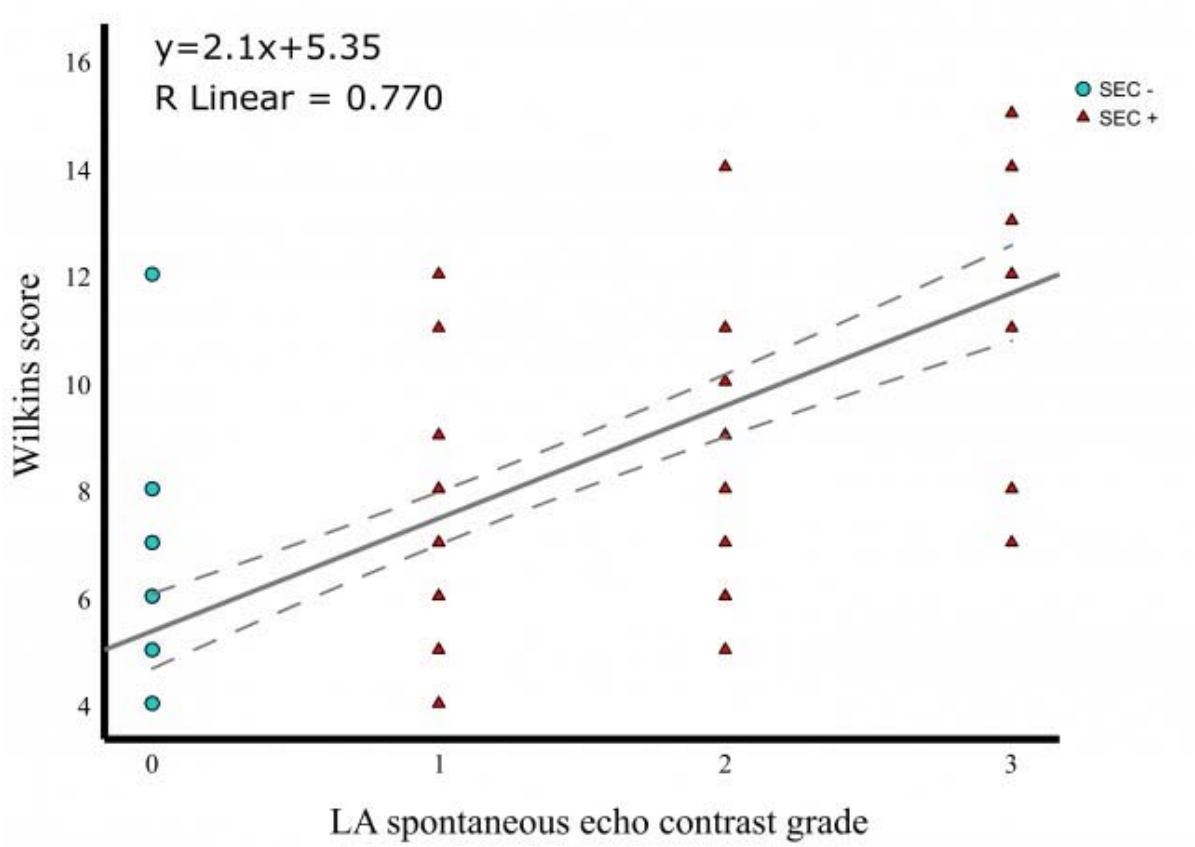

Hospitalization for TIA Free
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0
2
4
6
8
10
12
Months of Follow-up
LA SEC -
LA SEC +
Log Rank p< 0.001

Figure 2.


y=2.1x+5.35
R Linear = 0.770
SEC -
SEC +
Wilkins score
16
14
12
10
8
6
4
0
1
2
3
LA spontaneous echo contrast grade

ID: **326**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

RELATIONSHIP BETWEEN LEFT ATRIAL REMODELING INDEX AND STROKE SEVERITY IN PATIENTS WITH ACUTE ISCHEMIC STROKE

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OBJECTIVES: The cardiovascular manifestations of acute ischemic stroke have been well known. Apart from preexisting cardiac disorders, cardiovascular complications are most likely mediated by an increased sympathetic activity. It was reported that LA functional remodeling is feasible to predict cardiovascular outcomes as well as LA structural remodeling. However, it is uncertain whether the combined assessment of LA functional and structural markers are related with stroke severity. In this study, we aimed to investigate the relationship between frontal left atrial remodeling index and stroke severity in patients with acute ischemic stroke.

METHODS: A total of 80 patients (45 men, 35 women, 67 ± 15 years) with acute ischemic stroke were included in the study. NIHSS scores were calculated. Patients were divided into 2 groups according to the NIHS score (Group 1; NIHSS < 16, Group 2; NIHSS ≥ 16). Demographic, clinical, and laboratory data were collected for all patients. Cardiac evaluation with two-dimensional echocardiography was performed within 48 hours of admission to neurology care unit. Peak systolic LA strain was evaluated using 2D speckle tracking imaging. We calculated the average value for LA peak systolic strain obtained from the apical four-chamber, two-chamber, and apical long axis views. LA volume was indexed to body surface area (LAVI). We defined the ratio of LA peak systolic strain and LAVI as LA remodeling index (LARI = [LA peak systolic strain/ LAVI]).

RESULTS: There were no significant differences among clinical parameters of patients. LARI was significantly higher in Group 1 patients than Group 2 patients (Table 1).

CONCLUSIONS: Our results suggested that, left atrial remodeling index is associated with stroke severity on admission in patients with acute ischemic stroke.

Table 1: Echocardiographic parameters of patients.

Variables	Group-1 (NIHSS <16) n=58	Group-2 (NIHSS ≥ l6 Group) n=22	p Value
LVDd (mm)	51.2 ± 6.3	54.6 ± 6.8	NS
LVDs (mm)	40.5 ± 4.2	43.2 ± 5.8	NS
LVEDV (mL)	86.05 ± 17.76	95.43 ± 24.34	NS
LVESV (mL)	41.13 ± 12.47	44.78 ± 14.26	NS
LAD (mm)	39.5 ± 4.3	42.4 ± 4.6	NS
RAD (mm)	32.6 ± 3.4	34.7 ± 3.7	NS
RVDd (mm)	28.1 ± 2.5	30.7 ± 2.8	NS
LVEF (%)	59.2 ± 5.6	51.4 ± 6.3	0.024
LA GLS (%)	34.48 ± 9.73	26.27 ± 7.41	0.019
LAVI (ml/m2)	35.3 ± 12	53.4 ± 23	0.028
LARI (%)	0.95 ± 0.37	0.49 ± 0.27	0.032

ID: **312**

Topic: **Cardiology » Transcatheter ablation for tachyarrhythmias - Supraventricular tachycardia**

Presentation Type: **Oral**

USE OF TRANSESOPHAGEAL ECHOCARDIOGRAPHY BEFORE ATRIAL TACHYCARDIA ABLATION

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Introduction and Aim: It is known that patients with atrial fibrillation and atrial flutter carry a high risk of left atrial thrombus. To prevent this, oral anticoagulants is recommended to these patients if the CHADS2 VASC2 score is appropriate. Routine TEE control is also recommended for left atrial thrombus before atrial fibrillation and flutter ablation. These two conditions are unclear in patients with atrial tachycardia. It was planned to evaluate the frequency of atrial thrombus and the necessity of routine TEE before the procedure in patients scheduled for AT ablation that did not use oral anticoagulants. This study may be helpful in determining whether or not oral anticoagulants should be given to all or some of the patients with atrial tachycardia and to manage the presence of atrial thrombus before AT ablation.

Method: 29 patients who underwent TEE with AT ablation plan between January 2010 and June 2018 were included in the study. The presence of grade 2-3 SEC and thrombus in left atrium and/or left atrial appendage were accepted as thrombogenic milieu. The patients were divided into two groups according to the presence of thrombogenic milieu

Results: Grade 3 SEC was found in 2 patients and grade 2 SEC was detected in 1 patient. Grade 1-2 sec was detected in 5 patients, whereas 18 patients had no thrombus or sec. Thrombus was not detected in any patient.

Conclusion: In our study, it seems that there is no requirement for TEE before AT ablation. However, since the number of patients is low in the study, studies with more patients are needed.

ID: **418**

Topic: **Cardiology » Stroke prevention in Atrial fibrillation**

Presentation Type: **Oral**

LEFT ATRIAL THROMBUS IN PATIENTS WITH ATRIAL FIBRILLATION AND UNDER ORAL ANTICOAGULANT THERAPY; 3-D TRANSESOPHAGEAL ECHOCARDIOGRAPHIC STUDY

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Purpose

Ischemic stroke is the major complication of atrial fibrillation (AF) and only proven preventive therapy is oral anticoagulant therapy (OAC). Previous studies reported the presence of thrombi in the left atrium (LA) or left atrial appendage (LAA) despite anticoagulant therapy. We aim to investigate the predictors of LA/LAA thrombus in patients under OAC therapy and long-term clinical impact of thrombus.

Methods

We prospectively enrolled consecutive patients with permanent AF under OAC therapy. Patients baseline characteristics were recorded. Transesophageal echocardiographic study performed after complete transthoracic echocardiographic study. 3-D evaluation of LAA was made using 3-D zoom mode and thrombus was defined when echo reflecting, mobile mass detected. Patients clinical outcomes were decided according to hospital records or via phone calls.

Results

Among 184 patients, 28 LAT were detected. Mean CHA2DS2-VASC score was significantly higher in patients with LAT in comparison to patients without LAT. CHA2DS2-VASC score(p:0.001), left atrial volume(p:0.001), left atrial flow velocity(p:0.006) and left ventricular ejection fraction(p:0.014) were independently associated with LAT. Among the parameters in CHA2DS2-VASC score, the previous history of stroke and age were independently related to LAT. After 12 months of follow-up, patients with LAT had more ischemic stroke than patients without LAT(7.1% vs 4.4%, p: 0.001 respectively).

Conclusion

Although oral anticoagulation is the default treatment strategy for prevention of LAT and thromboembolism in patients with non-valvular AF, LAT still can be detected especially in patients with a high CHA2DS2-Vasc score. Furthermore, the presence of LAT is significantly associated with future ischemic stroke.

ID: **127**

Topic: **Cardiology » Cardiac imaging - Nuclear Imaging**

Presentation Type: **Oral**

THE IMPACT OF THE STRESS TEST ON SCORING IN MYOCARDIAL PERFUSION SCINTIGRAPHY

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Objective: The aim of this study is to determine how the scoring changes according to the stress method applied to the patients in myocardial perfusion scintigraphy (MPS).

Method: Overall 247 patients who underwent MPS imaging following stress test with Bruce protocol or pharmacological stress test with adenosine between August 2018 and April 2018 were included in the study. Stress and rest MPS images of the patients were evaluated by Cedars-Sinai myocardial imaging program with a five-point scale on a 17-segment model. Summed stress score (SSS), summed rest score (SRS), summed difference score (SDS), stress total perfusion defect (TPD) percentage, rest TPD percentage, difference TPD percentage were obtained quantitatively. Patients were classified in three groups as all patients, coronary artery disease (CAD) positive and negative. Statistical analysis was performed by using t-test and chi-square test.

Results: The mean age was 62±11 (106 F, 141 M). Ninety-four patients (38%) had a diagnosis of known coroner artery disease. The mean age of patients underwent pharmacological stress in CAD+ and CAD- groups were higher when compared to Bruce group. Table 1 presents the data according to the stress method. CNS, stress TPD and difference TPD values were higher in patients who underwent pharmacological stress test in CAD negative group than Bruce protocol applied patients. In the all patient group and in the CAD positive group; factors -except for age- did not differ with the stress method. There was no significant relationship between pharmacological stress method and gender (chi square, p: 0.085).

Conclusion: The frequency of pharmacological stress increases with age. In non-CAD group; reversible defect was found to be higher in individuals of who underwent pharmacological stress test relative to Bruce stress test. This result demonstrated that more ischemia was observed in pharmacological stress test group.

Key words: CAD, myocardial perfusion imaging, stress test, SSS

ID: **705**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

4D-VISUALIZATION TECHNIQUE AS A DIAGNOSTIC TOOL FOR INCREASING THE ACCURACY OF MEASUREMENTS IN TRANSESOPHAGAL ECHOCARDIOGRAPHY

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Modern echocardiographic techniques are increasingly used in the daily practice of large medical hospitals. Among them is the multi-plane scanning mode, which allows in 4D mode to extract a large number of 2D images from a simultaneously saved volumetric image in any cutting plane. At present, the aspect of the multi-plane scanning mode is poorly covered in the scientific literature. This study was undertaken to clarify the advantages of the 4D technique for transesophageal echocardiology (TEE) versus transthoracic echocardiography (TTE).

Research methods: The study included 16 patients who were diagnosed with congenital malformation and congenital anomalies of the heart structure during TTE. On the GE Vivid S70 device, a sector probe was used to assess the area of interest of the heart, with an assessment of the dimensional parameters of the specified scanning area. Subsequently, with a TEE sensor with a phased array (6VT-D), videos were recorded in 4D mode with volumetric visualization and their subsequent post-processing. Differences between the linear data obtained with TTE in B-mode and TEE in volumetric imaging mode were evaluated, expressed as a percentage of the initial values.

Results: It was found that the smallest measurement errors were recorded when assessing the severity of prolapse of the aortic (AV) and mitral (MV) valves. For AV, these differences were insignificant and reached -2.4%, for MV - from -9.7% to + 2.8%. For the interventricular septum (IVS) aneurysm, these differences with the data obtained with TTE already reach + 27.5%. In a number of cases, an aneurysm of the atrial septum (AS) during TTE was not visualized at all (depending on its location and spatial orientation). The best visualization quality was noted in relation to the developmental defects of the heart, namely, for the defects of the AS, with the difference in the obtained digital values compared to the TTE data from -33.3% to + 100% (for example: - 1.5 mm with TTE versus 3.0 mm at TEE).

Conclusion: Taking into account the obtained data, it should be concluded that when conducting TEE, preference should be given to the 4D technique (volumetric imaging mode) while maintaining the largest possible number of such images. Subsequent post-processing of image blocks makes it possible to obtain the most accurate data on the severity of a defect or anomaly, with the smallest error in the results obtained in comparison with TTE data. The width of the scanning sector is 5*4 cm, with a sector depth of about 7 cm, it is quite enough for the simultaneous capture of images of the entire area of interest of the heart, such as: AS, IVS, heart valve with all adjacent structures.
The ability to subsequently extract a large number of 2D images from a volumetric data block (4D), and at the same time in any plane of interest to us, is an indispensable tool in such situations. The greater amount of time required to post-process the 3D model of the heart scan sector and analyze all the information stored in such a study is the expected price for the final result.

ID: **604**
Topic: **Cardiology » Cardiac imaging - Echocardiography**
Presentation Type: **Oral**

EVALUATION OF EARLY MYOCARDIAL DYSFUNCTION WITH STRAIN ECHOCARDIOGRAPHY IN CHRONIC HEPATITIS B PATIENTS

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Introduction: It is well-known that chronic hepatitis B virus infection (CHBV) can be associated with hepatic-effects but it can also be associated with an extra-hepatic effect, of which cardiac manifestations are the one of the least known. There is a limited amount of data about myocardial dysfunction in CHBV. The aim of this study was to detect early myocardial dysfunction in CHBV using strain echocardiography.

Method: Our study is a prospective study that includes 40 CHBV patients without anti-viral treatment and 40 CHBV patients under antiviral treatment from 2017 October to 2018 May. All groups included patients, whose ages ranged from 30 to 60, not having co-morbid diseases and patients with pathologies that would cause myocardial dysfunction were excluded for all groups. All patients had statistically similar BMI, serum ALT-AST-INR values. All patients were evaluated with transthoracic 2D, tissue doppler, and strain echocardiography.

Results: Our patients' gender distribution is 67% female, and 33% male for each group. The mean age is 42,8±8,8 for CHBV patients without anti-viral treatment (Group 1), 44,3±8,9 for CHBV patients under anti-viral treatment(Group 2), and 42,5±11,4 for control group(p:0.677).The mean time from the diagnosis of chronic HBV (+) patients was 6.64 ± 3.4 days, and the mean HBV DNA value was 2185254,96±19248074,9.The mean lateral s' have a statistical significance between CHBV patients, and control group. The mean lateral s' was 10,2±1,9 for group 1; 11,3±3,3 for group 2; 211,7±2,6 for control group, and thisstatistical significance (p:0.035) is between control group, and group 1. The mean GLS was 19,9±3,4 for group 1, 18,7±3,7 for group 2,22,8±1,9 for control group; the mean GCS was 17±5,2 for group 1, 19,6±5,5 for group 2, 23,6±2,4 for control group. For both GCS, and GLS groups, control group was statistically different ($p<0.01$) from group1, and 2. However; group 1, and 2 was not different from each other.

Regarding other parameters Left Atrium diameter, interventricular septum diameter, posterior wall diameter, Left Ventricular diastolic diameter, Left Vent. end Systolic Volume, ejection fraction , E wave velocity, A wave velocity, deceleration time , lateral e' wave velocity ,lateral a' wave velocity , septal s' wave velocity , septal e' wave velocity , septal a' wave velocity ,there were no significant difference among the three groups. And there was no correlation between HBV-DNA quantity,and GLS (R= 0.10 P=0.932), GCS (R=0.079 P= 0.519) values respectively (Table 1).

Conclusion: Chronic HBV infection, due to being a chronic necro-inflammatory period, can affect myocardial functions. Traditional echocardiographic parameters as LVEF are not useful to detect early myocardial dysfunction. Strain echocardiography is more useful in the identification of subclinic myocardial disease. Myocardial dysfunction may be seen as cardiac involvement of CHBV. We detected statically decreased GLS,GCS and LS values, without significant difference other echo parameters. In the this situation this is the first study that shows strain echocardiography, and tissue doppler echocardiography may be more valuable for CHBV patients than routine 2D echocardiographic LVEF parameters to determinate myocardial efect. Long-term follow-up to evaluate whether low strain predicted the development of EF reduction will be useful for understanding the cardiac effects of CHBV. Perhaps these datas may change the HBV treatment regimens for cardioprotection in the future.

Table 1. Echocardiographic parameters of the patients

	HBV without anti-viral treatment	HBV with anti-viral treatment	Control Group	p-value
LA	31.7±4.1	33.5±3.7	33.5±4.4	0.075
IVS	9.1±1.5	9.3±1.8	9.4±1.3	0.680
PW	9.0±1.4	9.0±1.7	9.1±1.1	0.967
LVD	41.8±3.8	42.2±3	42.9±3.7	0.314
LVS	26.2±3.9	25.9±2.9	26.3±3	0.889
LVEDV	80.2±21.5	77.1±23.5	70.4±18.7	0.096
LVESV	33.9±10.1	33±10.8	29.7±9.6	0.121
EF	61.7±8.2	61.1±5.8	62.6±5.8	0.583
E	90.5±23.2	84.1±20.6	87.4±25.3	0.517
A	84.7±21.5	79.7±18.2	82.4±10.8	0.461
DT	171±48	166±48	153±31	0.222
Lateral s	10.2±1.9	11.3±3.3	11.7±2.6	0.035[a]
Lateral e	13.3±2.6	12.6±3.5	12.5±2.9	0.401
Lateral a	10.4±3.3	11.6±.4	11.5±2.6	0.086
Septal s	8.7±1.9	8.2±2.3	8±1.5	0.281
Septal e	9.9±2.6	9.8±2	9.8± 7	0.941
Septal a	9.5±1.6	10.3±4.3	8.8±2.2	0.084
GLS	19.9±3.4	18.7±3.7	22.8±1.9	<0.001[b]
GCS	17±5.2	19.6±5.5	23.6±2.4	<0.001[c]

a: difference between the control group and Group 1.

b: the control group is different from Group 1 and 2, and there is no difference between Groups 1 and 2.

c: the control group is different from Group 1 and 2, and there is no difference between Groups 1 and 2.

ID: **722**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

A CASE OF LYME DISEASE PRESENTED WITH SEVERE PLEUROPERICARDITIS LEADING TO CARDIAC TAMPONADE

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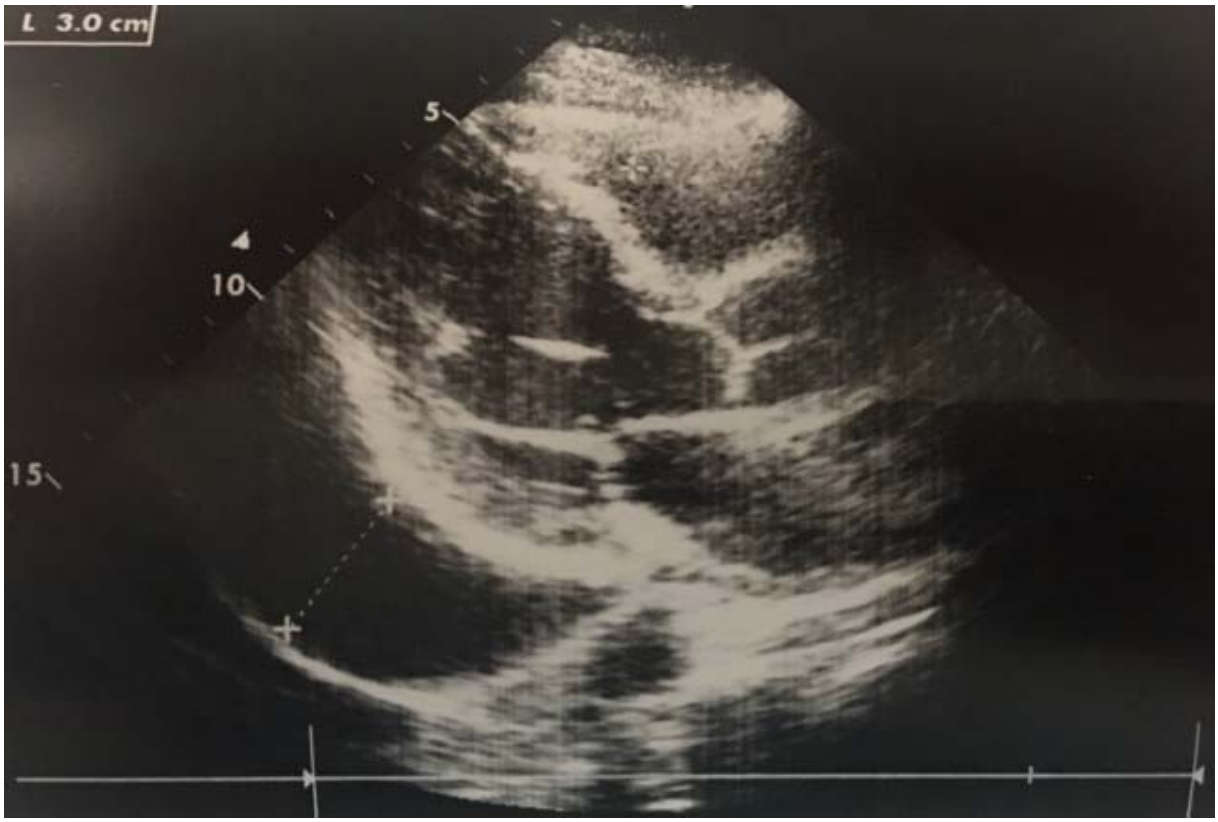
Objectives: Lyme disease (LD) is an infectious disease with multi-systemic inflammation. We would like to present a case of LD admitted with cardiac involvement without classical manifestations.

Introduction: Lyme disease is an Ixodes tick-transmitted infectious disease caused by *Borrelia burgdorferi*, a Gram-negative bacterium belonging to the Spirochete family. Clinical manifestations include dermatologic, rheumatologic, neurologic and cardiac involvements. Early localized disease, early disseminated disease and finally late or persistent infection can occur. Cardiac involvement is rare (<10%). The most common clinical feature of Lyme carditis is self-limited conduction abnormalities like atrioventricular block and myo-pericarditis.

Methods: A research on PubMed has been realized with the keywords 'Lyme disease', 'Lyme and pleuropericarditis' and 'cardiac involvement in Lyme disease'.

Results: A 43-year-old man with hypertension admitted to the cardiology outpatient clinic with chest pain, dyspnoea, palpitation, fever and fatigue. He had hypotension, diminished heart sounds and sinus tachycardia on ECG. His sedimentation rate (71 mm/h) and CRP levels (13.6 mg/dl) were high but cardiac enzymes, electrolytes and liver function tests were normal. Chest X-ray showed increased cardiothoracic index and mild to moderate bilateral pleural effusion. The echocardiography and thorax computerized tomography showed bilateral pleural and moderate to severe with a maximum of 2.8 cm pericardial effusion accompanied by intense fibrinous septae formations. Thoracentesis and pleural biopsy were performed. The patient had no arrhythmias and pericardial effusion started to diminish with non-steroidal anti-inflammatory therapy at the beginning but increased in later days and the patient developed cardiac tamponade. The fluid was located to the rear of the left ventricular posterior wall with a maximum of 3.5 cm. A transient high grade 2:1 AV block was observed in telemetry. Surgical pericardiocentesis and pericardial window procedure has been performed. Potential causes of pericarditis including infections, metabolic, autoimmune and malign diseases were investigated. IgM antibodies to Borrelia burgdoferi were detected in serum with ELISA and Western Blot tests. Parenteral ceftriaxone and oral doxycycline therapy was administrated. The patient made a full recovery. At follow-up patient was free of symptoms, clinical and echocardiographic examinations were normal.

Conclusions: To the best of our knowledge, this is the first case of Lyme disease presented with isolated pleuropericarditis leading to cardiac tamponade without classic clinical manifestation in Turkey. Lyme associated pleuropericarditis is very rare and may be life threatening therefore it should be considered in differential diagnosis in patients with acute pleuropericarditis.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ID: **730**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

ECHOCARDIOGRAPHIC MEASUREMENT OF PULMONARY ARTERY TO ASCENDING AORTA RATIO AS A PREDICTOR OF PULMONARY HYPERTENSION AND ATTACK RISK IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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Objective: Pulmonary artery (PA) enlargement, defined as a PA to ascending aorta (A) diameter ratio greater than one (PA:A > 1) identifies patients at increased risk for morbidity and mortality in patients with chronic obstructive pulmonary disease (COPD). PA:A has been investigated in numerous studies analyzing cardiac magnetic resonance (CMR) and computed tomography (CT) data, but there are few studies about role of transthoracic echocardiography (TTE) and its cut off value. In our study, we aimed to determine the relationship between PA/A ratio and COPD stage, number of attacks and pulmonary hypertension (PH) by measuring with TTE.

Methods: The retrospective observational study involved 40 patients with COPD. Clinical data and the data about pulmonary arterial diameter, ascendan aortic diameter, PA:A and systolic pulmonary artery pressure (sPAP) measured during TTE were obtained through the electronic patient database. All patients were analysed for clinical, demographic and imaging data.

Results: Of patients, 38 (95 %) were male and 2 (5%) female. The mean age was 68.15±8.39. There were 15 (37.5 %) patients who had a PA/A > 1. The pulmonary artery was wider in the group with PA/A > 1 (33 [IQR 32-37] mm vs 29.44±3 mm, p<0.001). Echocardiography measured PAP was higher in the group with PA/A > 1 than in those with PA/A ≤ 1 (48.93±6.84 mm Hg vs 30 [IQR 25-40] mm Hg, p<0.001). The number of exacerbations were significantly higher in the group with PA/A>1 respectively.

Conclusion: PA can be evaluated in most echocardiographic examinations. Evaluation of the pulmonary trunk should be a part of every routine TTE in COPD patients. It should be keep in mind that increased PA: A should alert us for increased PAP, attack risk and require further evaluation and follow-up examinations of these patients.

Oral Presentation Session

Left Ventricular Assist Devices and Extracorporeal Circulation: A Multidirectional Discussions

Date: 01.11.2020 Time: 11:00 – 12:00 Hall: 5

ID: **394**

Topic: **Cardiovascular Surgery » VAD**

Presentation Type: **Oral**

LEFT VENTRICULAR ASSIST DEVICES IMPROVE PULMONARY HEMODYNAMICS IN BRIDGE TO TRANSPLANT PATIENTS WITH END STAGE HEART FAILURE

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Background: Pulmonary hypertension is a frequent sequelae of end-stage heart failure and remains a contraindication for cardiac transplantation. Pulsatile LVADs have been shown to effectively reduce pulmonary hypertension in these patients. However, it remains to be seen if newer continuous flow LVADs have a similar effect on pulmonary hypertension. The objective of this study was to determine if the Heartware (HW), a continuous flow LVAD is effective in improving pulmonary hemodynamics in bridge-to-transplant patients.

Methods: 56 patients with end-stage heart failure underwent placement of Heartware as a bridge-to-transplant (BTT) at our institution. Pulmonary hemodynamics were evaluated with right heart catheterization at baseline, after placement of an intra-aortic balloon pump (IABP), and post-LVAD (prior to heart transplant).

Results: Demographic data of these patients were as follows: mean age 51.6 ± 13.3 years, 70% male, LVEF 14.7 ± 5.11%, 56.6% ischemic etiology and 83.3% received IABP prior to LVAD. Following LVAD support (mean duration of 146. 41 ± 73.83 days), systolic and diastolic pulmonary artery pressures (SPAP and DPAP) decreased significantly (SPAP 56.8 ± 13.55 mmHg, DPAP 28.27 ± 6.23 mmHg to SPAP 35.38 ± 10.23 mmHg, DPAP 15.71 ± 5.36 mmHg; $p < 0.001$). Similarly, pulmonary vascular resistance (PVR) decreased significantly from 3.69 ± 2.02 to 2.00 ± 0.85 Woods units ($p = 0.004$). Transpulmonary gradient (TPG) also declined significantly post-LVAD from 13.3 ± 5.6 to 9.35 ± 2.98 mmHg ($p = 0.02$).

Conclusion: Continuous flow LVADs effectively improve pulmonary hemodynamics associated with end-stage heart failure. Therefore, adequate left ventricular decompression achieved with continuous flow LVAD support can reverse significant pulmonary hypertension in end-stage heart failure patients making them eligible for cardiac transplantation.).

ID: **462**

Topic: **Cardiovascular Surgery » VAD**

Presentation Type: **Oral**

HEMORRHAGIC AND THROMBOEMBOLIC COMPLICATIONS IN PATIENTS WITH IMPLANTED LEFT VENTRICULAR ASSIST DEVICES IN EARLY POSTOPERATIVE PERIOD

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Abstract: The work is devoted to study hemorrhagic and thromboembolic complications in early postoperative period after implantation of left ventricular assist devices (LVAD).

We performed retrospective analysis of 10 patients, males aged 55±13.5 years, with a BMI of 30.8±8.3, with a left ventricular ejection fraction ranging from 9% to 28%, which in the period from 11.03.2016 to 22.11.2017 year, in the Silesian center of the Heart Disease (Poland), in conditions of artificial blood circulation, LVAD was implanted.

In the early postoperative period, patients received daily anticoagulant target therapy (ACCT), consisting of the following drugs: heparin (6-11 U/kg/h), aspirin (75-150 mg), Clopidogrel (75-150 mg), warfarin (1.5-7 mg), Nadroparinum Ca (0.3-0.6 ml/twice on day), Fondaparinux Na (2.5-5 mg/twice on day). Two patients received mono-heparin therapy, one patient received monotherapy with warfarin for 14 days. Other patients during the same period received combined heparin therapy in the first three days with a subsequent transition to warfarin, aspirin, Clopidogrel, Fraxiparin, or thrombin blocker.

The mechanical support of the left ventricle was carried out essentially by two different implantable systems, performing one function of support of the left ventricle: POLVAD - programmed controlled pneumatic membrane mechanical circulation of blood to two patients, and LVAD program-controlled electro-centrifugal circulation for eight patients. The duration of support by POLVAD system was from 102 to 156 days. Length of support - LVAD ranged from 20 to 78 days.

A comparison of the analyzed results led to the conclusion that anticoagulant mono-therapy with heparin or warfarin leads to an increase in the percentage of complications and mortality compared with the alternative combination anticoagulant targeted therapy consisting of the following drugs: heparin (6-11 U/kg/h), aspirin 75-150 mg), Clopidogrel (75-150 mg), warfarin (1.5-7 mg), Nadroparinum Ca (0.3-0.6 ml/ twice on day), Fondaparinux Na (2.5- 5 mg/ twice on day), Where survival rates were significantly higher by 60%.

Key words: left ventricular assist device (LVAD), anticoagulant targeted therapy (ACTT), hemorrhagic and thromboembolic complications.

Conflict of Interest: The authors do not foresee conflicts of interest.

Literature:

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ID: **441**

Topic: **Cardiovascular Surgery » ECMO**

Presentation Type: **Oral**

THE INTERNATIONAL TRANSPORTATION OF THE PATIENT WITH ECMO BY AIR-AMBULANCE TO REFERRED CENTER

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BACKGROUND: Extracorporeal life support systems (ECLS) that may be life-saving treatment modality for cardiopulmonary or respiratory pathologies are new and complex technologies. The patients that needed an ECLS system to bridging to transplantation or management of the disease get more benefit in experienced or referred centers. If the patient is needed for prolonged treatment with ECLS or for high intensive care management for recovery, the transportation of it with ECLS device is mandatory. Sometimes, the transportation of the patient with ECLS system may be required between different countries. ECLS transportation can be make to air-ambulance or ground way. We want to share our experiences about medical air transportation of the patients with ECLS systems to different referred centers in our country from international or far centers inside to Turkey.

METHODS: Ten patients by ECMO support were transferred from remote center to referred center via air-ambulance transportation between 2014 to 2019 that were analysed retrospectively.

RESULTS: All patients were transferred from different countries to Turkey. Median transport distance was 1152 ± 302 miles. Mean age was 45,2 ± 23,1. Two patients ages were below the 10 years. Veno-venous was applied for 7 patients, veno-arterial for rest of them. The seven patients had pulmonary pathologies, others with primarily cardiac diseases. The patient who lived in the different country was needed to transportation for advanced treatment to the referred centers in Turkey. But the transportation of these patients were necessary with ECMO. Firstly, ECMO support was applied and then were transferred with it. All the patients were transported by air-ambulance and reached to referred center hospital alive. On the air, we checked the hemodynamic monitorization, blood gases analysis, ventilation machine parameters. Any problems were not encountered like cannula dislodgement, pump system failure, breakdown of the membrane oxygenator.

CONCLUSIONS: The transfer of the patient with ECMO support machine is possible by the way of air if transfer team creates an environment like intensive care unit during transportation. In addition, checking more frequent blood gases analyses, temperature of the patient, charge of the battery and safety of the cannulas carry great importance to prevent catastrophic events on the air.

ID: **100**

Topic: **Cardiovascular Surgery » Perfusion Course**

Presentation Type: **Oral**

HAEMODYNAMIC AND PERFUSION DATA WITH THE USE OF DEL NIDO CARDIOPLEGIA ACROSS CARDIAC CASES

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Background:
del Nido (DN) cardioplegia was developed as a myocardial protection strategy for immature hearts in the paediatric population. However, there has been a rapid uptake into adult cardiac surgery due to its single dosing strategy, potential superior myocardial protection and lower cardiopulmonary and cross clamp times. In spite of a plethora of observational studies, the majority of studies have looked at very specific populations and very few have included urgent/emergency cases. We are pleased to present the findings from the John Hunter Hospital in over 300 patients across a wide case range including emergent and salvage cases.

Aims:
-To evaluate the haemodynamic parameters resulting from DN cardioplegia across a range of cardiac cases including emergency and salvage cases
-To evaluate inotrope usage post cardiotomy after the use of DN across a range of cardiac cases including emergency and salvage cases
-To evaluate total bypass and cross clamp times with the use of DN across a range of cardiac cases including emergency and salvage cases

Methodology:
309 cases requiring cardiopulmonary bypass and where DN cardioplegia was used were analysed between 2015 and 2018 by reviewing patient records. All cases including emergent and salvage cases were included in this analysis. Patients were excluded if perfusion records did not identify total cardiopulmonary bypass and aortic cross clamp times. The final analysis was done on 307 cases.

Results:
The mean CPB time was 106.21 +/- 2.60 minutes and the mean cross clamp time was 71.19 +/- 2.02 minutes. The majority of isolated cases required only 1 dose (1L) of DN whereas cases exceeding 90 minutes had 2 doses of half dose (500mL) DN. Cardiac indices were between 2.35 +/- 0.6 L/min/m.m and 3.45 +/-0.82 L/min/m.m. An evaluation of individual cohorts of surgeries is beyond the scope of this abstract and will be presented at the meeting.

Conclusions:
We have evaluated DN in a 'real world' scenario and found it to be a safe alternative to standard hyperkaelemic solutions for myocardial protection across a wide range of cardiac cases. Its single dose strategy decreases interruptions to the operation and may provide superior myocardial protection and decreased cardiopulmonary bypass times.

ID: **416**

Topic: **Cardiovascular Surgery » Perfusion Course**

Presentation Type: **Oral**

ANTEGRADE AND RETROGRADE CEREBRAL PERFUSION STRATEGIES TO ESTABLISH CEREBRAL PROTECTION IN PEDIATRICS OPEN HEART SURGERY

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OBJECTIVES: To share our experience and to determine the impact of using antegrade cerebral perfusion (ACP) and retrograde cerebral perfusion (RCP) for neurological protection in pediatric patients undergoing open heart surgery.

INTRODUCTION: Neurological injury as a consequence of cerebral embolization of air during Cardiopulmonary bypass is still a major cause of post-op morbidity and mortality. The incidence of neurological injury is even higher during aortic arch procedures and unexpected occurrence of air embolism during cardiopulmonary bypass. We have demonstrated that antegrade cerebral perfusion via the common carotid artery and retrograde cerebral perfusion via the SVC along with hypothermic circulatory arrest provides adequate cerebral protection.

Case Description:
Case 1:
A 7 year old boy with VSD, coarctation of aorta and arch hypoplasia, underwent repair of the aortic arch and closure of the VSD. Elective antegrade cerebral perfusion via the right common carotid artery was employed at 24°C with circulatory arrest of 40 mins during arch reconstruction. The patient made uneventful recovery.

Case 2:
A 16 year old female patient with a large hypertensive PDA and severe sub aortic membrane was electively undergoing repair. After establishing CPB there was inadvertent injury to the PDA. Circulatory arrest at 23°C was established and the PDA was repaired. There was air in the aortic root. Thus, an emergent Retrograde cerebral perfusion was performed via the SVC and air bubbles were observed in the aorta to be coming from the arch vessels in this way we prevented cerebral air embolism. The patient was smoothly weaned off CPB, extubated the next day and discharged without any complications.

CONCLUSION: Antegrade and retrograde cerebral perfusion are important management strategies and are associated with improved survival and decreased incidence of neurological injuries.

ID: **321**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

RECONSTRUCTION OF STERNAL WOUND DEFECTS WITH CLASSIC PECTORAL MUSCLE AFTER CLASSIC CARDIAC SURGERY

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Background and Aim: Sternal wound infection and soft tissue defect following open heart surgery is a serious complication that increases mortality and morbidity. In this study, we described the reconstruction of pectoralis major muscle flap in patients with soft tissue defect in the anterior chest wall due to infection at the sternum incision site after open heart surgery.

Methods: Between 2015-2019, a total of 15 patients underwent reconstruction of the anterior chest wall defects with pectoralis major muscle flap due to infection in the sternum incision line following open heart surgery. we planned to perform right pectoral major flap in all patients. Previously placed titanium plates on the sternum were considered infected and all were removed. Sternal fixation was achieved with new titanium plates. In one patient, the sternal incision was closed primarily. In other patients, a pectoral muscle flap was applied and a partial thickness skin graft was taken over the remaining soft tissue defect. The mean age of the patients was 53 years (range 43-76). Six patients had hypertension, 10 had diabetes mellitus, and one had systemic lupus erythematosus. The diameter of soft tissue defects ranged from 4x8 cm to 10x16 cm.

Results: One patient developed hematoma 1 week after grafting and was re-operated. Two patients had partial loss of skin graft placed on the flap and the defect was closed with a partial thickness skin graft taken from the thigh again. In other patients, no problem with wound healing was observed and full healing was achieved.

Conclusion: Pectoral muscle flap repair with adequate debridement is an effective and safe method in patients with sternal wounds after open heart surgery.

Keyword: Sternal wound, muscle flap, open heart surgery

Oral Presentation Session

Clinical and Therapeutic Approaches in Valvular Heart Diseases

Date: 01.11.2020 Time: 12:15 - 13:15 Hall: 4

ID: **167**

Topic: **Cardiology » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Oral**

THE COMPARISON OF EARLY AND LONG-TERM FOLLOW-UP RESULTS OF PERCUTANEOUS MITRAL BALLOON VALVULOPLASTY AND MITRAL VALVE REPLACEMENT

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Objective: Percutaneous mitral balloon valvuloplasty (PMBV) and mitral valve replacement (MVR) are the treatment options in mitral stenosis for several years, however studies that compare these two modalities are very rare in literature. We aimed to investigate the comparison of clinical results of PMBV and MVR.

Methods: 527 patients with rheumatic mitral stenosis treating with PMBV or MVR (276 patients with PMBV and 251 patients with MVR) from 1991 to 2012 were evaluated. The demographic characteristics, clinical, echocardiographic and catheterization data of patients were evaluated retrospectively. The result of early and late clinical follow-up of patients after PMBV and MVR were also evaluated.

Results: Mean follow-up time of PMBV-group was 4.7 years and 5.45 years for MVR-group. The hospital stay of PMBV-group was shorter than MVR (2.02 days vs 10.62 days, p<0.001). In hospital mortality of PMBV and MVR were %0 and %2 respectively (p=0.024). In PMBV-group early postprocedural success rate was %92.1. The event-free survival of PMBV and MVR was found to be similar. While re-intervention was higher in PMBV-group (p<0.001), mortality rate was higher in MVR-group (p<0.001).

Conclusions: PMBV seems to be more advantageous than MVR due to low mortality rates, easy application of the procedure and lacking the need of general anesthesia.

ID: **281**

Topic: **Cardiology » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Oral**

REVIEW OF INFECTIVE ENDOCARDITIS DIAGNOSIS AND MANAGEMENT A 4 YEAR EXPERIENCE

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Objectives: Infective Endocarditis (IE) remains a disease associated with significant morbidity and mortality. Surgical management is reserved in failed medical therapy and from serious complications related to valve destruction or embolic phenomena. We reviewed the assessment and management of patients with endocarditis in our busy cardiothoracic surgical centre.

Method: We retrospectively reviewed patient data from 2012 and 2015 including demographics, clinical and follow-up details from patient notes. 199 were included over the 4 year period.

Results: Of the 199 patients 156 (78%) underwent an operation at UHS. 128 (64%) were males, 28 were females (14%) and mean age was 59 (19-86). Of the patients that underwent surgery, 112 (72%) were alive at discharge Vs 20 (47%) in the non-surgical group. Of the organisms isolated on culture 47(24%) were Staphylococcus Aureus, 63(32%) had variants of Streptococcus, 31(16%). Of the patients that did not have surgery 19 (42.2%) were discharged with antibiotics and of these 17 had recovered well, although 3 had further admissions with IE and 4 were having further cardiac investigations for recurrence.

Conclusion: In our unit we operate on more patients with endocarditis than previously reported in the literature. Of the patients that were operated they had higher survival than those unoperated. This may be due to referral practices in our unit but does bear favorably for surgery in endocarditis.

ID: **57**

Topic: **Cardiology » PI for SHD - Others**

Presentation Type: **Oral**

RADIOLOGICAL AND CLINICAL FINDINGS OF INFECTIVE ENDOCARDITIS PATIENTS WITH CENTRAL NERVOUS SYSTEM INVOLVEMENT

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Objective: Central nervous system (CNS) involvement can lead to high morbidity and mortality in infective endocarditis (IE). The aim of this study was to investigate the clinical and radiological findings of IE patients with CNS involvement.

Methods: In this retrospective, single-center study, the records of patients with CNS involvement followed up with the diagnosis of IE between 2013-2019 were examined. The clinical and radiological findings of the patients were recorded and investigated.

Results: The records of 176 patients diagnosed with IE were evaluated. A total of 32 (18.18%) of these patients had CNS involvement. The mean age of the patients was 64.25±14.2 years and 17 (53.1%) were female. Four (12.5%) patients had prosthetic aorta and mitral valve, 2 (6.25%) patients had only prosthetic aorta, and 2 (6.25%) patients had only prosthetic mitral valve. Native heart valves were present in 24 (75%) patients. Stroke was observed in 24 (75%) patients, spondylodiscitis in 9 (28,12%) and brain abscess in 3 (9.3%) patients. A total of 21 (%65.62) patients had only mitral, 5 patients (%15.62) had only aorta and 6 patients (%18.75) had both aortic and mitral valve vegetation. Additional vegetation in the tricuspid valve was observed in 3 (9.3%) patients. The most common comorbid condition was end-stage chronic renal failure in 9 (28.12%) patients. The causative agent was staphylococci in 14 (43.75%) patients. Mortality from endocarditis-related complications was determined in 17 (53.12%) patients at the 1-year follow-up during diagnosis and treatment.

Conclusions: CNS involvement can be seen in 15-30% of IE. In this series, neurological complications were determined at the rate of 18%. Neurological complications are mostly cerebral infarction, transient ischemic attack, intracerebral hemorrhage, brain abscess, seizures, meningitis and spondylodiscitis. Mitral valve vegetations were seen to be the most common source of cerebral infarcts and aortic valve vegetations were the second source. Staphylococci were determined as the agent most responsible in patients with neurological complications. The data of this study are consistent with findings in the literature. Mortality rates in neurological complications of IE have been reported in literature to be between 30-40%. The higher mortality rate in the current series can be explained by the fact that our center is a tertiary center and accepts more patients with a high comorbid status and a higher risk profile. In conclusion, neurological complications are common and can result in high mortality in IE. Typical clinical findings and magnetic resonance imaging are often sufficient for diagnosis.

ID: **22**

Topic: **Cardiovascular Surgery » Risk Management in Cardiovascular Diseases**

Presentation Type: **Oral**

MANAGEMENT OF WARFARIN COMPLICATIONS IN THE EMERGENCY DEPARTMENT

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Background: Bleeding is the risk related to long-term warfarin therapy and rises significantly at INR values above 4.5. The goal of warfarin reversal is to elevate vitamin K-dependent clotting factors. The aim of this study was to evaluate the management of the warfarin related bleeding complications in acute care patients.

Material and Method: A totally of 74 patients with on warfarin treatment, who admitted to our acute care clinic were enrolled to the study. The patients were grouped into three groups based on International normalized ratio (INR) levels. INR levels of the groups were <3.0 for Group-I, 3.0≤INR ≤5.0 for Group-II and INR>5.0 for Group-III. Patients' medical history, medications and warfarin related complications were recorded throughout examination.

Results: In hematological analysis, platelet count and mean platelet volume were similar between groups. Plateletcrit and hemoglobin levels were significantly higher in group-I than group-III (p=0.01). There was no significance difference between groups in blood group analysis. Group-I and group-II were evaluated without medical intervention yet fresh frozen plasma (FFP) and erythrocyte suspension (ES) were given significantly in group-III. Patients in group-I and group-II were discharged usually, and group-III subjects were followed-up in the hospital.

Conclusion: This study demonstrated that warfarin anticoagulation at higher INR levels and without bleeding complication was managed by conservatively. Intravenous vitamin K was administered at minor bleeding complications in patients with warfarin anticoagulation. FFP and vitamin K was administered at the high INR levels with major bleeding complications in patients with warfarin anticoagulation.

ID: **79**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

YOUNG MALE PATIENT WITH SUBAORTIC MEMBRANOUS STENOSIS AND LEFT VENTRICULAR NON-COMPACTION

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A 19-year-old male patient presented to the cardiology outpatient clinic with dyspnea. The patient stated that dyspnea started and increased in the last 1 month. Effort capacity was observed in class 2-3. Physical examination revealed tachycardia and auscultation revealed a third heart sound. Complete left bundle branch block was detected on electrocardiography. As a result of echocardiographic evaluation; The left ventricle showed a non-compact layer, hypertrabeculation and subaortic membranous stenosis (Figures 2a and 2b). Ejection fraction was observed to be 25%. The patient was diagnosed as left ventricular non-compact and subaortic stenosis and was admitted to the cardiology department. Heart failure treatment was started. Shortness of breath regressed. Improvement in exercise capacity (class 1-2) was detected. It was decided to perform cardiac resynchronization therapy as bridging therapy to transplantation.

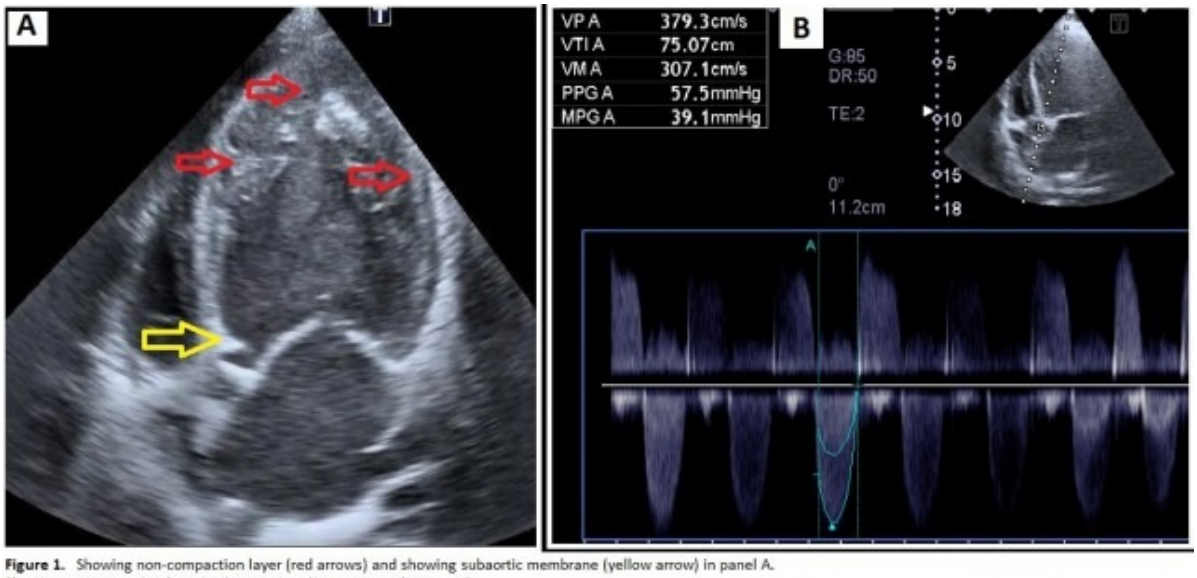

Figure 1. Showing non-compaction layer (red arrows) and showing subaortic membrane (yellow arrow) in panel A. Showing severe aortic stenosis due to subaortic membrane in panel B.

ID: **708**

Topic: **Cardiology » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Oral**

RELATIONSHIP BETWEEN SPONTANEOUS ECHO CONTRAST AND RESTENOSIS AFTER PERCUTANEOUS MITRAL BALLOON VALVULOPLASTY

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Background: Percutaneous balloon mitral valvuloplasty (PBMV) has become the treatment of choice for patients with rheumatic mitral stenosis (MS). One of the major complications following PBMV is symptomatic mitral valve restenosis, which reported to range between 7% and 23%. Major predictive factors for mitral restenosis following PBMV are; older age, higher NYHA class, higher pre-procedural Wilkins score, atrial fibrillation (AF) and post-procedural estimated mitral valve area (MVA). Spontaneous echo contrast (SEC) is an echogenic swirling pattern of blood flow, which arises from increased ultrasonic backscatter as a result of aggregation of the cellular components of blood. This condition is mainly associated with blood stasis or low velocity blood flow. We have undertaken this study to investigate the predictive role of SEC in mitral restenosis following successful PBMV.

Method: We enrolled 341 consecutive patients presenting with symptomatic mitral stenosis with favorable valve morphology who underwent PMBV. Our study patients were assigned to one of the two groups depending on the presence (group 1 – 102 patients) or absence (group 2 - 239 patients) of SEC in the left atrial appendage and left atrial cavity.

Results: According to our data 21 patients (20.6%) in group 1 later developed mitral restenosis. Average time from hospital discharge to mitral restenosis was 48 (24-84) months for group 1. 21 patients (8.8%) in group 2 later developed mitral restenosis. Average time from hospital discharge to mitral restenosis was 36 (36-75) months for group 2. Of the whole cohort, incidence of mitral restenosis was significantly higher in patients with SEC compared to patients without SEC (p=0.004). Furthermore, outcomes of subgroup analyses revealed that incidence of mitral restenosis were significantly higher in patients with grade 3-4 SEC compared to those with grade 1-2 SEC [8 (13.6%) vs. 13 (30.2), p=0.040]

Conclusion: We demonstrated strong association between existence of SEC and mitral restenosis following PBMV. Thus we suggest, in patients who underwent PBMV taking the existence of SEC into account could contribute decrease the incidence of future mitral restenosis.

	SEK – (n=239)	SEK + (n=102)	P value
Follow-up time (months)	39 (24-79)	60 (24-96)	**0.044**
History of mitral valve intervention, n (%)			0.948
PMBV	26 (10.9)	10 (9.8)	
Surgical intervention	13 (5.4)	6 (5.9)	
Restenosis after PMBV	21 (8.8)	21 (20.6)	**0.004**
PMBV to restenosis interval, months	36 (36-72)	48 (24-84)	0.859
Balloon diameter, mm	28 (28-28)	28 (26-28)	0.331
Number of balloon inflation			0.819
1	78 (32.6)	32 (31.4)	
>1	161 (67.4)	70 (68.6)	
2	122 (51.0)	54 (52.9)	
3	37 (15.5)	14 (13.7)	
4	2 (0.8)	2 (2.0)	
Emergent intervention	7 (2.9)	6 (5.9)	0.159
Severe MR after PMBV	2 (0.8)	3 (2.9)	0.160
Tamponade after PMBV	3 (1.3)	3 (2.9)	0.253
Aortic Damage	2 (0.8)	0 (0)	0.491
Emergent surgery after PMBV			
MVR	7 (2.9)	5 (4.9)	0.271
Commissurotomy	0 (0)	1 (1.0)	0.299
Urgent intervention	7 (2.9)	5 (4.9)	0.271
Severe MR during follow up	6 (2.5)	0 (0)	0.116
Success of PMBV	215 (90.0)	85 (84.3)	0.194
Post-operative Stroke	0 (0)	1 (1.0)	0.299

ID: **723**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

DOES INTERVENTION ALWAYS ESSENTIAL FOR AORTO-RIGHT VENTRICULAR OUTFLOW TRACT FISTULA AFTER SURGICAL AORTIC VALVE REPLACEMENT? A CASE REPORT

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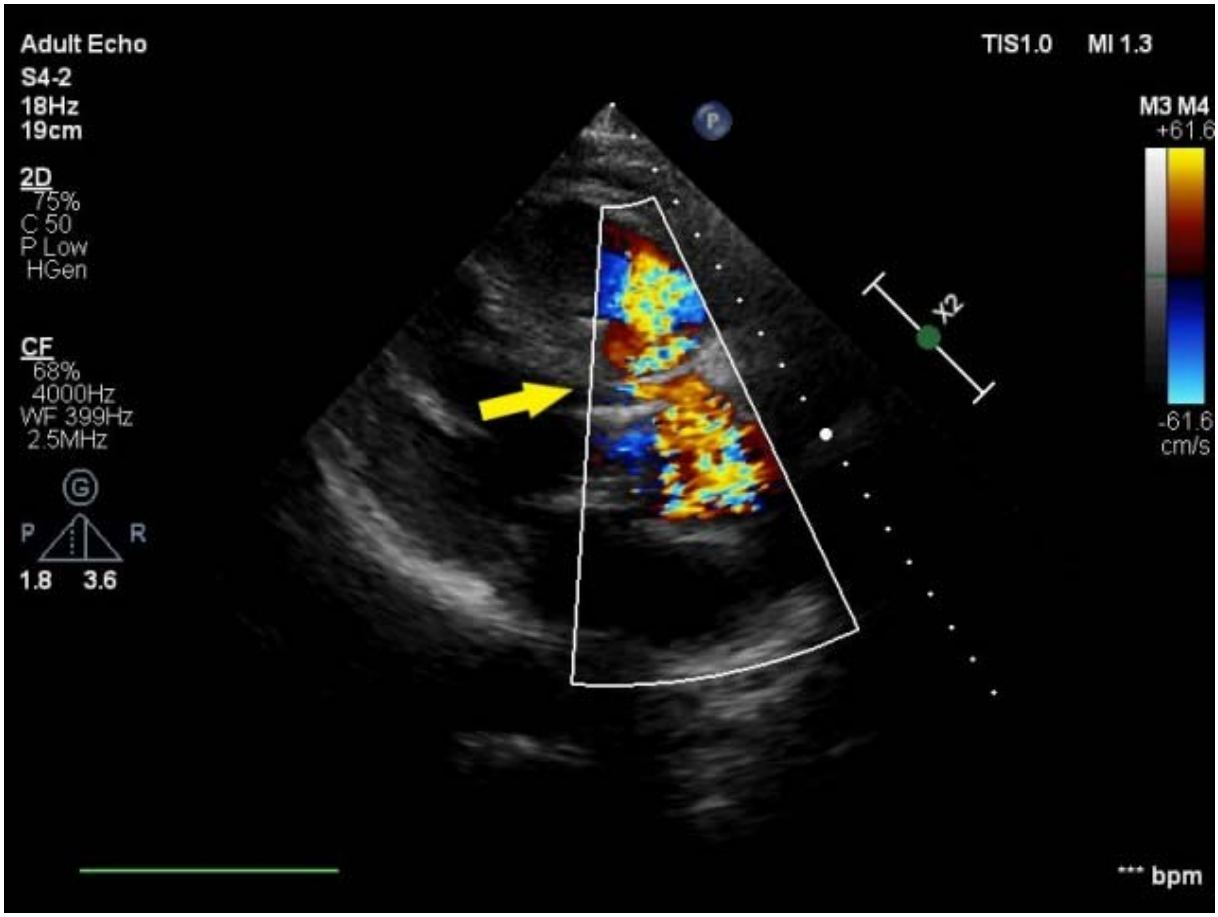
Introduction: Prosthetic valve endocarditis (PVE) is a complication after AVR and accounts for 20 % of infective endocarditis. PVE sometimes complicates with abscess formation, pseudoaneurysm and aorto-cardiac fistula (ACF).

Case: 69-year-old male patient with a history of surgical AVR because of severe AS referred to our clinic suffering from shortness of breath during exertion. AVR was performed 2 months ago. He had a history of hemodialysis because of persistant pulmonary edema attacks and renal disfunction 3 weeks ago. He received intravenous antibiotic treatment for mild respiratory tract infection during that period. On his physical exam, there was a precordial grade 3/6 murmur; prosthetic clicks were heard clearly. Vital signs were; Blood pressure: 110/70 mmHg, Temperature: 37,8 °C, Pulse: 98 bpm, Saturation: 95% on room air. Clinical laboratory test results revealed an increase of inflammation related markers (Sedimentation Rate: 38 mm/hr, C-reactive protein: 68 mg/L, WBC:14.2x109/L). Plasma creatinine level was 2.1 mg/dl and Glomerular filtration rate (GFR) was 34.5. Transthoracic echocardiography (TTE) revealed non dilated chambers with prosthetic aortic valve-in-situ with peak and mean gradient of 25 and 10 mmHg. There was an abnormal communication between aortic root and RVOT starting from aortic annulus level, continuing through aortic wall and draining into the RVOT (Figure 1). The shunt was confirmed from different TTE views with continuous unidirectional color-flow jet. There was minimal paravalvular aortic regurgitation but not significant prosthesis dehiscence. RV size was normal and systolic pulmonary artery pressure (sPAP) was 30 mmHg. Qp/Qs was 1.4/ 1.0. Transesophageal echocardiography (TEE) also confirmed 3x20 mm fistula tract from different views. Patient refused re-operation and was hospitalized for antibiotic treatment for 6 weeks because of infective endocarditis. None of blood culture results were positive. During clinical and echocardiographic follow up under medical theraphy for 8 months, he had no sign of hypervolemia.

Discussion: Aorto-cardiac fistulas (ACF) are rare but more frequently reported and data is limited. The severity of symptoms mostly depends on shunt's size. Although small shunts can be tolerated, majority of cases undergo reoperation. Rarely, symptomatic patients can be treated with percutaneously. For asymptomatic patients who are diagnosed on an imaging study, medical treatment can be an option; but patients being treated without any intervention have significantly higher mortality rates.


Adult Echo
S4-2
18Hz
19cm
2D
75%
C 50
P Low
HGen
CF
68%
4000Hz
WF 399Hz
2.5MHz
P
R
1.8
3.6
TIS1.0
MI 1.3
M3 M4
+61.6
-61.6
cm/s
x2
*** bpm

ID: **300**

Topic: **Cardiology » PI for SHD - Transcatheter aortic valve replacement**

Presentation Type: **Oral**

EFFECT OF TRANSCATHETER AORTIC VALVE IMPLANTATION IN LIVER CIRRHOSIS

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Background and Aim: The treatment of choice for severe Aortic Stenosis (AS) has been surgical aortic valve replacement (SAVR) for most patients with acceptable surgical risks. Transcatheter aortic valve implantation (TAVI) has emerged as an alternative to intermediate or high-risk surgery in patients with comorbid conditions. Liver cirrhosis, which is not included in the traditional risk scoring system, associated with increased perioperative mortality and morbidity in cardiothoracic surgeries. Also, the effect and outcomes of TAVI in patients with hepatic cirrhosis are limited. We report our TAVI experience in patients with cirrhosis and want to point out the feasibility and safety of performing TAVI.

Method: A total of 9 of 480 (5.3%) patients treated at our institution with TAVI had liver cirrhosis. Before TAVI, coronary angiography, multi-slice computed tomography and transthoracic echocardiography (TTE) were performed in all of the patients to determine the operation feasibility and procedural technique. Transesophageal echocardiography (TEE) could not be performed because all patients had esophageal varices. Survival was evaluated for all patients and TAVI was applied to patients with a probability of survival of more than 1 year.

Results: Baseline characteristics and procedural features are shown in table. The mean age of the patients were 64.7±8.8 years. There was 1 woman and 8 men. The mean STS score was 3.9±2.3. Childs–Pugh–Turcotte (CPT) score scores ranged from 5 to 11 with a mean of 6.8±1.8. There were 5 patients who were CTP class A, there were 3 patients who were CTP class B and one patient was CTP class C. All transcatheter balloon expandable aortic valves were successfully implanted. Post procedure echocardiographic evaluation was performed and it revealed that all of the implanted valves had successful results with only mild paravalvular leak in three cases at discharge. There were no life-threatening or major bleeding complications. In one year follow-up, patients have improvement in functional capacity with no regurgitation seen on TTE. No deaths were observed in the hospital and 1 year follow-up.

Conclusion: This study demonstrates that the TAVI with a balloon expandable valves can be performed safely and effectively in liver cirrhosis patients.

Age [years]	62	46	73	66	65	66	69	59	77
Gender	M	M	M	M	F	M	M	M	M
STS score (%)	2.2	2.7	1.7	5.5	8.4	4.2	2.5	4.4	3.2
NYHA	3	3	4	4	3	3	3	3	2
Liver Cirrhosis etiology	Cryptogenic	Hepatit B viruses	Cryptogenic	Cryptogenic	Hepatit C viruses	Hepatit B viruses	Hepatit B viruses	Toxic	Autoimmune

Childs–Pugh–Turcotte score	6	5	8	7	5	6	11	7	6
Childs–Pugh–Turcotte class	A	A	B	B	A	A	C	B	A
LVEF (%)	65	65	65	30	60	48	65	23	60
Aortic mean gr [mm Hg]	53	73	54	42	55	67	73	42	75
AVA [cm²]	0.90	0.40	0.70	0.50	0.59	0.42	0.67	0.80	0.54
Edwards Sapien XT size mm	26	23	26	26	23	26	29	29	26

ID: **829**

Topic: **Cardiology » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Oral**

A NECGLECTING PART OF ROUTINE CARDIOLOGY PRACTICE: INVASIVE ASSESMENT OF A PATIENT WITH AORTIC STENOSIS AND MILDLY DECRESASED EJECTION FRACTION WITH DOBUTAMINECHALLENGE TEST

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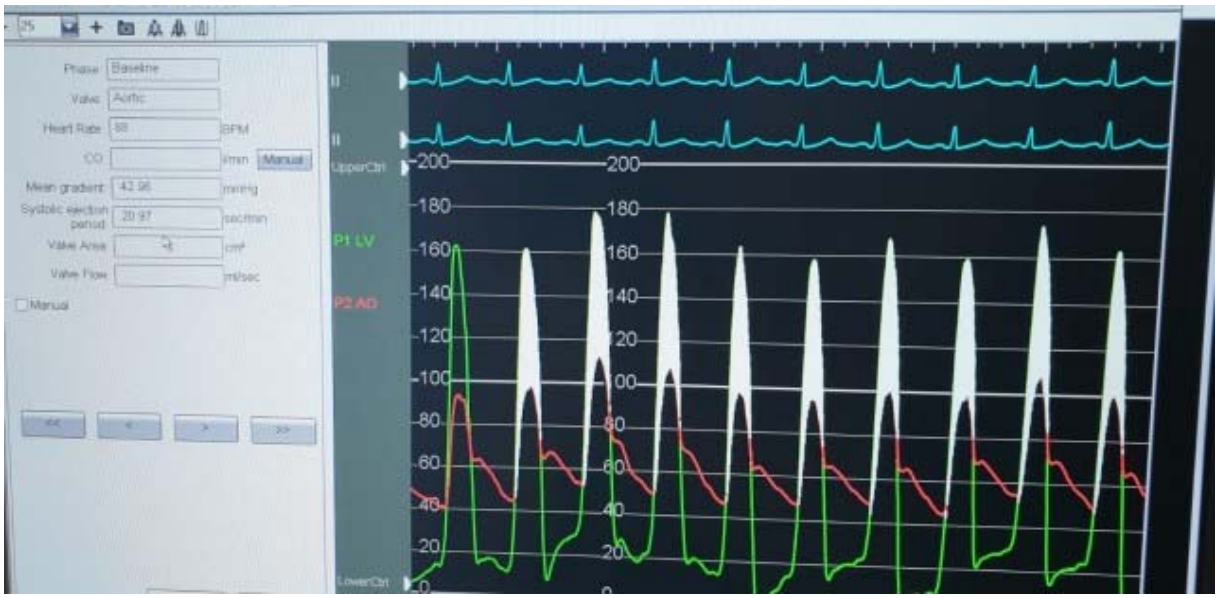
A 71-year-old female patient admitted to our polyclinic with symptoms of fatigue and NYHA III dyspnea. Past history of the patient revealed that she had been evaluated by three different examiners previously. All three examiners had reported that she had aortic stenosis of mild severity. She had been also hospitalized because of heart failure symptoms and accepted as diastolic heart failure in one of these previous visits. Transthoracic echocardiography (TTE) examination in the last visit showed similar aortic gradient measurements with previous ones, with mild decrease in ejection fraction and an increase in the left ventricular diastolic diameters. Poor image quality and difficulties in alignment of doppler cursor with jet flow might have influenced our results so we decided to perform retrograde left ventricle catheterization which also measured nearly the same aortic gradients. Dobutamine challenge during the catheterization revealed true severe aortic stenosis and patient referred to surgery. Complete reliance on TTE measurements for evaluation of aortic stenosis may lead underestimation of disease severity and we think our patient was a good example. Although TTE is the recommended diagnostic modality, estimation of aortic stenosis severity with catheterization is still of use and should be encouraged in selected patients.



ID: **761**

Topic: **Cardiology » Hypertrophic Cardiomyopathy**

Presentation Type: **Oral**

SEPTAL ALCOHOL ABLATION IN HYPERTROPHIC OBSTRUCTIVE CARDIOMYOPATHY: A SINGLE CENTER EXPERIENCE

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INTRODUCTION: Hypertrophic cardiomyopathy (HCM) is the most common inherited heart disease in the general population. While the prevalence rate is 0,2% in developed countries, HCM is the most common cause of sudden cardiac death in people under age 30. Septal alcohol ablation(SAA) is recommended as a treatment option in case of moderate-to-severe symptoms despite maximally tolerated drug therapy(MTDT) in HCM patients with prominent left ventricle outflow tract(LVOT) obstruction. In this case report, two successful septal alcohol ablation cases performed in our center were shared.Case-1: A 66-years-old female patient, who was followed up with the diagnosis of Sjögren's disease and HCM, applied to our outpatient clinic with the complaint of shortness of breath. The symptom level of the patient was determined as NYHA III despite MTDT. One month ago, DR-ICD had been implanted due to the estimated of sudden cardiac risk score was 5%. In the transthoracic echocardiography(TTE), measurements were as: IVS: 17 mm, PW: 12 mm, LVEF 60%, mild-moderate mitral regurgitation.In the LVOT, there was a gradient of 58 mmHg at rest, and 192 mmHg with Valsalva. SAA was planned since the general condition of the patient was not suitable for surgery and due to patient preference.Peak-to-peak pressure gradients between the aorta and LV of the patient undergoing cardiac catheterization before the procedure was 130 mmHg. Following SAA with 2 ml of alcohol performed after determining the appropriate septal perforator by contrast echocardiography, gradient decreased to 50 mmHg. The patient's symptoms regressed to NYHA level I-II in the outpatient follow-up. IVS was measured as 13mm and PW as 12mm in the second-month controlCase-2: A 74-year-old female patient with known hypertension and HCM, applied to our outpatient clinic with complaints of fatigue and shortness of breath. Her symptom level was determined as NYHA III despite MTDT. In the TTE, measurements were as: IVS: 17 mm, PW: 12 mm, EF:60%, with mild mitral regurgitation. In the LVOT, there was a gradient of 75 mmHg at rest, and 130 mmHg with Valsalva. Considering the low compatibility for surgery SAA was planned. Peak-to-peak pressure gradients of the patient undergoing cardiac catheterization before the procedure was 110 mmHg. Following SAA gradient decreased to 30 mmHg. The patient's symptoms regressed to NYHA level I-II in the outpatient follow-up.DISCUSSION: SAA and surgical myectomy are two viable options in patients with symptomatic obstructive HCM despite MTDT. The superiority of a given method is a matter of debate. There are no randomized controlled studies comparing these two methods, however, similar symptomatic relief and procedure-related mortality have been reported in meta-analyses.RESULT: SAA may be considered in elderly patients with comorbidities and high operative risk.


case-1
before
after
case-2
before
after

Oral Presentation Session

Surgery for Cardiac Tumors, Experimental Models and Advanced Surgical Techniques

Date: 01.11.2020 Time: 12:15 - 13:30 Hall: 5

ID: **154**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

SURGERY OF CARDIAC MYXOMA: ABOUT A 104 CASES

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Introduction: The cardiac myxomas remain the most frequent shapes of the primitive tumors of the heart. Their clinical expressions are not-specific and very variable according to the anatomical forms. The objective of this study is to evaluate our immediate results, with means and long terms.

Methods: It is about a retrospective study relating to a series of 104 patients with clear female prevalence of 49 years median age with the extreme ones going from 10 to 78 years operated between January 2000 and December 2019. The base of insertion of the tumor is septal in the majority of the cases. A complete and satisfactory resection of the myxomecarrying its base of establishment is carried out in all the cases. In 54 cases, the tumor is excised with a part of interauricular septum associated with a repair of the interauricular septum.

Results: Operational mortality is worthless. Control was between 1 month and 9 years .The echocardiography showed the tumoral recedive in two cases.

Conclusion: The cardiac myxome is a rareprimitive tumor cardiac generally symptomatic. Its diagnosis rests primarily on theechocardiography. Its treatment always surgical, is burdened with a weak morbimortality. In the long run, the evolution is usually favorable, nevertheless, the repetition remains pos

ID: **14**

Topic: **Cardiovascular Surgery » Risk Management in Cardiovascular Diseases**

Presentation Type: **Oral**

MANAGEMENT OF INTRAABDOMINAL TUMOURS EXTENDING INTO THE HEART

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Introduction: Intracardiac extension of the tumours, especially the renal cell carcinoma and various others is not infrequent. Their surgical management may sometimes require hypothermic total circulatory arrest for a bloodless comfortable field. In this report we present our experiences on resection of intraabdominal originating tumors with the technique that overcomes the need of circulatory arrest.

Patients and Methods: Eleven patients with the diagnosis of renal cell carcinoma, two patients with the diagnosis of Wilm's tumor and one patient with the diagnosis of intraabdominal leiomyomatosis were operated between February 2012 and November 2018. Mean age of the patients was 37.5 ± 11.4 years. There were 2 pediatric cases and they were diagnosed with Wilms tumor. Two of the adult patients were males with the diagnosis of renal tumors and remaining 10 patients were females one of which was diagnosed with leiomyomatosis and remaining 9 had renal cell carcinoma. In all cases the tumors extended into the right heart chambers.

Results: A triple line design, one to be inserted into the superior vena cava, another one to be inserted into the infrarenal inferior vena cava or through the femoral vein and another one connected to a two-stage venous cannula to be inserted through the right atrial auricula after the evacuation of the tumor from the inferior vena cava and the heart were prepared. The line connected to the two-stage cannula was clamped while aortic and bi-caval or superior vena cava and femoral vein (1 patient) cannulations. After median sternotomy, laparotomy and preparations, cardiopulmonary bypass was started and heart was arrested. The hepatoduodenal ligament and tumor free renal vein were clamped. The tumor originating kidney was resected and its vein was left open. Right atriotomy was performed and intracardiac extending tumor through the inferior vena cava was completely excised. The renal vein was primarily sutured and atrium was closed. The two-stage cannula was inserted into the atrium and the venous cannulas were removed. Operations were finished without any complications and patients could be discharged from the hospital in a mean 5.8 ± 2.4 days after 1 day intensive care unit stay. Mean duration of follow up was 38.8±14.2 months. Mortality did not occur in any of the patients without any complications with regards to abdominal or cardiac procedures or cannulations.

Conclusion: Radical complete resection of the tumour together with thrombectomy of the inferior vena cava and its intracardiac extension without any residual mass are the major determinants of mortality in patients with abdominal tumors extending into the heart through inferior vena cava. Our technique of superior vena cava and infarenal inferior vena cava / femoral vein cannulations overcomes the need of hypothermic total circulatory arrest and its consequences in this particular patient population owing removal of whole tumor mass.

ID: **158**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

SURGERY OF CARDIAC TUMORS IN CHILDREN

Redha Lakehal, Bendjaballah Soumaya

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Introduction: The primary cardiac tumours are rare in pediatry, with prevalence from 1/600 to 17/600 in the series of autopsies. The incidence of cardiac metastases coming fromall the malignant types of tumors is approximately 1%. The majority of the primary cardiac tumors of the child are benign; approximately 10% of them being malignant .On the other hand, the majority of the secondary tumors is malignant. The echocardiography, it to scan and the imagery by cardiac magnetic resonance are the principal diagnostic tools. A cardiac catheterization proves seldom necessary. The tumoral biopsy diagnosis with histological analysis remains the key examination for the confirmation of the surgery, chemotherapy , and the radiotherapy can prolong survival .The forecast after surgical resection; in the event of non-myxomateuses symptomatic benign tumors cardiac is favorable .The forecast in the event of malignant primary cardiac tumor is generally very dark.

Methods: From January 2000 to December 2019, 05 child underwent a surgery in open heart for cardiac tumor. They are 03 boys and 02 girl. The median age is 10.6 year with extremes (15 day – 15 year) . Symptomatology is dominated by the cardiac failure. CTI: 0.5-0.55.ECG: RSr. The echocardiography allowed the heart tumors diagnosis in all the cases. The surgical treatment under cardiopulmonary bypass for the 03 children, 01 without cardiopulmonary bypass and one inoperable.

Results: Death of the girl with anatomopathologic study in favor of a rhabdomyosarcoma and simple postoperative course for the two boys with anatomopathologic study in favor of myxoma.

Conclusion: The cardiac tumors of the child are rare. The majority benign and are discovered in children of less than 1 year. The rhabdomyoma is most frequent. The myxoma is rarer in the child. The cardiac tumors are generally asymptomatic and of fortuitous discovery. Echocardiography is the basic examination of the diagnosis but only the examination histopathologic allows a diagnosisof certainty. The new methods of imagery bring additional information. The surgical abstention is usual, except in the event of severe obstacle hemodynamic or of disorder of the rhythm bringing into play the vital prognosis.

Key words: Tumor, biatrial, child, surgery, cardiopulmonary bypass.

ID: **156**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

SURGERY OF CARDIAC HYDATID CYST

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Introduction: Algeria is an endemic area of hydatid cyst. Through new exploration techniques, we face an increasing frequency of the cardiac location. Surgery is the only radical treatment. In this study, we report our experience in the treatment of cardiac hydatic cyst.

Methods: During the period from January 2000 to August 2019, 31 patients were operated (18 women and 13 men). The middle age was 24 years (6 - 66 year). Varied locations of hydatid cyst were noted, with varied symptoms: dyspnea and palpitation. Sinusal rhythm was present in 29/31 cases. In all cases, diagnosis was confirmed by echocardiography, the CT scan in 14 cases and Magnetic resonance imaging in 1 case. Hydatid serology was positive in 25/31 cases.

Results: Urgent surgical indications were present in 3 cases. Operative procedure consisted of flattening, aspiration, removal of the membrane and sterilization –in padding of the residual cavity. Average duration of the cardiopulmonary bypass was 31.76 minutes. Duration of ventilation varied from 4 hours to 22 days. Stay in intensive care unit: 1 -22 days. Throughout our study, 24 cases were operated with cardiopulmonary bypass and aortic cross clamping, 6 patients without aortic cross clamping.We deplored only one death.

Conclusion: Cardiac location of hydatid cyst is still primitive. Evolution is marked by the onset of dreadful complications. Diagnosis is carried out thanks to the contribution of the echocardiography and CT scan. We insist on preventive measures of the cyst.

ID: **160**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

SYRGERY OF MALIGNANT HEART TUMOR

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Introduction: Approximately a quarter of all the cardiac tumors show histological characteristics maligneset have an invasive and metastatic behavior. Almost all (95%) are sarcomas, which places these tumours at the second rank after the myxomas as regards the total frequency. However, the cardiac sarcomas primaries remain exceptionally rare. it can occur has any old. The sarcomas result from the mesenchyma and thus present a large variety of the morphological types, including angiosarcoma (37%), rhabdomyosarcoma (10%), osteosarcoma (3% - 9%) and the undifferentiated class (24%).

Methods: From January 2000 to December 2019 or among the 140 patients having undergone a surgery in open heart for cardiac tumor 08 have were operated for malignant cardiac tumor. They are 02 men and 06 women. The median age is 44 year with extremely (5 – 77 year). Symptomatology is dominated by dyspnea, sometimes the symptom of call was palpitations, syncope, sometimes by embolic complications. The echocardiography allowed the diagnosis of mass will intra cardiac in all the cases. The surgical treatment under cardiopulmonary bypass.

Results: The histopathologic study showed that it was about one 01 polymorphic little differentiated sarcoma; 03 fibrosarcoma; 01embryonic rhabdomyosarcoma of girl of 05 year, 01 angiosarcoma of the right ventricul, 02 malignants lymphoma not hodgkinin. Operational mortality was in a one case. 02 cases of recidives were found;1 for a fibrosarcoma and a sarcoma of the left atrium which has was taken again.

Conclusion: The sarcomas account for 90% of the malignant tumors, but they are associated with an extremely poor forecast in spite of their complete resection, chemotherapy as well as the autotransplantation . New therapies are thus necessary to improve the survival of the patients at which one diagnosed this aggressive tumor.

Keywords: Malignant, tumor, heart, surgery, cardiopulmonary bypass.

ID: **74**

Topic: **Cardiovascular Surgery » Hybrid Cardiovascular Surgery**

Presentation Type: **Oral**

CARDIOPULMONARY BYPASS FOR RESECTION OF RENAL AND INFERIOR VENA CAVA TUMOURS: EXPERIENCES FROM OUR SERIES

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Background:
Renal tumours often grow into the inferior vena cava (IVC) through the renal vein in about 5-10% of all cases necessitating extensive tumour thrombus removal and IVC reconstruction. We are presenting our experiences with 13 cases necessitating cardiopulmonary bypass (CPB) with and without circulatory arrest.

Aims/Objectives:
To evaluate the technical issues of cardiopulmonary bypass for management of tumour thrombus in the IVC
To evaluate the safety of circulatory arrest in the management of IVC tumour thrombus and subsequent reconstruction of the IVC

Methods:
All patients were evaluated at a multi-disciplinary meeting involving cardiothoracic, urological and general surgeons in addition to oncologists, pathologists, radiologists and perfusionists. 13 patients were selected for management of tumour thrombus in the IVC with cardiopulmonary bypass support.
A midline laparotomy was the initial incision for all patients. All patients had central bypass via a median sternotomy
Cooling to various temperatures were carried out depending on the extent of the tumour thrombus and the complexity of the reconstruction.
Separation from CPB was done after active warming to 37 degrees C.

Results:
The mean CPB times was 102.62±41.26 minutes and mean circulatory arrest times (when used) was 23.92±12.04 minutes. In the immediate post-operative period, all patients required noradrenaline (100%), 3 patients (23%) required adrenaline and 4 patients (29%) required dobutamine for haemodynamic support. All patients (n=13; 100%) survived 30 days post operatively and were discharged home. The average hospital stay was 16.85±13.78 days. The all cause mortality within the first 5 years was 38% (n=5).

Conclusion:
Central cardiopulmonary bypass with or without hypothermic arrest is a safe and reliable tool in the armamentarium of the surgeon operating on an IVC tumour thrombus.
The morbidity and mortality associated with this rather extensive procedure is acceptable with a 5 year survival rate over 62%.
A team approach is imperative in the management of an IVC tumour thrombus and is directly related to better patient outcomes.

ID: **305**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

DIFFERENT MANAGEMENT OPTIONS IN TREATMENT OF PERIORBITAL PEDIATRIC HAEMANGIOMA

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Background: Although infantile hemangioma is a common benign childhood tumor, it is still one of the challenging problems. The current prospective study aimed to evaluate the effect of local propranolol gel in the treatment of infantile periorbital hemangioma.

Methods: A prospective study in the period of 4 years from January 2012 to December 2016 was carried out on infants with periorbital hemangioma with a follow-up period of a minimum of 1 year. All infants underwent a fine-needle histopathological sample. All patients who proved to be capillary hemangioma were divided into two groups. Group I included those patients who were treated with topical timolol maleate gel from 4 to 30 weeks. On the other hand, group II included those patients who underwent a local corticosteroid therapy in the form of clobetasol 0.05% gel for a similar period. Posttherapy clinical and histopathological assessment took place in both groups. The obtained data were statistically analyzed.

Results: Twenty-eight patients were enrolled in the study. They were 18 women and 10 men with the ratio of women to men being about 2: 1. In 21 infants, the tumor shrank in a period of 4–10 weeks after topical timolol administration. On the other hand, those who underwent local corticosteroid therapy showed a longer period for the shrinkage of the tumor; the P value is less than 0.003.

Conclusion: Local timolol gel therapy is superior to topical corticosteroid therapy with a wide range of safety and less side effects. Moreover, its cost-effectiveness is acceptable compared with other modalities such as laser therapy. The number of the study materials are limited; yet, it may be an indicator for a road map of managing infantile periorbital hemangiomas. Further studies with a larger population may be needed, as the problem deserves a full citizenship in the world of pediatric research.

ID: **70**

Topic: **Cardiovascular Surgery » Risk Management in Cardiovascular Diseases**

Presentation Type: **Oral**

THE HIDDEN DANGER IN THE HEART IS CARDIAC MYXOMAS: 12 YEARS SINGLE CENTER EXPERIENCE

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Objective: Myxomas constitute approximately 30% of benign cardiac tumors and are the most common primary tumors of the heart. Although histologically benign, they can be dangerous and mortal due to thromboembolic complications. When tumors are diagnosed in a timely manner and complete resection is achieved, patients will be treated fully except cases of recurrence. The aim of this study was to present the 12-year results of patients operated and followed up for cardiac myxoma in our clinic.

Methods: Between January 2008 and August 2019, 48 patients (26 females, 22 males, mean age 50.91 ± 12.89 years, range 28 to 74 years) were operated with the diagnosis of left atrial myxoma. Resection surgery was performed in 48 - 72 hours after diagnosis. The patients were followed up with Echocardiography once a year and the mean follow-up period was 34.04 ± 23.86 (range 9 to 100 months).

Results: The mean diameter of the removed myxomas was 5.71 ± 0.96 (range 3.80 to 7.60 cm). 45 patients had left atrial myxomas, 2 patients had right atrial myxomas, and 1 patient had a biatrial myxoma. C-reactive protein (CRP) and high sedimentation rate were observed in almost all patients. The patients were followed-up regularly with yearly ecocardiographi.

Conclusions: As a result, myxomas are benign and rarely detected cardiac tumors that can cause symptoms ranging from being asymptomatic to mortality. After myxoma resection following diagnosis, good results are obtained in the long term, and the recurrence rate is negligible in patients without a family history. Sinus rhythm and young age dyspnea, fatigue symptoms of the patient myxoma should be suspected and echocardiographic examination should be done.

ID: **596**

Topic: **Cardiovascular Surgery » Medical and Surgical Treatment of Heart Failure**

Presentation Type: **Oral**

PRIMARY ANGIOSARCOMA OF PERICARDIUM WITH CONSTRICTIVE PERICARDITIS: A CASE REPORT

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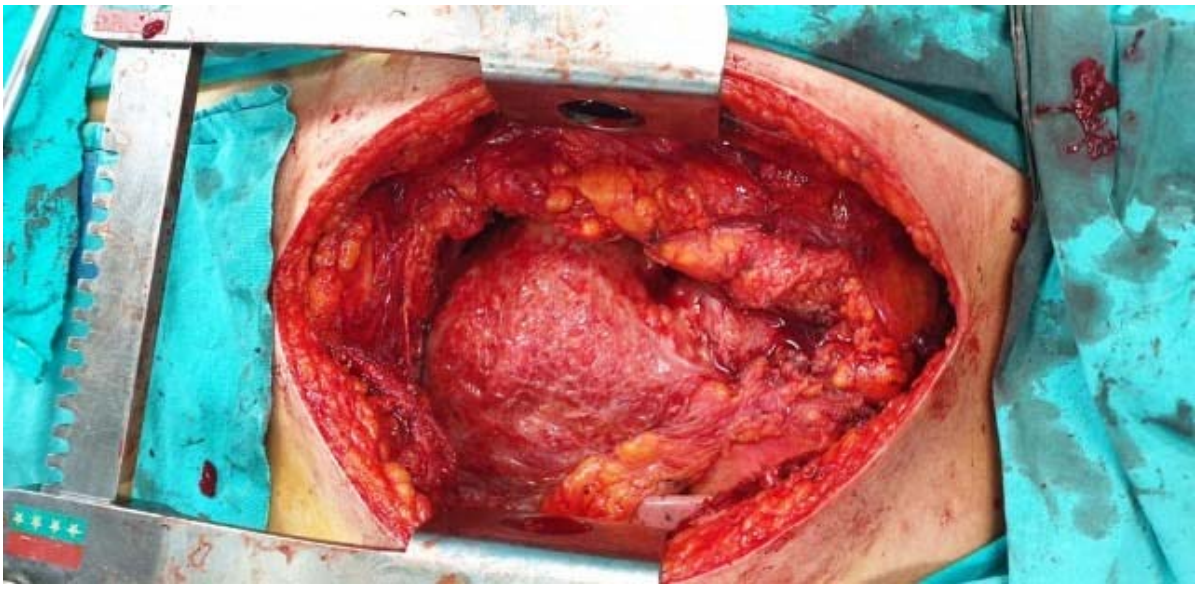
Background: Primary malignant tumors of the heart are seen rarely. Angiosarcoma is the most frequent primary malignant tumor of the cardiac chamber and usually involves the right atrium. Primary angiosarcoma of the pericardium which is extremely rare presents various clinical signs and has an aggressive metastasis potential.

Case presentation: In the current study, we present a 52-year-old man who complained of weakness and dyspnea for 2 months. Echocardiography revealed pericardial effusion. The patient was treated with anti-inflammatory and antibiotic drugs. Despite the treatment, consecutive echocardiography demonstrated an increase of pericardial fluid and thickness. Although 700cc pericardial fluid was drained with pericardiocentesis, it reproduced and became fibrillary form. The pathologic evaluation of pericardial fluid did not indicate a malignant pattern. Computed tomography determined multiple lung lesions that were appropriate with metastasis. 18 FDG PET-CT indicated prevascular, paraaortic, pericardial, supraclavicular lymph node uptake. Due to augmentation of dyspnea, septal bounce and other constrictive pericarditis signs of ECO, total pericardiectomy was performed. The pathological assessment of pericardiectomy material and wedge resected lung tissue with the tumor revealed the diagnosis was angiosarcoma of the pericardium.

Conclusion: This highly metastatic and malignant tumor takes part in the etiology of pericardial effusion and constrictive pericarditis. Primary pericardial angiosarcoma is difficult to diagnose thus it requires the collocation of multiple diagnostic tools.



ID: **54**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

IATROGENIC LEFT VENTRICULAR PSEUDOANEURYSM DEVELOPED FOLLOWING PERICARDIOCENTHESIS

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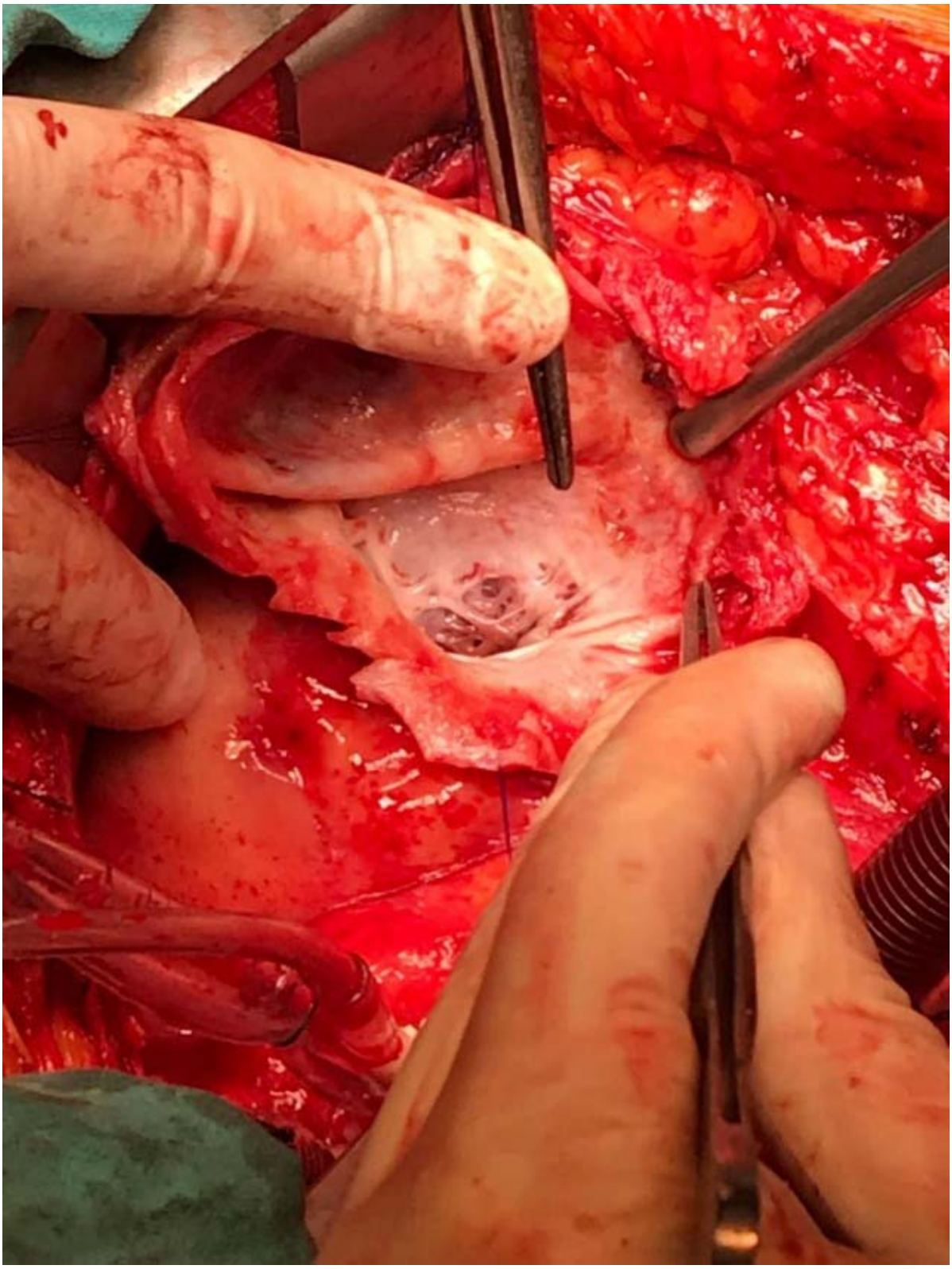
Objective: To present a case of Left Ventricle (LV) iatrogenic pseudoaneurysm following pericardiocentesis and its clinical evaluation with successful surgical management.

Material and Methods: This case report includes a 60-years old female diagnosed with minimal pericardial effusion, then developed to a major pericardial effusion with a need of pericardiocentesis. Patient also has a history of Rheumatoid arthritis (RA), diagnosed 6 months ago and under corticosteroid medication. Myocardial perfusion scintigraphy (MPS) and Transthoracic Echocardiography (TTE), applied before the pericardiocentesis, revealed ischemia in lateral wall of LV with a perfusion defect in apex and inferior wall of LV. After pericardiocentesis to developed pericardial effusion made by Cardiology Department, diagnose of a 60mm pseudoaneurysm from LV's apex to inferior wall was made with TTE and Thorax CT during routine follow up.

Results: Patient transferred to Department of Cardiovascular Surgery for resection and repair of pseudoaneurysm. A 60 mm of aneurysmatic segment was arising from apical section. After longitudinal incision was made, entry of the needle from pericardiocentesis and minimal thrombus was observed. Ventriculoplasty was made by using Cooley's technique. Patient had an uncomplicated post-operative course and discharged on post-operative 7th day.

Conclusion: LV pseudoaneurysms are mostly a complication of myocardial infarction, infection or surgery. However, in some rare cases may occur as a result of iatrogenic etiology such as pericardiocentesis.
In our case, myocardial fragility related to prolonged usage of corticosteroids may have a preliminary role. Lack of motion and perfusion defect in apex evaluated in MPS also shows patient has a fragile LV structure and pre-existing coronary artery disease confirmed with CAG. Both these factors may have played a preliminary role in pseudoaneurysm formation after accidental penetration.
Some aspects in our study are unique. First, pseudoaneurysm diagnosed asymptomatically during routine control without tamponade or rupture. Second patient has a prolonged usage of corticosteroids and akinetic myocardial segment with perfusion deficiency making ventricle wall more vulnerable to traumas. Third during operation penetrance point of needle from pericardiocentesis and minimal thrombogenic material was visible with a narrow neck (Image 1). Aneurysmatic segment was also localized and didn't involve myocardial component. Therefore, it has a little impact on LV function and structural geometry.
In conclusion to avoid these complications, decision to perform pericardiocentesis must be cautiously made by developed scoring methods. High risk patients must be identified, and a stricter post-operative follow-up must be planned.



ID: **348**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

KRILL OIL PREVENTS ATHEROSCLEROSIS IN AN EXPERIMENTAL MODEL

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Background: Modalities to reduce the formation and progression of atherosclerotic plaque are the major targets of coronary artery disease management. Omega-3 fatty acid supplementation that is obtained from fish has been shown to reduce cardiovascular events. Krill (Euphasia superba) are small, crustaceans that live in cold seas like Antarctic Ocean and recently, due to its high content and form of the eicosapentaenoic acid (EPA) and decosahexaenoic acid (DHA), krill oil became popular in researches dealed with prevention of cardiac disorders and cancer. The aim of the present study is to analyse the effect of krill oil supplement on atherosclerosis in rats treated with high-fat diet and streptozotocin induced diabetes mellitus.

Materials and Method: Sixteen Spraque-Dawley male rats were divided into 2 groups as control and krill oil. Each group was fed with high-fat diet and injected streptozotocin subcutaneously to obtain an experimental model of atherosclerosis. Krill oil group rats received 50mg of krill oil supplement orally. Rats were sacrificed after six months for biochemical and histopathological examinations of aorta and coronary arteries for foam cell detection using hematoxylin and eosin staining.

Results: Induction of atherosclerosis and diabetes in rats after high fat diet and streptozotocin injection was confirmed by elevated levels of total cholesterol and LDL and increased fasting glucose and insulin levels and also significant increase in he number of foam cells in aorta and coronary arteries in the control group. Krill oil group showed a decreased number of foam cells and also reduced levels of total cholesterol and LDL after 6 months of treatment.

Conclusions: The present study indicates that krill oil supplementation attenuates the number of foam cells in aorta and coronary arteries meaning a preventive effect of atherosclerosis.

ID: **736**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

SURGICAL REMOVAL OF ATRIAL SEPTAL DEFECT CLOSURE DEVICE EMBOLIZED TO THORACIC AORTA

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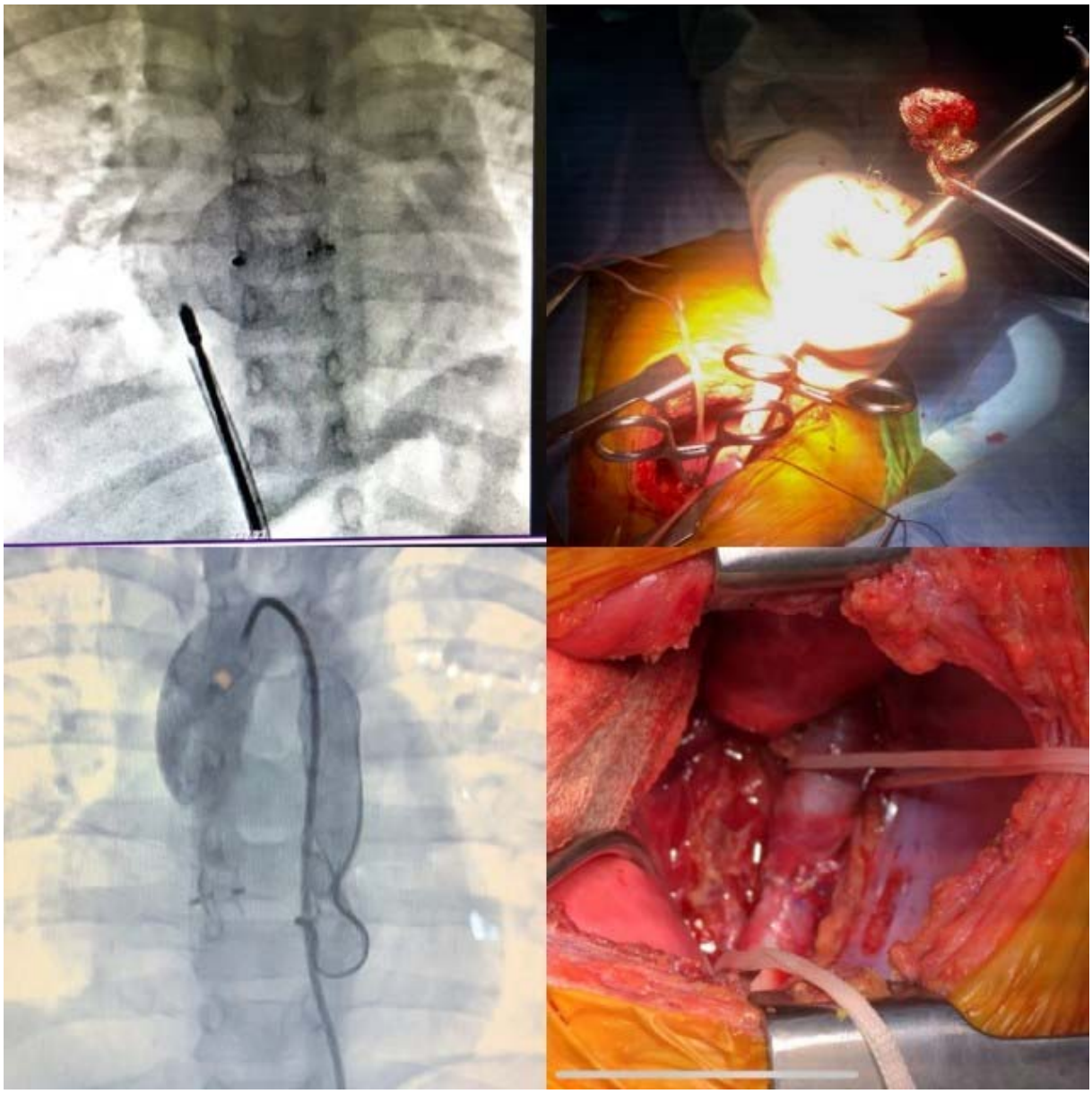
Summary: Atrial Septal Defect is the second most common congenital heart anomaly in children, and Ventricular Septal Defect is one of the less common congenital heart anomalies. The gold standard treatment method applied for a long time is surgery. During the removal of the device with percutaneous interventional methods, the direction changes and carries a risk of distal embolization, and the closure of Atrial Septal Defect and Ventricular septal defects by percutaneous intervention using the device has emerged as an alternative treatment to surgery. Parts of percutaneous devices or the entire device can be embolized and this situation may require emergency surgical intervention. In this case report, a case of surgical removal of the device from the descending aorta after the use of Atrial septal defect and ventricular septal defect closure device in the early period.

Discussion: Embolized devices can be removed surgically or percutaneously. However, we believe that it would be more appropriate to transfer the patient to the surgical department due to the possibility of the device going further without too much effort after a few percutaneous attempts. It's shown that this rare but potentially fatal complication has mostly been surgically treated in previous studies.

Conclusion: In conclusion, although percutaneous closure is a safe and effective method in small and medium ASDs, it can cause complications requiring emergency surgery, as shown in our case. Early and appropriate surgical intervention during and after percutaneous intervention can save the patient's life.



ID: **734**

Topic: **Cardiovascular Surgery » Minimally Invasive and Robotic Cardiac Surgery**

Presentation Type: **Oral**

USE OF SINGLE-LUMEN INTUBATION IN VIDEO-THORACOSCOPIC PERICARDIAL FENESTRATION: IS IT FEASIBLE?

Murat Akkus, Yunus Seyrek

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Objective: In our study, we aimed to demonstrate that single lumen intubation is feasible in video-thoracoscopic pericardial fenestration, thus double- lumen intubation is not strictly necessary.

Methods: Between January 2011 and December 2018, the medical records of 161 patients who underwent video-thoracoscopic pericardial fenestration in our thoracic surgery clinic, were reviewed retrospectively. Patients were analyzed in two groups: patients who had single lumen intubation and double-lumen intubation. Surgical procedure was performed via total of 3 thoracic ports: 1 thoracic incision for 5-mm trocar at the level of fourth anterior intercostal space and 1 thoracic incision for 12-mm trocar at the level of the level of mid-axillary fifth intercostal space (camera port) and 1 thoracic incision for 10-mm trocar of the sixth anterior intercostal space were opened. Lung deflation cannot be performed in patients with single- lumen intubation. Warm CO2 insufflation allowed sufficient workspace for video-thoracoscopic pericardial fenestrations of patients with single lumen intubation. The operation time for each patient was recorded from the start of anesthesia induction to the end of surgical the procedure. American society of Anesthesiologists (ASA) score was defined for each patient. The chi-square tests were used to compare qualitative data. IBM SPSS Statistics for Windows, version 22.0, was used for statistical analyses.

Results: The cohort's mean age was 56±11.8 years (range, 42–84) consisting of 93 male (57.7%) and 68 female (42.3%) patients. Etiological pathologies for pericardial fluid were; tuberculosis (n=23, 14.3%), malignancy (n=39, 24.2%), nonspecific pericarditis (n=99, 61.5%). Of these patients 54 cases presented with cardiac tamponade and 124 cases (77%) presented with ASA3 or higher scores. Operation time was significantly lower in single lumen intubation group (35.3±4.5 minutes vs 57.6±11.2 minutes, p=0.001). There was no statistical difference between the groups in terms of age, gender, complication, mortality, body mass index, hospital duration, chest tube duration and ASA scores.

Conclusions: Double-lumen intubation is essential for lung deflation during thoracoscopic surgery; nonetheless it may not be suitable for every patient and generally takes longer time than single-lumen intubation. We speculate that single-lumen intubation is feasible in patients who will undergo video thoracoscopic pericardial fenestration by the assist of warm carbon dioxide insufflation.

Key words: video-thoracoscopic pericardial fenestration, single-lumen intubation, warm carbon dioxide insufflation

Oral Presentation Session

New Perspectives in Acute Coronary Pulmonary Embolism

Date: 01.11.2020 Time: 13:30 – 14:30 Hall: 4

ID: **73**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

A NOVEL PROGNOSTIC MARKER IN ACUTE PULMONARY EMBOLISM: SYSTOLIC AORTIC REGURGITATION

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Background: Aortic regurgitation usually occurs in diastole but systolic aortic regurgitation (SAR) is caused by the inability of ventricular contraction to overcome the aortic pressure in systole. The present study aimed to investigate the prevalence and SAR in acute pulmonary embolism.

Methods: We enrolled 208 consecutive patients (mean age of 71.3±9.5 years, 50% women) with acute pulmonary embolism and prospectively followed up for 1 year. Demographic, clinical, echocardiographic, and laboratory data were obtained at study entry. The primary endpoint of the study was cardiovascular mortality at one year.

Results: SAR was noted in 12 (5.8%) of the patients, and 20 patients (9.6%) died due to cardiovascular reasons at the end of the first year. The 1-year mortality rate was higher for patients with SAR (58.3 %) compared to those without SAR (6.6 %, p<0.001). After adjusting for important covariates, SAR remained independently associated with mortality (OR 3.657; 95 % CI 1.674–8.567; p < 0.001).

Conclusions: This is the first study to demonstrate that the presence of SAR is associated with adverse events in acute pulmonary embolism.

ID: **139**

Topic: **Cardiology » Electrocardiography and Non invasive electrocardiology**

Presentation Type: **Oral**

APPLYING A NEW DIAGNOSTIC MARKER IN PATIENTS WITH PULMONARY EMBOLISM: R PEAK TIME

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Objective: Pulmonary embolism (PE) accounts for considerable number of morbidity and mortality events. Most of patients die due to the diagnostic failure not for the insufficient treatment. We aimed to evaluate diagnostic value of R-peak time (ventricular activation time) in patients with acute pulmonary embolism.

Methods: A total of 123 PE patients (a median of 39 (29 to49) years), and 145 healthy controls (a median of 35 (25 to 51) years), were selected in this study. R-peak time was measured in all derivations from the12-lead electrocardiogram.

Results: Among the ECG parameters, R-peak time (β-coefficient, SE=0.473, CI 3.55-23.41; $p < 0.001$) and T-wave inversion in all leads V1-V3, (SE=0.421, CI 1.10-5.49; $p < 0.001$) were the independent predictor of PE. The ROC curve analyses showed that the cut-off value of mean R-peak time in acute PE was 29.3±3.1 ms with a sensitivity of 87.1% and a specificity of 79.8 % (AUC: 0.881, 95%CI: 0.765–0.993; $p < 0.001$). In the correlation analyses; the R-peak time was correlated with RV end-diastolic diameter ($r = 0.446$; $p < 0.001$), RV/left ventricle (LV) ratio ($r = 0.556$; $p < 0.001$), systolic pulmonary artery pressure (SPAP) ($r = 0.538$; $p < 0.001$), and negatively correlated with TAPSE ($r = -0.523$; $p < 0.001$).

Conclusions: This study revealed that R-peak time was prolonged and correlated to the severity of the disease in patients with acute pulmonary embolism. Therefore, prolonged R-peak time may be measured for diagnosing acute PE and used as a predictor for future events.

Key words: Electrocardiography; Pulmonary Embolism; R-peak time

ID: **356**

Topic: **Cardiology » Diagnosis and treatment of Pulmonary Hypertension**

Presentation Type: **Oral**

AHO INDEX: A NEW PARAMETER FOR THE DETERMINATION OF NORMAL RIGHT VENTRICULAR FUNCTION IN PATIENTS WITH ACUTE PULMONARY EMBOLISM

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Objective: In this study, we sought to bring out which parameters were helpful in predicting a normal right ventricular (RV) function in patients with acute pulmonary embolism (PE).

Methods: Consecutive 100 acute PE patients, who were hospitalized and confirmed by CT angiography, were enrolled for the study. All patients' demographics, symptoms on admission, risk factors, electrocardiography and laboratory findings, and hemodynamic parameters were assessed. Echocardiography was done in first 24 hours. Baseline characteristics of patients classified into two categories according to their right RV functions

Results: Mean age of patients was 63±16 years and 48 (48%) of them were male. Twenty three patients (%23) had normal RV functions. Multiple logistic regression analysis showed that age (p: 0,041, OR: 1,174, 95% CI: 1,007 to 1,368), oxygen saturation (p: 0,026, OR: 1,372, 95% CI: 1,039 to 1,812) and heart rate (p: 0,049, OR: 1,160, 95% CI: 1,001 to 1,346) were independent predictors of normal RV function. ROC analysis brought out cut off values of these parameters for normal RV function: for age it was ≤ 53 (sensitivity 65,2%, specifity 88,3%), for saturation it was > 90% (sensitivity 60%, specifity 86,2%) and for heart rate it was ≤ 118 bpm (sensitivity 100%, specifity 51,6%). The setting in which all three parameters were positive was named as AHO index=1, positive predictive value for normal RV function was 100% and sensitivity was 44%, negative predictive value was 85,6% and specifity was 100% (AUC: 0,717, 95% CI: 0,619 to 0,803).

Conclusion: In acute PE patients who were younger than 53 years and had heart rate ≤ 118 bpm and oxygen saturation > 90% (AHO index=1), RV functions were found to be normal. Accordingly, without the need of CT angiography or echocardiography, clinican may predict normal RV function with available demographic and noninvasive hemodynamic parameters.

Keywords: Acute pulmonary embolism; right ventricular function; AHO index; age; heart rate; oxygen saturation

ID: **24**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Oral**

ACUTE INFERIOR MYOCARDIAL INFARCTION ASSOCIATED WITH SILDENAFIL IN AN ASYMPTOMATIC PATIENT WITHOUT CORONARY ARTERY DISEASE

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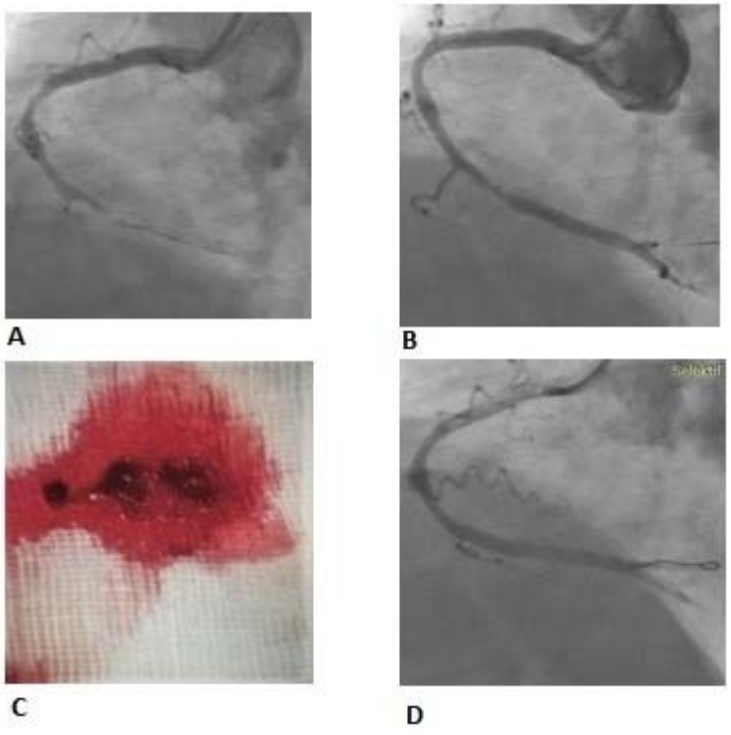
In this case report, the relation was investigated between sildenafil and MI in a nitrate-free patient who developed acute myocardial infarction (MI) after taking sildenafil and without any history of coronary artery disease (CAD). A 59-year-old patient that presented with chest pain that appeared 2 hours after taking 100 mg oral sildenafil without attempting any sexual intercourse, and was hospitalized with the diagnosis of acute inferior MI.
The coronary angiography revealed total occlusion of in the mid-region of the right coronary artery (RCA). The total stenosis was treated firstly with thrombus aspiration and then with stent implantation (Figure 1 A, B, C, D). Sildenafil-related MI is seen very rarely in without any history of CAD; therefore, we believe that it might be important to discuss our case in this respect.

Figure 1 A: Intense thrombosed total occlusion of right coronary artery from the mid region, B: Residual stenosis after thrombus aspiration, C: Thrombosed aspiration material, D: Right coronary artery after successful stenting.



Oral Presentation Session

Cardiovascular Surgical Aid in Trauma Patients

Date: 01.11.2020 Time: 13:45 - 14:45 Hall: 5

ID: **299**

Topic: **Cardiology » Peripheral arterial diseases**

Presentation Type: **Oral**

DAMAGE CONTROL VASCULAR SURGERY: A THIRD WORLD EXPERIENCE

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Background: Vascular injuries pose a major challenge for all surgeons even those who are experienced, especially in low/limited resources austere environments. To evaluate the 10 years' experience with damage control vascular surgery (DCVS) in managing vascular injuries in different rural emergency centers, with special emphasizes on the rule of surgical residence.

Methods: A 3-years retrospective study from December 2016 to January 2019, to report all cases of isolated vascular trauma that were referred to our center with an emergency vascular trauma from different rural emergency centers. Patients' files were thoroughly reviewed to report the type of vascular injury, the initial DCVS, and the rank of the surgeon who performed the initial management before referral.

Results: Two-hundred and 40 (240) patients were reported. They were 160 males and 80 females with the male to female ratio of 3:1. Their age ranged from 15-67 years with the median age 38.5±1.5 years. In 195 patients, the cause of vascular injury was road traffic accident in whom 71 suffered from major trauma to the femoral artery, while the remaining 24 patients experienced trauma to the femoral vein. The remaining 175 patients were victims of assaults by gunshot in 45 patients, or direct penetrating stab or contused wound in 130 patients. The mean time between the initial injury and the primary DCVS that was done at the original center ranged from 7 to 20 hours, with the mean of 12.5 ± 2.6. Limb salvage was successful in 112 patients. Out of them 107 initially underwent the DCVS by experienced surgeons, while the remaining 5 patients were treated by residents with different scopes of experience. Limbs were sacrificed in 128 patients because of failure of the DCVS. In those patients amputation was performed as a life-saving procedure.

Conclusions: Damage control vascular surgery is an effective tool in limb salvage in trauma patient. It should be a major part of Junior and senior residents in the developing countries to save the hospital resources and to decrease the cost-effectiveness of health care.

ID: **487**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Oral**

THE EFFICACY OF ILOPROST TREATMENT ON EXTREMITY AMPUTATION OF 98 PATIENTS WITH VASCULAR INJURY IN 998 BURN PATIENTS

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OBJECTIVE: Burn trauma is one of the health problems that may have serious physical effects on patients and affect many systems. As a result of vascular injury in burn patients, extremity amputations are likely to occur in these patients. In this study, we aimed to evaluate burn patients in terms of circulatory system and to present the effect of iloprost treatment on extremity amputation.

MATERIALS AND METHODS: Demographic characteristics, burn causes, burn surface areas, number of days of hospitalization, circulatory examinations, extremity amputations of the patients affected by burn trauma were retrospectively analyzed.

RESULTS: The study included a total of 998 patients, 568 males and 430 females, who were evaluated for burn. The mean age of the patients was 16.82 ±19.08 years. Vascular pathology was detected in 98 (9.8%) of the patients. Of the patients with vascular pathology, 30 (30.6%) were children and 68 (69.3%) were adults. Of these, 66 (67.3%) were male and 32 (32.7%) were female. The mean number of days of hospitalization of the patients with vascular pathology was 33.79±29.76 days. The most common cause of burn in the burn patients was scald burn (715 cases, 71.64%). The most common cause of burn in the patients with vascular pathology was flame burn, which was seen in 25 (25.5%) of the patients. The majority of the 1583 extremity burns (901 extremities, 56.91%) detected due to burn consisted of lower extremity burns. The mean burn surface area of the patients with vascular pathology was 15.24± 18.86%. Low molecular weight heparin (LMWH) along with iloprost treatment were administered to 23 patients (23.4%) who were found to have pathology on vascular examination, while only LMWH was administered to 75 (76.6%) patients. Of the patients, 24 underwent extremity amputation. The patients who were given iloprost and low molecular weight heparin treatment underwent two amputations, while other amputations were performed on the patients who were not given iloprost treatment. During hospitalization, 1 patient died due to septic shock, 1 patient died due to cardiac arrhythmia, and 3 patients died due to multiple concomitant injuries.

CONCLUSION: Extremity amputations in burn patients cause serious problems both individually and socially. We are of the opinon that the use of iloprost treatment to prevent amputation in burn patients with circulatory problems will reduce amputation rates.

ID: **320**

Topic: **Cardiovascular Surgery » Peripheral Arterial Disease**

Presentation Type: **Oral**

PATENCY RATIO IN PERIPHERAL VASCULAR INJURY DUE TO PENETRATING CUTTER INJURIES

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Background and Aim: Peripheral vascular injuries are common and require urgent surgical intervention. Early diagnosis and early surgical intervention in penetrating cutter injuries reduce mortality and morbidity. In this report, we aimed to share our experience in peripheral vascular injury due to penetrating cutter injuries retrospectively.

Methods: A total of 112 patients who underwent surgery for penetrating cutter injury between January 2017 and June 2019 were retrospectively reviewed. We aimed to follow up the patency rates by following 6 months postoperatively.

Results: 86 (76.78%) of the cases were male and 23 (23.21%) were female. The mean age was 28.34 ± 7.5 years. According to the etiology, 73 patients (65.18%) had penetrating cutter injury and 39 patients (34.82%) had gunshot wounds. Femoral artery was the most frequently injured artery with 45 cases (40.17%). The other injured vessels were radial artery with 38 cases (33.92%), superficial femoral vein with 22 cases (19.64%), ulnar artery with 17 cases (15.17%), and brachial artery with 15 cases (13.39%). Tibialis posterior artery in 6 cases (5.35%), popliteal artery in 7 cases (6.25%), popliteal vein in 7 cases (6.25%), anterior tibial artery in two cases (1.78%), deep femoral vein. there was nerve, muscle and bone damage in 21 cases (18.75%). In 48 cases (42.85%), we preferred the end-to-end anastomosis technique as operative intervention. We performed interposition with saphenous vein graft in 28 patients (25%), primary repair in 22 patients (19.64%) and synthetic graft interposition in 14 patients (12.5%). After the whole procedure, we recommend the use of warfarin after venous intervention. On the side, we recommend dual antiplatelet therapy after arterial intervention. Two patients who underwent graft interposition developed graft thrombosis and one of them underwent embolectomy and the other one underwent graft re-position. Two patients who underwent saphenous vein interposition developed graft thrombosis. One of them underwent embolectomy and the other one underwent re-operation with new saphenous vein graft. A patients of all developed A-V fistula after operation and we repaired it. Amputation was required in the second week of one patient with bone injury and vascular injury.

Conclusion: It is especially important to intervene in the shortest time and with the correct diagnosis and to reduce limb loss and mortality. The rapid delivery of these patients to the hospital and the suspicion of vascular injury in the emergency departments may bring patients closer to the correct diagnosis. After a correct diagnosis, it is important to take a multidisciplinary approach to penetrating cutter injury.

Keywords: peripheral vascular disease, penetrating cutter injuries, trauma

ID: **347**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

N-ACETYL CYSTEINE ATTENUATES FERROPTOSIS MEDIATED LUNG INJURY INDUCED BY ABDOMINAL AORTA ISCHEMIA/REPERFUSION

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Background: This study aimed to analyze the effect of N-acetyl cysteine pretreatment on the prevention of ferroptosis mediated lung injury induced by abdominal aorta ischemia and reperfusion (I/R),

Materials and Method: Eighteen male Sprague-Dawley rats weighing 350-400 g were randomized into three groups. The animals received N-acetyl cysteine 150 mg/kg or normal saline 0.1 ml/kg intraperitoneally before the ischemic period. In the control and study groups, I/R injury was induced by clamping the aorta infrarenally for 2 hs, followed by 4 h of reperfusion. The third group underwent sham surgery. After sacrifice, lungs of the animals were extracted for both histopathological and biochemical analysis.

Results: There was a significant difference between the control and study animals regarding tissue malondealdehyde (MDA), and glutathione (GSH) levels. In the control group the MDA levels were increased and the GSH levels were increased significantly compared to sham group that revealed a ferroptosis mediated lung injury. However N-acetyl cysteine decreased the levels of MDA and increased the levels of GSH revealing a protective effect. The Prussian blue (free iron stain) staining which was used to examine iron deposition revealed a reduced deposition of iron in the N-acetyl cysteine group.

Discussion: The results of the present study suggests a protective effect of N-acetyl cysteine of ferroptosis mediated lung injury induced by abdominal aorta ischemia reperfusion in a rat model.

ID: **265**

Topic: **Cardiovascular Surgery » Peripheral Arterial Disease**

Presentation Type: **Oral**

MANAGEMENT OF HIGH-RISK POPLITEAL VASCULAR BLUNT TRAUMA: CLINICAL EXPERIENCE WITH 50 CASES

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Background:

The purpose of this study is to report the clinical and functional outcomes of patients, treated between 2015 and 2019, with high-risk popliteal vascular injuries due to fractures of the leg.

Methods:

A retrospective analysis was conducted of prospectively collected data. Our aim was to perform surgical revascularization as soon as the arterial injury was recognized. The mechanism of injury was blunt in the entire cohort of patients, and all of them had bone fractures of leg. The treatment of arterial injury included vein graft interposition in 24 (48%), primary anastomosis in 22 (22%), and primary embolectomy in 15 (30%) patients.

Results:

In the entire cohort of patients, 46 patients (92%) were male and 4 were female (8%); the mean age was 41 years (16–60 years). The overall amputation rate in this study was 20% (10 amputations). Significant ($P < 0.05$) independent factors associated negatively with limb salvage were combined tibia and fibula fracture, concomitant artery and vein injury, ligation of venous injury, and lack of backflow after Fogarty catheter thrombectomy, while repair of popliteal artery and vein injury, when present, was associated with improved early limb salvage.

Conclusion:

Early recognisation of any vascular injury is important in salvaging a limb. Any delay may result in risk of amputation. Popliteal artery is one the most common artery to be involved following leg fractures. Expeditious recognition of vascular injury, transport to repair, and repair of associated venous injury when possible are necessary to optimize limb salvage. The importance of a high level of suspicion and low threshold for timely amputation has been emphasized when limb salvage was deemed impossible to prevent life-threatening complication. Delays in surgery, extensive soft tissue defect, compound tibia–fibula fracture, and other factors are associated with high amputation rate following popliteal artery injury.

Keywords: popliteal, vascular blunt trauma, fracture

ID: **243**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Oral**

EVALUATION OF TREATMENT OPTIONS FOR FEMORAL ARTERY PSEUDOANEURYSMS AND THEIR EFFICIENCIES

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Objective: In our study, we evaluated etiologic factors of femoral artery pseudoaneurysms, treatment approaches and efficiency of treatments.

Method: Between January 2012 and August 2019, 73 femoral artery pseudoaneurysm cases in our hospital have been evaluated for etiologies, treatment types and their consequences.

Results: 48(% 65,8) patients have been diagnosed by ultrasonography, 21(% 28,7) by digital subtraction angiography, 4(% 5,5) by computed tomography in 73 patients. 46(% 63) patients were male and 27(% 37) were female. Their age was between 1-88 (mean 55). Mean pseudoaneurysm diameter in widest plane was 28,2±19,8 mm. 40(% 54,8) pseudoaneurysms were developed after coronary angiography and endovascular treatments, 10(% 13,7) were after neurovascular and peripheral vascular interventions. In 4(% 5,5) of the patients reason was penetrating injuries due to sharp instrument, in 3(% 4,1) gun wound, in 2(% 2,7) due to venous catheterization, in 10(% 13,7) cardiovascular and orthopedic surgery, in 1(% 1,4) local soft tissue infection and in three(%4,1) of patients etiologic factor couldn't be found. Surgery has been performed for 20(%27,4) patients, endovascular glue treatment for 3(% 4,1), percutaneous thrombin for 4(% 5,5), endovascular coil for 5(% 6,8), endovascular balloon for 1(% 1,4), endovascular stent for 2(% 2,7) and compression treatment for 18(%24,6) patients. All of the patients are found to be cured after surgical and endovascular procedures. In surgical procedures, 17(% 85) were primary repair and 3(% 15) were graft interposition. In patients who are performed surgery, 7(% 35) had surgical site infection and 3(%15) had wound healing defect. In a patient with graft interposition, graft removal has need to be performed as well.

Conclusion: Up to three centimeters, compression with ultrasound is found to be generally effective. When compression is inefficient, percutaneous thrombin treatment can be used. If that is ineffective as well or in great pseudoaneurysms endovascular treatments or surgical therapy should be used.

ID: **296**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Oral**

PEDIATRIC EXTREMITY VASCULAR INJURIES IN THE LIMITED-RESOURCE SETTINGS: A RETROSPECTIVE ANALYSIS

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BACKGROUND: Vascular injuries to the extremities although being uncommon among the pediatric population they may result in serious life-threatening disabilities. This study was conducted to evaluate our local experience for the management of pediatric and adolescent extremity vascular trauma in poor/limited resource settings.

METHODS: A retrospective study was performed within a period of 11 years duration from January 2006 to December 2016, at Tertiary Referral University Hospitals having an emergency and specialized trauma centers. All types of arterial repair were performed by highly experienced vascular and endovascular surgeons and well trained general and pediatric surgeons. Patients were divided into three age groups. Group I (5-10 years), group II (11-15 years), and group III (16-21 years).

RESULTS: We recruited 183 patients with Lower extremity injuries. Arteriorrhaphy was performed in 32%, primary repair and natural grafting in 40.5%, and 49%, respectively. While 10.5% underwent surgical bypass. There is a significant correlation between Mangled Extremity Severity Score and age groups I and II ($P < 0.001$). Different treatment modalities of arterial repair were having the same survival rate ($P < 0.001$). The definitive limb salvage and arterial patency were accomplished in approximately 94% ($P < 0.001$).

CONCLUSIONS: It is highly recommended to using autologous vein graft as a primary treatment option, rather than synthetic materials for repair of vascular injuries. Moreover, other treatment modalities such as; arteriorrhaphy and repair with end-to-end primary vascular anastomosis must be adopted, whenever possible, especially in the limited-resource settings as it is reliable, feasible, with fewer postoperative complications.

ID: **336**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

CARDIAC INJURY WITH A NAIL-GUN

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OBJECTIVE

Nail gun injuries primarily occur in the extremities of workers as a consequence of accidental occupational trauma. Such injury involving the thorax is much less common, and penetrating cardiac injury secondary to pneumatic nail gun discharge is rare. Specifically, there have been several reports of penetrating nail gun injuries to the heart, leading to patient presentations varying from asymptomatic to death from exsanguination and cardiac tamponade. These devices can lead to life-threatening injuries that require rapid diagnosis to help guide management.

METHODS

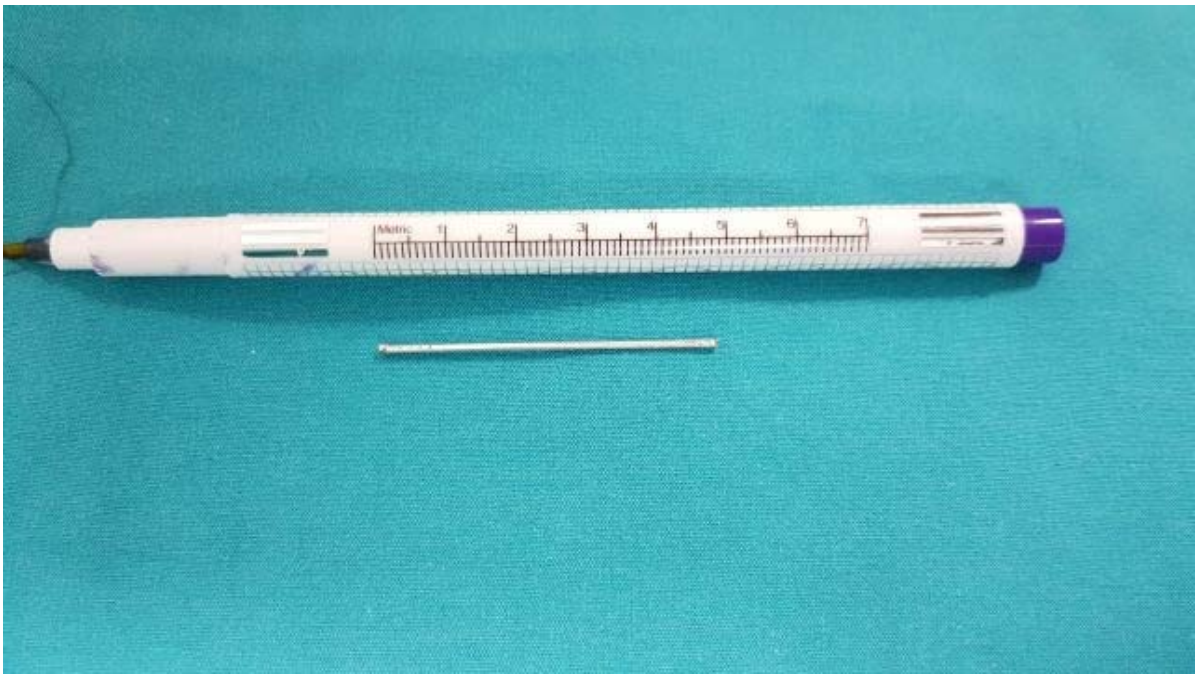
A 59 years old construction worker man admitted to our emergency service after a self-inflicted pneumatic nail gun injury to the left side of the chest. On arrival to our hospital, the patient was hemodynamically stable. Vital signs were: blood pressure 113/72 mm Hg, pulse 118 beats/min, and respirations 16 breaths/min. Lungs were clear with equal breath sounds bilaterally. Physical examination revealed a puncture wound with a fully embedded nail at the left edge of the sternum adjacent to the fifth intercostal space. Chest radiographs demonstrated a 50-mm nail traversing the sternum and anterior mediastinum with likely incursion into the pericardial space.
The trans-thoracic echocardiography showed tamponade findings like right atrial and ventricular compression. The patient was taken to the surgery immediately. Surgery was performed via median sternotomy under general anesthesia. The nail could be seen entering the mediastinum abutting the left pleura and then penetrating the left anterolateral aspect of the pericardium. The pericardium was carefully opened to remove the compression of the right ventricle because of the blood clot and the nail penetrating the anterior wall of the right ventricle. After opening of the pericardium 400 cc hemorrhagic fluid was aspirated. Then 1 cm rupture near the apex of the heart was detected. The rupture was repaired using teflon felt with 4-0 polypropylene. In control there was no bleeding from the repaired area. The nail was removed by the inside of the left thorax. The patient was discharged home 4 days postoperatively.

RESULTS

Penetrating nail gun injuries occur almost exclusively in adult males (97%) and involve the extremities (90%). When penetration of the heart occurs, it most often involves the right ventricle and is associated with cardiac tamponade.

CONCLUSIONS

Nail gun injuries to the heart, although rare, represent a severe injury that sometimes should be treated immediately. Prevention is the key to avoiding nail-gun-associated injuries. All the efforts should focus on improved safety mechanisms as well as improved training and safety education, for the consumer population.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Oral Presentation Session

Coronary Artery Ectasia and Slow-Flow: Confusion Must Be Cleared

Date: 01.11.2020 Time: 14:45 – 16:15 Hall: 4

ID: **256**

Topic: **Cardiology » Chronic stable angına pectoris**

Presentation Type: **Oral**

THE RELATIONSHIP BETWEEN ELEVATED MAGNESIUM LEVELS AND CORONARY ARTERY ECTASIA

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OBJECTIVE: Coronary artery ectasia (CAE) without specific symptoms is the localised or diffuse swelling of the epicardial coronary arteries to at least 1.5 times the adjacent normal coronary segment. It is congenital or acquired and several studies have reported its incidence at 0.3–5%. Magnesium, the second most abundant intracellular cation, is an essential element that plays a crucial role in cardiac and vascular functions. Magnessium (Mg) plays an important role in cardiac excitability, vascular tonus, contractibility, reactivity and vasodilatation. In our study, we aimed to study the vasodilatory effect of Mg in the aetiopathogenesis of ectasia, and the long-term effects of elevated Mg levels on the vascular structure, leading to abnormal coronary dilatation.

METHODS: A total of 4800 patients identified during routine coronary angiograms in our clinic between January 2010 and 2013 were included in the study. Sixty-two patients with isolated CAE, 57 with normal coronary angiograms (NCA), 73 with severe coronary artery disease (CAD), and 95 with stenosis of at least one coronary artery and CAE (CAD + CAE) were included in the study. Routine biochemical and haematological laboratory tests were done. Isolated CAE was defined as dilatation of at least one epicardial coronary artery to 1.5 times the reference vessel diameter and absence of critical stenosis (> 50%) in any of the coronary arteries. NCA were defined as the absence of angiographic atherosclerosis during routine coronary angiography; 60% or greater stenosis in at least one epicardial coronary artery was defined as CAD. CAD + CAE was defined as 60% or greater stenosis in at least one epicardial coronary artery and the presence of ectasia in any of the coronary arteries. Serum Mg levels were measured in mg/dl after 12 hours of fasting.

RESULTS: The mean age was 62 ± 10 years in the CAE patients, 61 ± 11 years in CAD patients, 64 ± 8 years in those with CEA + CAD, and 59 ± 8 years in the NCA patients. Serum Mg levels were 1.90 ± 0.19 mg/dl in isolated CAE patients, 1.75 ± 0.19 mg/dl in those with CAD, 1.83 ± 0.20 mg/ dl in those with CAD + CAE, and 1.80 ± 0.16 mg/dl in the NCA group. These results showed that Mg levels were higher in the ectasia patients with or without CAD.

CONCLUSIONS: The histopathological characteristics of patients with CAE were similar to those with CAD. The specific mechanism of abnormal luminal dilatation seen in CAE however remains to be elucidated. Mg is a divalent cation with powerful vasodilatory effects. In our study, serum Mg levels were found to be statistically higher in ectasia patients with or without CAD.

Keywords: Coronary artery ectasia, magnessium, pathophysiology

Comparisons of clinical parameters and magnessium

Clinical parameters	Isolated CAE (n = 62)	CAD (n = 73)	CAD + CAE (n = 95)	NCA (n = 57)	p-value
Fasting blood glucose (mg/dl)	109 ± 28	113 ± 25	118 ± 39	108 ± 25	0,197
Serum creatinine (mg/dl)	0.91 ± 0.20	0.88 ± 0.22	0.92 ± 0.31	0.80 ± 0.15	0,024
Triglycerides (mg/dl)	146 ± 79	171 ± 112	151 ± 82	136 ± 59	0,133
Total cholesterol (mg/dl)	192 ± 43	188 ± 35	180 ± 39	179 ± 36	0,142
LDL cholesterol (mg/dl)	118 ± 36	114 ± 27	108 ± 34	105 ± 29	0,095
HDL cholesterol (mg/dl)	46 ± 12	39 ± 8.8	42 ± 9.5	44 ± 10	0,003
Calcium (mg/dl)	9.69±0.32	9.64±0.28	9.67±0.33	9.58±0.41	0,103
Magnesium (mg/dl)	1.90±0.19	1.75±0.19	1.83±0.20	1.80±0.16	0,000

ID: **68**

Topic: **Cardiology » Preventive cardiology**

Presentation Type: **Oral**

THE RELATIONSHIP BETWEEN WHOLE BLOOD VISCOSITY AND CORONARY ARTERY ECTASIA

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Objective: Coronary artery ectasia (CAE) is a relatively rare finding diagnosed by coronary angiography. It is generally defined as localized or widespread expansion of the coronary arteries by more than 1.5 times the diameter of the adjacent normal artery. CAE is considered a variant of coronary atherosclerosis. As a primary indicator of shear stress, blood viscosity has not been utilized as a common practice in the cardiovascular evaluation despite having close relationship with multiple cardiovascular diseases. In addition, hyperviscosity has similar important pathophysiologic effects on cardiovascular system with conventional risk factors such as hypertension, hypercholesterolemia, diabetes mellitus, male gender, cigarette smoking. Measuring whole blood viscosity (WBV) as a routine may be too difficult because of not having standardized methods, the must of sophisticated devices and rare research data. But, a validated equation can be used to calculate WBV by using hematocrit and total plasma protein levels (for low and high shear rate). Calculating an estimated value about WBV with this basic formula, can provide clinicians a new tool for bedside evaluation of patients. According to De Simone et al., WBV could be extrapolated from its major determinants, which are red blood cells and total plasma protein. The first study extrapolating viscometer derived whole blood viscosity from total protein and hematocrit level. These extrapolation formulas have been used in formerly performed studies in different populations but have not been studied at firstly diagnosed ACS patients. WBV has the potential to have a role in the pathophysiology of coronary artery ectasia. In this study, we aimed to investigate the relationship between WBV and coronary artery ectasia.

Methods: In this cross - sectional study, a total of 452 consecutive selective coronary angiograms performed between January 2016 - January 2019 in our hospital were evaluated retrospectively. Two groups consisted of 190 patients with CAE and 262 randomly selected individuals with normal coronary artery. Ectasia type was categorized according to Markis classification. All data and WBV at low and high blood shear rate were compared between groups. [High shear rate (HSR) WBV = (0.12× hematocrit) + 0.17 (total protein -2.07), low shear rate LSR) WBV = (1.89× hematocrit + 3.76 (total protein -78.42)].

Results: When the clinical features were evaluated, the rate of hypertension ($p < 0.001$) was higher in the CAE group. When biochemical and hematological parameters were examined, creatinine ($p = 0.002$), hemoglobin ($p = 0.048$), hematocrit ($p = 0.010$), total protein ($p = 0.044$) and platelet ($p = 0.031$) levels were found to be high in CAE group. LSRWBV ($p = 0.003$) and HSRWBV ($p < 0.001$) levels were higher in CAE group. In multivariate logistic regression analysis, hypertension ($p = 0.005$), creatinine ($p < 0.001$), hematocrit ($p = 0.037$), DKAGTKV ($p = 0.013$) and YKAGTKV ($p < 0.001$) were identified as independent risk factors for CAE.

Conclusions: In our study, WBV was found to be higher in patients with CAE than subjects with normal coronary artery. It was found that the WBV values increased with increasing CAE. This study has the potential to be useful in understanding the pathophysiology of CAE and developing therapies for it.

Keywords: coronary artery ectasia, whole blood viscosity, atherosclerosis.

Table 1. Characteristics and laboratory parameters of the study groups.

Variables	Control (n=262)	Coronary Artery Ectasia (n=190)	p value
Age, year	61.0 ± 11.22	62.2 ± 11.49	0.231
Female, n(%)	125 (47.7%)	80 (42.1%)	0.237
BMI, kg/m^2	26.49 ± 4.80	27.02 ± 5.26	0.287
Diabetes Mellitus, n(%)	84 (32.1)	56 (29.5)	0.557
Hypertension, n(%)	94 (34.8%)	80 (49.5%)	**0.002**
Hyperlipidemia, n(%)	112 (42. %)	84 (44.2%)	0.757
Smoking, n(%)	72 (27.5%)	50 (26.3%)	0.783
LVEF, %	60.3 ± 5.9	59.0 ± 6.9	0.083
Ectasia type Type I Type II Type III Type IV	-	 35 32 30 93	-
Diameter of ectasia (mm)	-	4.91 (4.00-5.79)	-
Glucose, mg/dL	113.3 ± 42.6	112.1 ± 44.1	0.674
Creatinine , mg/dL	0.91 ± 0.18	1.07 ± 0.31	**0.003**
White blood cell, 10^3/mm^3	7.6 ± 2.2	7.7 ± 2.2	0.782
Hemoglobin, g/dL	13.4 ± 1.7	13.8 ± 1.4	**0.048**
Hematocrit, (%)	39 .8± 4.8	41.6 ± 4.1	**0.010**
Total protein, g/dL	71.1± 8.2	72.2 ± 7.6	**0.044**
Platelet, 10^3/mm^3	262.5 ± 67.2	279.4 ± 97.6	**0.031**
CRP,mg/L	3.8 ± 3.3	4.1 ± 3.0	0.635
Total cholesterol, mg/dL	184.1 ± 60.0	185.4 ± 49.7	0.875
LDL-C, mg/dL	109.1 ± 47.3	108.3 ± 40.0	0.803
HDL-C, mg/dL	46.2 ± 13.2	47.3 ± 11.0	0.296
Trigliserid, mg/dL	162.1± 79.1	160.6 ± 83.3	0.905
WBV at LSR	46.4 ± 32.9	55.3 ± 28.7	**0.003**
WBV at HSR	16.5 ± 1.5	16.9 ± 1.3	<**0.001**

Data are given as mean ± SD, n, as a percentage [n (%)]. BMI, Body mass index; CRP, C-reactive protein; HDL, high density lipoprotein; LDL, low density lipoprotein; LVEF, left ventricular ejection fraction; WBV at HSR: Whole blood viscosity at high shear rate; WBV at LSR: Whole blood viscosity at low shear rate.

Table 2. Multivariate linear regression analysis showing the predictors for the coronary artery ectasia

Variables	Univariable Beta (95% CI)	p value	Multivariable Beta (95% CI)	p value
Hypertension	0.545 (0.368- 0.807)	**0.002**	0.488 (0.317-0.750)	**0.005**
Creatinine	1.037 (0.544-1.974)	<**0.001**	0.099 (0.037-0.268)	<**0.001**
Hemoglobin	0.866 (0.771-0.973)	**0.015**	2.259 (1.456-3.506)	0.061
Hematocrit	0.923 (0.884-0.963)	**0.007**	0.701 (0.600-0.820)	**0.037**
Total protein	0.786 (0.622-0.994)	0.076	-	-
Platelet	0.983 (0.822-1.144)	0.123	-	-
WBV at LSR	0.991 (0.985-0.997)	**0.003**	0.991 (0.984-0.998)	**0.013**
WBV at HSR	0.807 (0.708-0.919)	<**0.001**	1.258 (1.071-1.445)	<**0.001**

WBV at HSR: Whole blood viscosity at high shear rate; WBV at LSR: Whole blood viscosity at low shear rate.

ID: **632**

Topic: **Cardiology » Chronic stable angına pectoris**

Presentation Type: **Oral**

TRIGLYCERIDE/HDL RATIO IS ASSOCIATED WITH CORONARY ARTERY ECTASIA

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Objective: Coronary artery ectasia (CAE) is characterized by abnormal dilatation of a coronary artery segment and disturbed coronary flow. Previous studies have suggested a possible association between atherogenic lipid profile and CAE. In this study, we aimed to assess the association between triglycerides to HDL-cholesterol ratio (TG/HDL-C) and CAE.

Methods: In this retrospective analysis, 43 patients diagnosed with CAE (58.41±11.06 years, 51.16% male) were included. CAE was diagnosed if at least one coronary artery segment was enlarged 1.5-fold or greater than the adjacent normal coronary artery segment. Detailed medical history, laboratory and transthoracic echocardiography findings were obtained from medical records of the patients. 43 age and gender matched subjects (57.44±9.63 years, 51.16% male) with normal coronary arteries and normal coronary flow were involved as control group.

Results: Patients with CAE had higher hemoglobin level (14.80±1.65 vs. 13.88±1.32 g/dL, p=0.006), neutrophil count [5.33 (4.15) vs. 4.07 (1.65) x103/ml, p=0.001] and TG level [170.00 (88.00) vs. 142.00 (89.00) mg/dL, p=0.049] compared to controls. TG/HDL-C ratio [4.54 (2.59) vs. 3.20 (2.51), p=0.001] was also significantly higher in the CAE group. On the other hand, HDL-C level [39.00 (13.00) vs. 44.00 (20.00) mg/dL, p=0.001] was significantly lower in the CAE group. In the multivariate regression analysis, hemoglobin level (OR: 1.550, 95% CI: 1.060-2.266, p=0.024), neutrophil count (OR: 1.632, 95% CI: 1.165-2.286, p=0.004) and TG/HDL-C ratio (OR: 1.519, 95% CI: 1.168-1.976, p=0.002) were found to be independently associated with the presence of CAE. A TG/HDL-C ratio ≥3.76 predicted the presence of CAE with a sensitivity of 62.8% and specificity of 60.5% (AUC: 0.704, 95% CI: 0.595-0.813, p=0.001).

Conclusions: TG/HDL-C ratio was independently associated with the presence of CAE but predicted the presence of CAE with a low sensitivity and specificity.

ID: **82**

Topic: **Cardiology » Preventive cardiology**

Presentation Type: **Oral**

MEDITERRANEAN DIET MAY BE PROTECTIVE AGAINST CORONARY ARTERY ECTASIA

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Mediterranean diet may be protective against coronary artery ectasia Objective: Coronary artery ectasia (CAE) is a relatively rare finding diagnosed by coronary angiography. It is generally defined as localized or widespread expansion of the coronary arteries by more than 1.5 times the diameter of the adjacent normal artery. CAE is considered a variant of coronary atherosclerosis. Markis et al. performed an anatomical classification of CAE and determined a two-year mortality rate of 15%, which is similar to the mortality rate of 3-vessel coronary artery stenosis.

A style of diet that represents the typical nutritional habits of populations surrounding the Mediterranean includes consumption of high rates of fruits, vegetables, monounsaturated fats, fish, whole-wheat grains, legumes and nuts, as well as low amounts of red meat. Such styles of healthy nutrition have an antiarrhythmic effect potential with their anti-inflammatory, antioxidant and cytoprotective effects. Previous studies have determined the protective effect of the Mediterranean diet from atrial fibrillation. While the antiarrhythmic effects associated with some components of the Mediterranean diet (fruits, walnuts and olive oil) have been determined the number of studies that have examined the antiarrhythmic effects of the Mediterranean diet as a whole are still limited.

Mediterranean diet has the potential effect prevent from coronary artery ectasia. In this study, we aimed to investigate the relationship between Mediterranean diet and coronary artery ectasia.

Methods: In this cross - sectional study, a total of 452 consecutive selective coronary angiograms performed between January 2016 - January 2019 in our hospital were evaluated. Two groups consisted of 190 patients with CAE and 262 randomly selected individuals with normal coronary artery. Mediterranean diet score questionnaire was performed to all patients. Ectasia type was categorized according to Markis classification. All data and Mediterranean diet score were compared between groups.

Results: When the clinical features were evaluated, the rate of hypertension ($p < 0.001$) was higher in the CAE group. When biochemical and hematological parameters were examined, creatinine ($p = 0.002$), hemoglobin ($p = 0.048$), hematocrit ($p = 0.010$), total protein ($p = 0.044$) and platelet ($p = 0.031$) levels were found to be high in CAE group. Mediterranean diet score levels were lower in CAE group. In multivariate logistic regression analysis, hypertension ($p = 0.009$), creatinine ($p < 0.001$), hematocrit ($p = 0.045$), Mediterranean diet score ($p < 0.001$) were identified as independent risk factors for CAE.

Conclusions: The protective role of Mediterranean diet type nutrition on CAE was clearly observed in our study. This study, which is one of the limited number of studies examining the relationship between Mediterranean diet and CAE, may be helpful in understanding the pathophysiology of CAE.

Keywords: Coronary artery ectasia, Mediterranean diet, atherosclerosis.

Table 1. Characteristics and laboratory parameters of the study groups.

Variables	Control (n=262)	Coronary Artery Ectasia (n=190)	p value
Age, year	61.0 ± 11.22	62.2 ± 11.49	0.231
Female, n(%)	125 (47.7%)	80 (42.1%)	0.237
BMI, kg/m²	26.49 ± 4.80	27.02 ± 5.26	0.287
Diabetes Mellitus, n(%)	84 (32.1)	56 (29.5)	0.557
Hypertension, n(%)	94 (34.8%)	80 (49.5%)	**0.002**
Hyperlipidemia, n(%)	112 (42. %)	84 (44.2%)	0.757
Smoking, n(%)	72 (27.5%)	50 (26.3%)	0.783
LVEF, %	60.3 ± 5.9	59.0 ± 6.9	0.083
Ectasia type Type I Type II Type III Type IV	-	 35 32 30 93	-
Diameter of ectasia (mm)	-	4.91 (4.00-5.79)	-
Glucose, mg/dL	113.3 ± 42.6	112.1 ± 44.1	0.674
Creatinine , mg/dL	0.91 ± 0.18	1.07 ± 0.31	**0.003**
White blood cell, $10^3/mm^3$	7.6 ± 2.2	7.7 ± 2.2	0.782
Hemoglobin, g/dL	13.4 ± 1.7	13.8 ± 1.4	**0.048**
Hematocrit, (%)	39 .8± 4.8	41.6 ± 4.1	**0.010**
Total protein, g/dL	71.1± 8.2	72.2 ± 7.6	**0.044**
Platelet, $10^3/mm^3$	262.5 ± 67.2	279.4 ± 97.6	**0.031**
CRP,mg/L	3.8 ± 3.3	4.1 ± 3.0	0.635
Total cholesterol, mg/dL	184.1 ± 60.0	185.4 ± 49.7	0.875
LDL-C, mg/dL	109.1 ± 47.3	108.3 ± 40.0	0.803
HDL-C, mg/dL	46.2 ± 13.2	47.3 ± 11.0	0.296
Trigliserid, mg/dL	162.1± 79.1	160.6 ± 83.3	0.905
Mediterranean Diet Score	7.2 ± 1.3	5.1 ± 1.5	<**0.001**

Data are given as mean ± SD, n, as a percentage [n (%)]. BMI, Body mass index; CRP, C-reactive protein; HDL, high density lipoprotein; LDL, low density lipoprotein; LVEF, left ventricular ejection fraction;

Table 2. Multivariate linear regression analysis showing the predictors for the coronary artery ectasia

Variables	Univariable Beta (95% CI)	p value	Multivariable Beta (95% CI)	p value
Hypertension	0.545 (0.368- 0.807)	**0.002**	0.555 (0.449-0.661)	**0.009**
Creatinine	1.037 (0.544-1.974)	<**0.001**	1.013 (0.751-1.274)	<**0.001**
Hemoglobin	0.866 (0.771-0.973)	**0.015**	1.753 (1.321-2.183)	0.074
Hematocrit	0.923 (0.884-0.963)	**0.00**7	0.722 (0.600-0.820)	**0.045**
Total protein	0.786 (0.622-0.994)	0.076	-	-
Platelet	0.983 (0.822-1.144)	0.123	-	-
Mediterranean Diet Score	1.001 (0.980-1.023)	<**0.001**	1.005 (0.994-1.014)	<**0.001**

ID: **44**

Topic: **Cardiology » PI for SHD - Others**

Presentation Type: **Oral**

THE RELATIONSHIP BETWEEN FEMORAL ARTERY PSEUDOANEURYSM AND CORONARY ARTERY ECTASIA IN POATMENOPAUSAL FEMALE PATIENS

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Background: The aim of this study is to investigate relationship between the femoral artery pseudoaneurysm (FAP) and coronary artery ectasia (CAE) in postmenopausal female patients who underwent elective coronary angiography

Method: This single-center retrospective study included 411 patients who underwent elective coronary angiography and met the inclusion criterias were divided into two groups based on presence and absence of FAP on doppler ultrasonographic examination of femoral arteries.

Results: The study population comprised 411 postmenopausal patients with medaian age of 62 (56-69) years. CAE was detected in 41 (9.9%) patients and FAP was detected 15 (3.6%) patients. The subjects were divided into two groups according to presence of FAP; as patients with FAP (15), and those without FAP (396). Increased age, hypertension, smoking, BMI, trigliserid (TG), LDL-cholesterol and decreased glomerular filtration rate (eGFR) and education status were observed in patients with FAP as compared to those without FAP. To identify the independent predictors of FAP, multivariate logistic regression analyses with a stepwise backward model were performed using the variables in the univariate analyses including age, diabetes mellitus, hypertension, smoking, BMI, CAE, LDL-c, TG, HbA1c, glomerular filtration rate and education status. CAE (OR:1.21, 95% confidence interval [CI]: 1.10-1.36, p=0.012), and BMI (OR: 1.15, 95% CI 1.03-1.29, p=0.015) were found to be associated with FAP.

Conclusions: Our study demonstrated that CAE may associated with FAP after coronary angiography via transfemoral access in postmenopausal female patients.

Table. Traditional univariable and multivariable logistic regression analysis for femoral artery pseudoaneurysm

Variables		Univariable			Multivariable	
	Unadjusted OR	95 % CI	P value	Adjusted OR	95% CI	P value
Age	0.97	0.95-1.05	0.58			
Diabetes mellitus [n (%)]	1.16	1.02-1.28	0.09			
Hypertension [n (%)]	5.51	1.86-8.24	0.11			
BMI [kg /m2]	1.15	1.03-1.29	0.015	1.14	1.02-1.27	0.015
Smoking [n (%)]	1.21	1.09-1.34	0.41			
eGFR [mL/min/1.73m2]	1.03	1.00-1.07	0.06			
LDL-C [mg/dl]	1.12	1.05-1.18	0.56			
Coronary Artery Ectasia	1.21	1.10-1.36	0.012	1.28	1.12-1.41	0.029
HbA1c [%]	1.24	0.81-1.88	0.31			

ID: **325**

Topic: **Cardiology » Chronic stable angına pectoris**

Presentation Type: **Oral**

NEW INDICATOR OF CELLULAR ISCHEMIA IN CORONARY SLOW FLOW PHENOMENON: CELL-FREE DNA

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Background: Coronary slow flow phenomenon (CSFP) is defined as the delayed arrival of coronary blood flow to distal vascular bed at least in one major epicardial coronary artery. Cell-free DNA (cfDNA) is a type of DNA that circulates freely in blood after being released from nucleated cells. CSFP is an angiographic observation defined by the delayed passage of contrast media in the epicardial vessels. Various studies have shown an increased risk of sudden cardiac death, life threatening arrhythmias and congestive heart failure in CSFP. These risks are increased without coronary ischemia-induced stenosis, suggesting different etiopathogenic conditions in these patients. cfDNA is an important parameter indicating cellular ischemia and may be an important indicator for demonstrating silent myocardial ischemia in these patients. The present study aims to demonstrate whether the level of cfDNA increases in CSFP, which is an indicator of ischemia at the cellular level.

Methods: The study included 23 patients with CSFP, 23 with normal coronary angio-grams (NCA). Patients with CSFP had slow flow in all 3 of their coronary arteries. The indication for coronary angiography was typical angina and a positive exercise test or perfusion defect in myocardial perfusion scintigraphy (MPS). The patients' clinical characteristics including age, sex, smoking status, dyslipidemia, hypertension and diabetes mellitus (DM) findings were recorded. Hemogram, kidney and liver function tests, troponin, C-reactive protein, lipid parameters and thyroid hormones were evaluated in all patients. cfDNA levels of all patients were measured.

Results: The mean age was 53,8±10,3 years for the CSFP patients and 56,6±9,4 years for the NCA patients. There was no statistically significant difference between the groups in terms of basal clinical charesterics and laboratory data of patients. Plasma cfDNA levels were 5,04±2,37 ng/µl in CSFP patients and 2,28±1,09 ng/µl in the NCA group (p=0,000).

Conclusions: CSFP actually contains subclinical findings as shown in our study although it was thought to be a benign phenomenon by many clinicians. High levels of cf-DNA in patients with the CSFP suggest that impaired myocardial perfusion and the resulting ischemia cause myocardial cell lysis or rapid apoptosis that leads to earlier programmed cell death. The high levels in cf DNA in these patients might be a sign of increased cardiovascular risk. As reported in recent studies, evidence of ischemia at cellular level indicates that this phenomenon cannot be considered as a totally benign condition.

Keywords: Coronary disease, Cell-Free Nucleic Acids, Myocardial ischemia, Coronary slow flow phenomenon

CSFP (n=23)	NCA (n=23)	p-value	
Positive treadmill exercise test (n)	1	11	
Ischemia in MPS (n)	10	12	
LAD corrected TFC	36,2±8,2	18,1±2,7	0,000
CX	33,2±6,96	17,9±2,9	0,000
RCA	32,9±7,5	18,0±2,7	0,000
Hs-Troponin T	7,83±3,83	7,96±3,23	0,902
cfDNA (ng/µl)	5,04±2,37	2,28±1,09	0,000

ID: **454**

Topic: **Cardiology » Chronic stable angına pectoris**

Presentation Type: **Oral**

TRIGLYCERIDE/HDL-CHOLESTEROL RATIO IS ASSOCIATED WITH CORONARY SLOW FLOW

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Objective: Coronary slow flow (CSF) is an angiographic phenomenon characterized by delayed opacification of distal coronary vessels in the absence of significant epicardial atherosclerotic lesion. Previous studies have suggested a possible association between atherogenic lipid profile and CSF. Herein, we aimed to investigate the association between triglyceride to HDL-cholesterol ratio (TG/HDL-C) and CSF.

Methods: In this retrospective analysis, 43 patients diagnosed with CSF (57.86±9.63 years, 51.16% male) were assessed. Thrombolysis in myocardial infarction (TIMI) frame count (TFC) was calculated for each coronary artery to detect CSF. Detailed medical history, laboratory and transthoracic echocardiography findings were obtained from medical records of the patients. 43 age and gender matched subjects (57.44±9.63 years, 51.16% male) with normal coronary arteries and normal coronary flow were involved as control group.

Results: Patients with CSF had higher haemoglobin (14.91±1.74 vs. 13.88±1.32 g/dL, p=0.003) and TG levels [146.00 (84.00-441.00) vs. 142.00 (38.00-307.00) mg/dL, p=0.030) compared to controls. TG/HDL-C ratio [4.33 (2.10-18.03) vs. 3.20 (1.10-8.48), p=0.002) was also significantly higher in the CSF group. On the other hand, HDL-C level [39.00 (24.00-60.00) vs. 44.00 (24.00-76.00) mg/dL, p=0.008) was significantly lower in the CSF group. In the multivariate regression analysis, both haemoglobin level (OR: 1.503, 95% CI: 1.054-2.143, p=0.025) and TG/HDL-C ratio (OR: 1.412, 95% CI: 1.080-1.847, p=0.012) were found to be independently associated with the presence of CSF. A TG/HDL-C ratio ≥3.76 predicted the presence of CSF with a sensitivity of 58.1% and specificity of 60.5% (AUC: 0.693, 95% CI: 0.583-0.803, p=0.002).

Conclusions: TG/HDL-C ratio was independently associated with the presence of CSF but predicted the presence of CSF with a low sensitivity and specificity.

ID: **42**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Oral**

RELATIONSHIP BETWEEN ACUTE CORONARY SYNDROME AND SEVERITY OF CORONARY ARTERY ECTASIA

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Objective: The relationship between acute coronary syndrome and severity of coronary artery ectasia were investigated.

Methods: A total of 10.320 coronary angiographies performed between June 2015 and August 2018 in our clinic were analyzed retrospectively. Coronary artery ectasia, defined as the enlargement of a coronary artery to 1.5 times or more than that of the local or commonly adjacent normal coronary artery segment and classified according to Markis classification. Coronary artery ectasia was divided into two groups as mild and severe according to the degree of ectasia.

Results: Of 189 patients (1.8%) with coronary ectasia, 143 were male (76%). One hundred and seven patients (57%) were smokers, 96 (51%) were dyslipidemic, 106 (56%) had hypertension and 43 (22%) had diabetes mellitus. In 92%, the symptoms were chest pain and dyspnea. Of 102 patients (54%) presenting with acute coronary syndrome, 43 (23%) were diagnosed as ST-segment elevation myocardial infarction, while 59 (31%) were diagnosed as non-ST segment elevation myocardial infarction or unstable angina pectoris. Type 3 ectasia was the most common (34.9%, n=66), while type 2 ectasia was the least common (10.6%). Hundred and twenty-nine (68.3%) of the patients had mild ectasia, while 60 (31.7%) had severe ectasia. There was no differ significantly between acute coronary syndrome and severity of coronary artery ectasia (p=0.170).

Conclusion: Although there were more frequent acute coronary syndromes in patients with ectasic coronary artery in this study to compare the others, there was no significant relationship between ectasia severity and acute coronary syndrome

Keywords: Coronary arteria ectasia; coronary angiography; coronary artery disease

Table 1: Basal clinical and laboratory characteristics of patients.

Clinical features	Ectasia (N=189)
Age	61±12
Male	143(%76)
Cigarette	107(%57)
Hypertension	106(%56)
Diabetes Mellitus	43(%22)
EF(%)	52±10
Acute coronary syndrome	102(%54)
STEMI	43(%23)
NSTEMI/USAP	59(%31)
Hemoglobin (g/dL)	13,8±2,1
Platelet (10^9 / L)	228±59
Total Cholesterol (mg /dL)	193±57
HDL-k (mg / dL)	40±9

LDL-k (mg / dL)	123±54
Triglyceride (mg / dL)	161±96
Creatinine (mg / dL)	1,1±0,9

EF: Ejection Fraction, STEMI: ST segment elevation myocardial infarction NSTEMI: Non-ST segment elevation myocardial infarction, USAP: Unstable Angina Pectoris

Table 2: Characteristics of ectatic coronary arteries

	N	%
Classification of Markis et al.		
Type 1	40	21.6
Type 2	20	10.6
Type 3	66	34.9
Type 4	63	33.3
Severity of ectasia		
Severe (type 1+type 2)	60	31.7
Mild (type 3+type 4)	129	68.3

Table 3: The relationship between ectasia severity and acute coronary syndrome

	Mild ectasia (n)	Severe ectasia (n)	P value
Acute coronary syndrome(-)(n)	32	55	0.170
Acute coronary syndrome(+) (n)	28	74	

Oral Presentation Session

Surgery for Limb Ischemia

Date: 01.11.2020 Time: 15:00 – 16:15 Hall: 5

ID: **333**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Oral**

DIRECT ACCESS TO THE OCCLUDER ARTERY BY OPEN SURGERY IN PERIPHERAL ARTERIAL ISCHEMIA

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OBJECTIVE

Critical leg ischemia is a serious condition characterized by progressive atherosclerotic disease of the lower extremity arteries and is usually associated with high rate of unhealed foot wounds, limb loss and mortality.

Timely revascularization treatments play an important role in wound healing and limb salvage.
The traditional antegrade approach to endovascular treatment is unsuccessful in as many as 20% of patients do not exceed obstruction. In this case, different techniques can be used to cross the occluded vessels. Although retrograde access is technically an effective alternative in many patients in cases where antegrade recanalization fails, the presence of a patent artery is required to perform these techniques when previous studies are examined.
However, in some cases even the use of these techniques may not be able to pass through the occluded arteries.
Revascularization technique was applied to total occluded artery by direct open surgery; it may be an effective and alternative approach in many patients where other techniques are not effective.

METHODS

Embolectomy was performed by open surgery on the distal peripheral arteries because of poor foot circulation disorder in only 3 patients who presented to our clinic with acute arterial ischemia in the last year. Two patients were female and one patient was male. The mean age of the women was 71 years. The male patient was 82 years old. Patients underwent emergency embolectomy. In all of these patients, the Fogarty catheter did not progress distally. Since our scopy device was defective, it could not be performed as a hybrid in additional procedures. Artery tibialis posterior and dorsalis pedis were first explored with open surgery. Arteria dorsalis pedicle was thin and arteria tibialis anterior was explored in one patient. Fogarty catheters (2F-3F) are used during embolectomy according to vessel diameter (Image 1).

RESULTS

Two female patients had diabetes mellitus and one had atrial fibrillation. The other female patient underwent holter and arrhythmia attacks were observed. The male patient also had atrial fibrillation. All patients underwent echocardiography. Intracardiac pathology was not detected. A female patient had high homocysteine levels. All patients were coumadized.
In a mean follow-up of 6 months, a female patient had occlusion of the dorsalis pad. However, the patient had no complaints.
One of our female patients developed a low foot due to late admission to the hospital. This patient developed edema in the foot after the operation. however, his ischemic appearance completely disappeared, but his low foot did not improve.

CONCLUSIONS

This approach to the distal peripheral arteries should be tried in cases that are not successful with endovascular and open surgery. It should be remembered that the extremity is a good revascularization technique for wound healing and salvage of the extremity.

ID: **362**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Oral**

CARDIOVASCULAR RESULTS IN PATIENTS UNDERGOING ENDOVASCULAR TREATMENT FOR LOWER EXTREMITY PERIPHERAL ARTERY DISEASE IN THE WESTERN BLACK SEA REGION

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OBJECTIVE

To investigate cardiovascular results in patients with lower extremity peripheral artery disease who underwent endovascular treatment in the Western Black Sea region.

METHODS

The results of a 30-month follow-up of patients who underwent lower extremity endovascular therapy in a single center between January 2016 and June 2019 were evaluated. Long-term outcomes and predictors of future CV events were analyzed in 315 patients with 421 affected legs.

RESULTS

18% of cases were treated with claudication intermittent and 82% were treated for critical extremity ischemia (CLI). Compared to Claudicants, the rate of additional concomitant diseases and infected wounds was higher in CLI patients. Thirty-three patients died during the 30-month follow-up. Of these, 23 were cardiovascular. One hundred two of the cases had a non-fatal Case of cardiovascular events. For CLI patients, the independent risk factors of mortality were advanced age, presence of atrial fibrillation, height of body mass index, C reactive protein, dependence on dialysis. Congestive heart failure and dialysis were at risk for major adverse cardiovascular events (MACE). In the Claudication group, coronary artery disease was a significant risk for mortality, MACE, and non-fatal cardiovascular events.

CONCLUSIONS

The results were significantly worse in CLI patients than in claudication patients with long-term survival, and Major Adverse Cardiovascular Events rates.

KEYWORDS: Endovascular treatment, Cardiovascular events, Peripheral artery disease

ID: **426**

Topic: **Cardiovascular Surgery » Peripheral Arterial Disease**

Presentation Type: **Oral**

DRUG ELUTING BALLOON ANGIOPLASTY VERSUS BARE-METAL STENT IN TREATING CHRONIC TOTAL OCCLUSION OF FEMORO-POPLITEAL ARTERIAL SEGMENT; A REVIEW OF ONE-YEAR OUTCOME OF 90 PATIENTS WITH TASC C AND D LESION

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Background: Bare metal stent (BMS) scaffolding of superficial femoral artery occlusive lesions has been associated with high rates of late clinical failure. Maintaining the patency of recanalized arterial segments was the main issue behind the concept of leave nothing behind to be evolved and percutaneous balloon angioplasty becomes the preferred option for endovascular therapy. Drug eluting balloons (DEBs) have shown to be an effective alternative to BMS for patients with de novo complex superficial femoral occlusive disease.

Aims: To compare the outcome of DEB versus BMS in treating complex chronic total occlusion (CTO) of superficial femoral and proximal popliteal artery in patients with disabling claudication and critical limb ischemia regarding technical success, primary patency, clinically driven target lesion revascularization (cd-TLR), and limb salvage rate.

Methods and Material: 90 patients (110 limbs) were complaining of disabling and critical limb ischemia due to complex femoro-popliteal occlusive lesions were randomly allocated into two groups according to the intervention method performed. Group (A); 48 patients (57 limbs) were submitted for treatment with paclitaxel DEBs and Group (B); 42 patients (53 limbs) submitted for treatment with BMS. Follow-up period was for 1, 6 and 12.

Results: The Bare Metal Stents seem to have lower patency and higher cd-TLR rates compared to patients who received Paclitaxel Drug Coated Balloons but not statistically significant. The primary patency rates were 100%, 96%, 86.2%at 1, 6, 12 months respectively in DEB group, Vs 100%, 89.8%, 77.6% at 1, 6, 12 months respectively in BMS group. Clinically driven TLR rates were 2%, 7.8% at 6, 12 months respectively in DEB group Vs 6.1%, 14.2% at 6, 12 months respectively in BMS group.

Conclusions: Percutaneous therapy for TASC C and D femoro-popliteal lesion using DEB or BMS are both safe and effective with one-year high patency rate. Paclitaxel Drug Elluting Balloons seem to have a promising important role in prevention of restenosis and recurrence of peripheral arterial occlusive disease. However, stents are still playing important bailout role in the treatment of residual stenosis and dissection. Further follow-up is essential to obtain and document long-term outcome of different percutaneous therapy for complex and long SFA lesions.

ID: **45**

Topic: **Cardiovascular Surgery » Hybrid Cardiovascular Surgery**

Presentation Type: **Oral**

REVASCULARIZATION FOR LONG CHRONIC TOTAL OCCLUSIONS OF SUPERFICIAL FEMORAL ARTERY WITH COMPROMISED CRURAL RUNOFF IN PATIENTS WITH CRITICAL LIMB ISCHEMIA

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Background: The study assessed the outcome of hybrid interventions done in patients with long chronic total occlusions (CTO) of the superficial femoral artery (SFA), patent proximal popliteal artery and extensive crural runoff disease. A series of conventional femoral tibial bypasses was used as historic control.

Material and methods: Hybrid interventions were done in 40 patients (mean age 69.5 years), all with Rutherford class 5-6 disease, long (>200 mm) SFA CTO accompanied by either CTO of distal popliteal artery (n=9; 22.5%); CTO of all crural arteries (n=26; 65%) or CTO of all crural arteries but the peronea (n=7; 17.5%).We performed femoropopliteal bypass in all patients (100%) followed by balloon angioplasty of distal popliteal and/or crural arteries done either on the same day (n=22; 55%) or 2-14 days later (n=18; 45%). Direct angiosomic revascularization was achieved in 36 patients (90%). A series of 46 consecutive patients with CLI who underwent femoral tibial was used as a historic control.

Results: The 30-day mortality and graft failure rate were 2.5% vs 4.3% ($p>0.05$) and 5% vs 13% ($p<0.05$) after hybrid and tibial bypass interventions, respectively.
At 1 year the primary patency of bypass and amputation-free survival were 77.7% (95% CI 61.7-93.7) vs 57.1% (95% CI 42.9-71.3) and 82.1% (95% CI 66.8-97.4) vs 69.6% (95% CI 56.1-83.1) after hybrid intervention and tibial bypass, respectively (all non-significant).

Conclusion: Compared to femoral tibial bypass, the hybrid intervention tended to have lower rate of early bypass failure with no significant difference in the long-term patency and amputation-free survival.

ID: **260**

Topic: **Cardiovascular Surgery » Peripheral Arterial Disease**

Presentation Type: **Oral**

HYBRID PERIPHERIC INTERVENTIONS FOR THE CRITICAL LIMB ISCHEMIA PATIENTS

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Objective

The high risk patients suffering from critical limb ischemia due to multilevel arterial obstructive disease is an important clinical condition and their prevalence is growing rapidly. We presented here our surgical experience with critical limb ischemia patients with either TASC D aortoiliac disease or TASD D femoropopliteal disease.

Methods

In our center, 25 patients treated with both intervention and surgery as hybrid approach for the last year. 18 patients had femoropopliteal bypass (10 PTFE graft, 8 saphenous vein were used as conduit), 2 patients had femorofemoral bypass and 5 patients had femoral thromboendarterectomy and patch plasty operations. Percutaneous transluminal angioplasty (PTA) were performed at aortoiliac level in 23 patients and 15 iliac stents were applied. 8 PTA were performed at femoropopliteal level and lastly 3 PTA were done at infragenicular level. The patients had multiple risk factors and 12 of patients had previous intervention history and one patient had popliteal artery aneurysm with occlusive disease.

Results

As a result, the patients presented with critical limb ischemia were treated by both surgically and balloon angioplasty, stenting at multilevel arterial occlusive disease. The postprocedural revascularisation success was good and the symptoms were decreased. The pedal pulses were palpable. The ABI was increased after the treatment up to normal levels. The ischemic wound healing was observed in short period of time ranging from two weeks to eight weeks. The meticulous risk factor control and medical therapy were also applied for all patients. The best medical therapy was including dual antiplatelet therapy, cilastazol and antilipid agents.

Conclusions

The hybrid operating techniques are often useful when treating complex problems and multilevel disease in patients with chronic or acute lower limb ischemia. This type of approach may result in excellent early patency and limb salvage rates. The simultaneously performed hybrid peripheric operations for the critical limb ischemia patients may be the preferred treatment option.

ID: **419**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Oral**

CATHETER DIRECTED THROMBOLYSIS IN THE MANAGEMENT OF ACUTE LOWER LIMB ISCHEMIA: A SINGLE CENTER EXPERIENCE

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Introduction: Severe acute limb ischemia is a vascular emergency that is characterized by sudden loss or marked decrease in limb perfusion. The viability of the limb carries high risk of mortality and limb amputation despite current treatment modalities.

CDT is now accepted as the first-line treatment for properly selected patients with acute limb ischemia. In addition, there are many reports in the recent literature on using percutaneous mechanical thrombectomy (PMT) devices either as an adjunct to or in lieu of CDT.

Methods: This study prospectively analyzed patients with acute thromboembolism of the infrainguinal arteries who had undergone CDT at our vascular and interventional surgery department between January 2017 and September 2019. Patients between the ages of 38 and 82 years with lesions in infrainguinal arteries who presented with symptoms for #14 days were included in this study.

After the sheath and catheter were secured with a skin suture, the patients were transferred to the inpatient unit. Per the standardized thrombolysis protocol, a bolus dose of 10 mg of recombinant tissue-type plasminogen activator (Actilyse; Boehringer Ingelheim, Ingelheim, Germany) in a saline solution (50 mL) was injected during 30 minutes, followed by continuous infusion of recombinant tissue-type plasminogen activator at a rate of 1.0 mg/h; 500 IU of unfractionated heparin was infused through the catheter every hour.

Result: A total of 18 patients with ALI underwent CDT during the study period. Technical success was achieved in 16 (88.88%) treated limbs. Clinical success was assessed according to the SVS guidelines-recommended scale for gauging changes in clinical status. Markedly improved clinical status (grade +3) was achieved in 55.55% of limbs (n=10); moderately improved (grade +2), in 27.77% of limbs (n=5); and minimally improved (grade +1), in 11.11% of limbs (n=2). There was one death and one major amputation reported at 30-day follow-up.

Discussion: In this study, we established the efficacy of CDT therapy for infrainguinal thrombotic occlusive lesions. The study demonstrated that CDT can be performed with robust technical success for acute popliteal and infrapopliteal vessel thromboembolism. In addition, with regard to safety, the study reconfirmed that CDT can be performed relatively safely from the perspective of complications. In smaller vessels, treatment of thromboembolic occlusion is challenging and can be associated with considerable morbidity and mortality if they are not adequately addressed. Passage of large-bore catheters to carry out these endovascular procedures in small vessels increases the risks of spasm, dissection, vessel rupture, and plaque disruption. In addition, open thrombectomy is considerably more invasive and is typically associated with a much more substantial perioperative recovery than is typically seen after percutaneous revascularization.

Conclusion: Although the risk of major hemorrhage is admittedly higher with thrombolysis compared with surgery, thrombolysis has proven to be at least equivalent to surgery in many patients with acute limb-threatening ischemia and is considered the standard of care for acute peripheral arterial occlusions If the outflow is robust to the foot, flow can usually be reestablished relatively quickly.

Oral Presentation Session

Chronic Coronary Syndromes: Non - Invasive and Invasive Diagnosis

Date: 01.11.2020 Time: 16:30 - 17:45 Hall: 4

ID: **206**

Topic: **Cardiology » Diabetes Mellitus and Cardiovascular Disease**

Presentation Type: **Oral**

THE COMPARISON OF LEFT INTERNAL MAMARY ARTERY AND SAPHENA VEIN GRAFT DAMAGE IN CORONARY ARTERY DISEASE THAT EVAULATED WITH GENSINI SCORING

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BACKGROUND: The aim of this study is to compare the total damage and urotensin-II immunoreactivity in the grafts of diabetic and nondiabetic patients with Gensini scoring.

METHODS: In our study, Gensini Scores of the patients were calculated. During coronary bypass surgery, we obtained tissue materials from the grafts of 21 Coronary Artery patients. Routine tissue follow-up procedures were performed on the tissue samples of the study.

Group 1: LIMA and saphenous grafts from CAD Group 2: LIMA and saphenous grafts from CAD+Diabetes Mellitus.

We stained the tissues with Hemotoxylin-Eosin and evaluated the immune reactivity with U-II. We examined light tissue microscopically. We calculated total damage score and H score and analyzed statistically with Mann Whitney U test.

RESULTS: In patients with a high Gensini score, there was a strong correlation between the total damage score of the LIMA and the U-II immunoreactivity intensity in the Tunica Intima ($p = 0.005$). In patients with high Gensini score, there was a strong correlation between total damage score in saphenous vein and U-II immunoreactivity intensity in Tunica Media ($p = 0.005$). In patients with low Gensini score there was no significant relationship between the total damage score of the LIMA and the U-II immunoreactivity intensity in the Tunica Intima ($p > 0.05$). In patients with low Gensini score, there was no significant relationship between total damage score of saphenous vein and U-II immunoreactivity intensity in Tunica Media ($p > 0.05$).

CONCLUSIONS: U-II, which has been shown to play a role in atherosclerotic process, causes more damage to LIMA and saphenous grafts in patients with high Gensini score of Diabetes Mellitus.

KEYWORDS: Gensini score, graft damage, Urotensin II.

ID: **115**

Topic: **Cardiology » Percutaneous coronary interventions**

Presentation Type: **Oral**

PALPATION OF THE RADIAL ARTERY OCCLUSION

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OBJECTIVE
Coronary angiography is performed in coronary artery disease (CAD) to monitor coronary anatomy, to evaluate treatment options and to predict prognosis. The rate of major complications that may occur in routine diagnostic catheterization is around 1-2% and the incidence of death, myocardial infarction (MI) and stroke is 0.1-0.2%. Radial artery occlusion is one of the minor complications.

METHODS
Forty patients who underwent radial coronary angiography between March 2018 and November 2019 were included in the study. In the routine polyclinic control performed on 10-14. days after angiography; radial, ulnar and brachial artery pulsations were checked and the presence of complaints about the procedure was questioned. Upper extremity arterial doppler was applied to patients who could not get pulses of radial artery in physical examination. Physical examination findings and doppler results were compared.

RESULTS
A total of 40 patients (26 male, 14 female) with diagnosed CAD (28 stable CAD,12 acute coronary syndrome) were enrolled in the study. The mean age of patients was 61.2 ± 9.2 years. 22 patients (%55) underwent medical follow-up, 10 patients (%25) underwent LAD artery stenting, 3 patients (%7.5) underwent CX artery stenting, and 5 (%12.5) patients underwent RCA stenting. 25 of the 40 patients (%62.5) whose pulse could not be palpated in the physical examination were compatible with occlusion as a result of doppler.

CONCLUSIONS
The use of the transradial approach for coronary angiography has become increasingly common in recent years. Advantages of the transradial cardiac catheterization such as lower entry complication rates, early mobilization, no hospitalization, cost, and patient comfort are the reasons for preference.

Major access site vascular complications of 0.59% with the transradial approach compared to 3.71% with the transfemoral approach.

However, there also are complications related to transradial access. Symptomatic radial artery occlusion, non-occlusive radial artery injury and radial artery spasms are commonly reported complications of this approach. Pseudoaneurysm formation, radial artery perforation, arteriovenous fistula, granuloma and nerve injury are rarely reported complications of transradial approach.

Radial artery occlusion is the most common complication with an incidence of 2–18%. Prolonged high-pressure compression, repeat entry and low radial artery to sheath ratio have been associated with the risk factors of this complication. Detection of acute radial artery occlusion is possible with high accuracy by palpation of pulses in outpatient clinics. In this way, early diagnosis and treatment of occlusion can be performed at low cost, easy, repeatable and with high accuracy.

ID: **428**

Topic: **Cardiology » Percutaneous coronary interventions**

Presentation Type: **Oral**

COMPARISON OF TRANSRADIAL VERSUS TRANSFEMORAL DIAGNOSTIC CORONARY ANGIOGRAPHY IN TERMS OF OXIDATIVE STRESS: WHICH ONE IS MORE PHYSIOLOGICAL?

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Background: Oxidative stress (OS) during diagnostic procedures is an important factor for the development of many complications. In this study, we aimed to compare the oxidative response in patients undergoing diagnostic transradial (TR) or transfemoral (TF) coronary angiography (CAG).

Methods: In this prospective, single-center study we randomised 60 patients with stable angina pectoris undergoing diagnostic CAG to either transradial (n=30) or transfemoral (n=30) approach. The levels of plasma total oxidative status (TOS) were measured just before and after the procedure.

Results: The clinical and laboratory findings were compatible between the two groups. In patients undergoing TR CAG, the percentage of patients with normal coronary arteries was significantly higher than the patients undergoing TF CAG (66% vs. 25% p=0.006). Although the levels of plasma TOS after CAG were increased in both groups, this was more pronounced in the TF group as compared with the TR group (20.09± 18.47; 34.40±21.05 vs. 18,98±10,39; 23,33±11,56 p <0.001).

Conclusions: In this study, we showed that oxidative stress response associated with heart catheterization is more evident in patients undergoing TF CAG.

ID: **574**

Topic: **Cardiology » Percutaneous coronary interventions**

Presentation Type: **Oral**

COMPARISION OF RADIATION EXPOSURE BETWEEN RIGHT RADIAL AND LEFT RADIAL ACCESS IN STEMI PATIENTS

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OBJECTIVE: Radiation exposure is an important issue for interventional cardiologists. The right or left radial arteries are the access of choice in many catheterization laboratories around the world. The aim of this study was to compare the radiation exposure between right radial artery and left radial artery in STEMI patients

METHODS: The study design was prospective and observational, in which we measured the radiation exposure of the operator. It was carried out between September 2018 and January 2019. The operator radiation dose was evaluated using dedicated electronic dosimeters in 168 procedures: 98 right radial access and 70 left radial access. Eight experienced interventional cardiologist operators performed all the percutaneous coronary interventions (PCI) using a single-plane angiography unit via both right and left radial artery approaches.

RESULTS: Data from 168 primary percutaneous coronary interventions were recorded. Demographic, laboratory and basic variables were similar between groups. The mean physician radiation exposure levels from the right radial access site and left radial access site were 44.5 ± 17.1 µSv and 47.1 ± 16.7 µSv, respectively (p= 0.12). There were not any difference between groups according to the duration of fluoroscopy (242 ± 94 vs. 263 ± 106 s; p = 0.312).
CONCLUSİONS; The radiation exposure levels and duration of fluoroscopy does not differ significantly with the use of right or left radial artery access for primary percutaneous coronary intervention in STEMİ patients.

Key words: Radiation exposure, Radial percutaneous coronary intervention, ST elevation myocardial infarction

ID: **566**

Topic: **Cardiology » Chronic stable angına pectoris**

Presentation Type: **Oral**

RELATION OF SERUM THIOL LEVELS AND STABLE ANGINA PECTORIS

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Background: Coronary artery disease is the most common cause of mortality and morbidity all over the Word. Oxidative stress plays a role in the pathogenesis of many diseases such as atherosclerosis. Thiols are important elements for oxidation reactions and under oxidative stress. In this study, antioxidant differences were evaluated in volunteers with stable coronary artery disease and normal coronary artery.

Methods: One hundred-forty-six patients with stable angina pectoris patient and 41 patients with control patient were included in the study. Plasma total thiol levels, native thiol levels and disulfide levels were measured. These variables were evaluated between the groups.

Results: There was no significant difference between basal characteristics and blood biochemical and hematological parameters. Plasma native thiol levels (373.15 ±69.30 µmol/L vs. 403.62±62.36 µmol/L, p =0.009), total thiol levels (405.62± 72.09 µmol/L vs. 444.17 ±65.53 µmol/L, p=0.002) and disulfide levels (16.23 ± 7.03 vs. 20.27 ± 8.10, p = 0.02) were significantly lower in patients within in stable angina pectoris than control patients.

Conclusions: In this study, antioxidant markers thiol and disulfide were found to be lower instable angina. In our study, it can be concluded that antioxidant system may also change in stable coronary artery disease and contribute to atherosclerosis. In other words, it may be considered as another factor contributing to atherosclerosis.

Figure 1 . Native thiol values between two groups

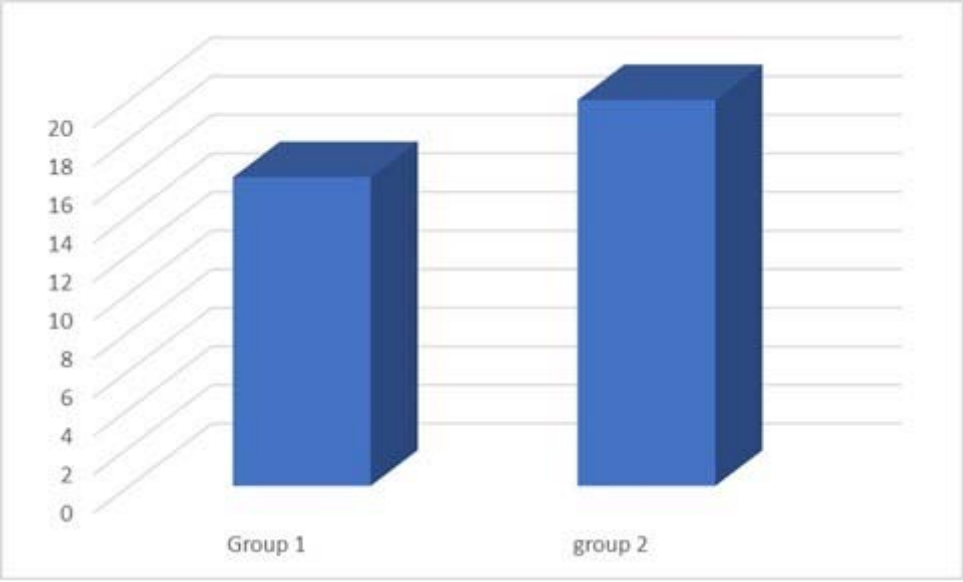


Figure 2. Total thiol values between two groups

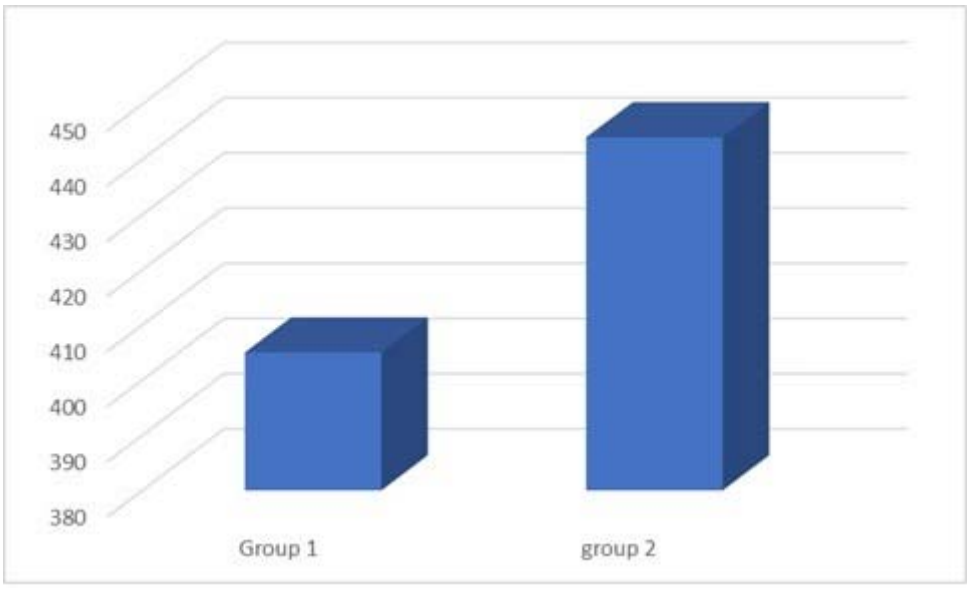
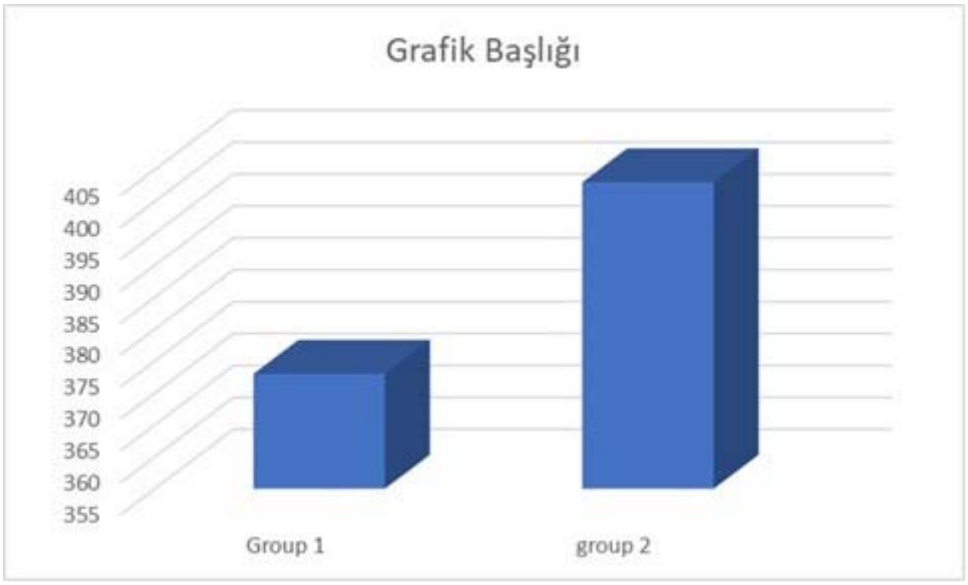


Figure 3. Disulfide values between two groups



ID: **721**

Topic: **Cardiology » Preventive cardiology**

Presentation Type: **Oral**

RELATIONSHIP BETWEEN BLOOD GROUPS, SYNTAX SCORE AND LIPID PARAMETERS IN TURKISH POPULATION

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Relationship Between Blood Groups, SYNTAX Score and Lipid Parameters in Turkish Population
Objective

Coronary artery disease is the leading cause of morbidity and mortality worldwide. Many studies have been conducted to investigate the underlying factors of atherosclerotic heart disease. There are different data in studies investigating a relationship between ABO blood group and cardiovascular risk. The mechanism that best explains the relationship between blood type and coronary artery disease is the change in von Willebrand factor levels depending on the blood group. A study measuring plasma levels of factor VIII-VWF showed that non-O individuals were 25% higher than those of the O type. There are studies showing the relationship between ABO blood groups and low density lipoprotein (LDL), Type 2 diabetes mellitus, and angiotensin converting enzyme activity. The relationship between blood group and CAD in stable patients has been evaluated and it has been shown that there are important relationships between ABO blood groups and the severity of angiographic CAD. There was an increase in the severity of coronary artery disease in the non-O blood group. According to the studies, the relationship between the blood type and coronary artery disease varies between communities. In the Turkish population, there are previously only data on stable angina patients, but data including stable CAD and acute coronary syndrome patients are insufficient. A study was planned to evaluate the relationship between ABO blood group and lipid parameters and SYNTAX score.

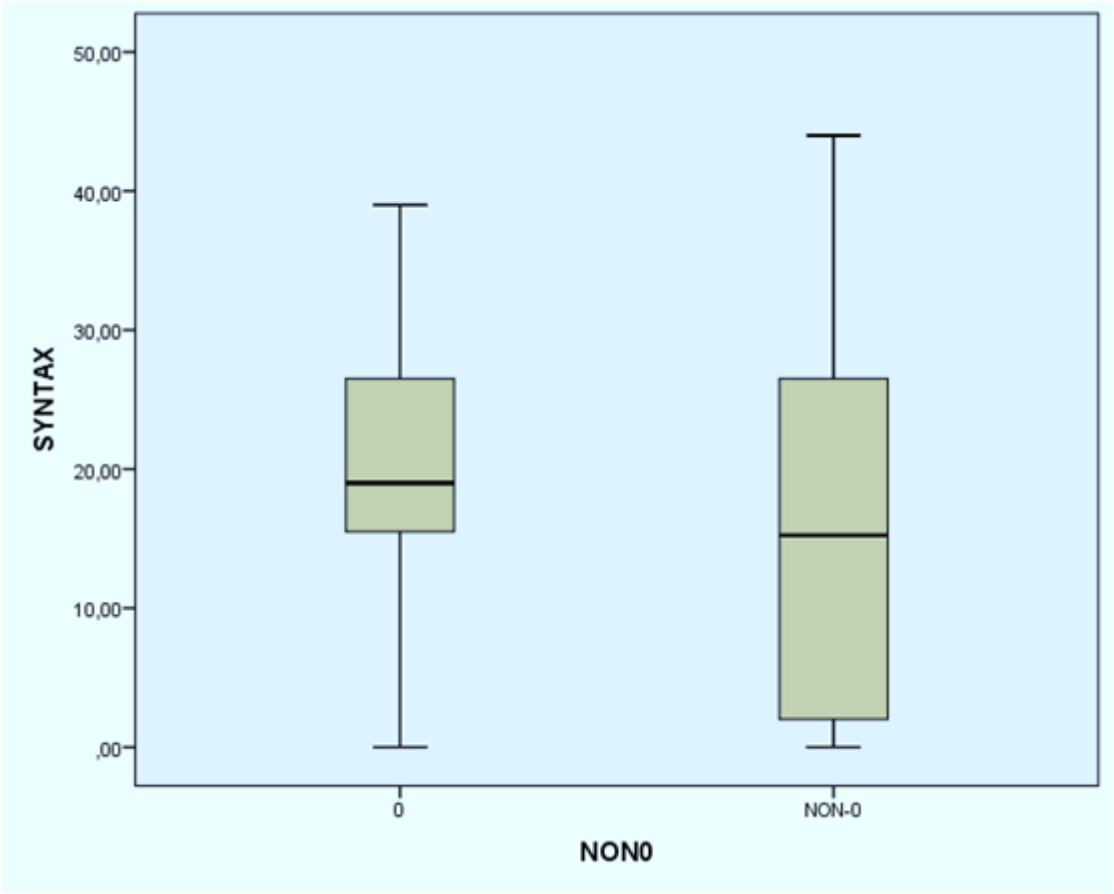
Methods

SYNTAX scores of 133 patients who underwent coronary angiography were calculated. 18.8% of the patients had stable angina pectoris, 21.8% unstable angina pectoris, 29.3% non ST elevation MI and 30.1% ST elevation MI diagnosis. SYNTAX scores were divided into 3 groups as 0-16 low, 16-22 medium and> 22 high. It was also classified as group 0 and non-group 0 according to blood groups. In addition, patients in groups A, B, O, AB were examined in 4 groups, regardless of whether they were Rh positive or negative.

Results
There was no significant relationship between ABO blood groups and SYNTAX score (p: 0.204). Unlike the previous study data, the SYNTAX score was significantly higher in patients in group O than in patients without group O (p:0.016). When patients with normal coronary artery were excluded from the study, there was no significant difference in SYNTAX scores between patients with and without the O group (p: 0.734). No significant correlation was observed between admission diagnoses and blood groups (p: 0.188). The relationship between RH positive and negative patients and SYNTAX score was insignificant. In terms of lipid parameters, total cholesterol (p: 0.021) and low density lipoprotein (p: 0.039) levels were significantly lower in group 0 patients.
Conclusion
Although, according to our study data, patients with O blood group do not seem as lucky in terms of the presence and severity of coronary artery disease as in previous studies, the relationship between O blood group and prognosis can be explained by the significantly lower total cholesterol and LDL levels. In addition, our data should be supported by large-scale studies involving larger numbers of patients evaluating sub-genotypes of blood group phenotypes.

Key words: ABO blood groups, SYNTAX score, cholestrol

Figure1 : Relationship between blood groups and SYNTAX score



ID: **724**

Topic: **Cardiology » Preventive cardiology**

Presentation Type: **Oral**

CARDIOVASCULAR DISEASE AND RISK FACTORS IN RENAL TRANSPLANT CANDIDATES

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Objectives: Cardiovascular disease and risk factors are associated with major adverse cardiac events after renal tranplantation. Therefore, preoperative evaluation of cardiovascular disease and risk factors is crucial for the cardiac risk assessment. The aim of the present study was to determine the prevalence of cardiovascular disease and risk factors in renal transplant candidates.

Methods: The present study is a single-center, observational study including 174 end-stage renal failure patients (male: 55.2% and mean age: 49 ± 13 years) who had undergone renal transplantation between January 2011 to January 2017. Preoperative clinical characteristics, cardiovascular diseases and risk factors were analyzed retrospectively.

Results: The study population had multiple cardiovascular risk factors before renal transplantation as hypertension (66.7%), diabetes (28.2%), dyslipidemia (29.9%), and smoking (30.5%). The most common cardiovascular diseases were congestive heart failure (10.9%) and coronary artery disease (8.6%). The proportion of patients receiving myocardial revascularization procedure (percutaneous coronary intervention or coronary artery bypass grafting) was 6.9%. The mean left ventricular mass index was 114 ± 32 g/m2 and 55.5% of study population had left venticular hypertrophy.

Conclusion: The prevalence of cardiovascular diseases and risk factors is high among candidates for renal transplantation.

ID: **431**

Topic: **Cardiology » Chronic stable angına pectoris**

Presentation Type: **Oral**

RELATIONSHIP BETWEEN GERIATRIC NUTRITIONAL RISK INDEX AND ANGIOGRAPHIC CORONARY ARTERY DISEASE SEVERITY IN ELDERLY

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Objective: The aim of this study is to evaluate association between Geriatric Nutritional Risk Index (GNRI), a simple tool to assess nutritional status, and coronary artery disease severity and complexity in elderly patients.

Methods: This study is a retrospective analysis of 366 patients undergoing coronary angiography. All patients were ≥65 years old age. Patients with previous revascularization were excluded. Gensini and SYNTAX scores were calculated according to the angiographic images to determine atherosclerosis severity. GNRI was calculated as follows: GNRI=[14.89 x serum albumin (g/dl)]+ [41.7 x (body weight/ body weight at body mass index of 22)]. Patients were then divided into two groups as previously reported: GNRI <92 and GNRI ≥ 92. Gensini and SYNTAX scores were compared between two groups.

Results: One hundred thirty- seven patients had GNRI lower than 92 and 229 patients had GNRI ≥ 92. Median age of patients in group with GNRI <92 was 72 years and 70 years in group with GNRI ≥ 92 (p=0.006). There was no difference regarding to gender, body mass index, smoking, hypertension and diabetes mellitus between two groups. Median SYNTAX score was 9 (0-80) in group with GNRI <92 and 6 (0-56.5) in group with GNRI ≥ 92 (p=0.198). Median Gensini score was 29 (0-188) in group with GNRI <92 and 21 (0-182) in group with GNRI ≥ 92 (p=0.353).

Conclusion: Previous studies have reported prognostic value of objective nutritional indices such as GNRI in patients with stable coronary artery disease. We found no association between GNRI and angiographic coronary artery severity and complexity in elderly.

Oral Presentation Session

Features of Postoperative Care after Coronary Surgery

Date: 01.11.2020 Time: 16:30 - 17:45 Hall: 5

ID: **388**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

THE EFFECTS OF CABG SURGERY ON PULMONARY FUNCTION TESTS, BODE INDEX AND EXERCISE CAPACITIES

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Objectives: CABG often causes physiological changes in patients. Although functional changes such as lung function and exercise capacity are observed in patients, there are no detailed studies examining this change. In this study, we aimed to objectively investigate the changes in pulmonary function tests (PFT) and exercise capacity in patients with CABG.

Methods: The effect of coronary by-pass operations dependent on heart-lung pump in the Cardiovascular Surgery Department was evaluated. Demographic and surgical characteristics of the patients were recorded. PFT, six-minute walk test (6MWT), mMRC dyspnea score and BODE index were evaluated preoperatively and 6 months postoperatively.

Results: A total of 75 patients were included in the study and the mean age of the patients was 59.8 ± 10.0 years and the male / female ratio was 57/18. Figure 1 showed the changes in pre- and postoperative pulmonary function test, exercise capacity and BODE index. mMRC dyspnea scores and BODE index results were significantly lower after CABG surgery ($p<0,05$).

Conclusion: Despite the decrease in respiratory function in patients undergoing CABG surgery, there is an increase in exercise capacity and quality of life and a decrease in mortality risk.

Parameters	Preoperative	Postoperative	*p value*
FVC			
ml±SD	2617±849	2527±881	*.139*
%pred±SD	73.8±15.4	72.0±17.2	*.587*
FEV1			
ml±SD	2274±788	2180±810	*.318*
%pred±SD	79.0±17.8	76.3±18.7	*.155*
FEV1/FVC			
%pred±SD	106.1±11.3	106.6±12.0	*.487*
FEF25-75			
ml/sn±SD	3092±1428	2841±1330	*.275*
%pred±SD	102.8±39.6	94.1±36.5	*.045*
6MWT, metres±SD	352.7±91.4	366.0±94.4	*.251*
MMRC(n,%)			*.000*
0-1	13(62.6)	12(68.0)	
2-3	28(37.3)	24(32)	
BODE(n,%)			*.000*
0-2	61(81.3)	57(76.1)	
3-4	11(14.7)	9(12.0)	
5-6	2(2.7)	9(12.0)	
7-10	1(1.3)	0	

ID: **145**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

PREOPERATIVE VITAMIN D LEVEL IS ASSOCIATED WITH POSTOPERATIVE DELIRIUM AFTER CARDIAC SURGERY IN PATIENTS OVER 65 YEARS OF AGE

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Background: Delirium after cardiac surgery is a devastating and important complication. Its incidence is suggested to be between 3% - 67% and it is highly prevalent in elderly patients. Vitamin D is a steroid hormone produced on the skin by the effect of sunlight and it mainly plays role in bone metabolism. It is also important for immunity, cardiovascular and central nervous systems. Higher vitamin D levels are suggested to be protective for cognitive functions and also delirium. In the present study we analyzed the association of preoperative vitamin D levels and postoperative delirium after cardiac surgery in patients of 65 years of age.

Methods: We retrospectively reviewed the data of 212 adult patients above 65 years of age who underwent isolated CABG surgery from January 2016 to January 2018. the patient population was divided into two groups on the basis of preoperative serum vitamin D (25-hydroxyvitamin D [25-OHD])levels with a normal range of 25-75nmol/L (Group I= patients with preoperative serum 25-OHD level<25nmol/Land Group II= patients with preoperative serum 25-OHD level ≥25nmol/L). Delirium was interpreted according to confusion assessment method for the intensive care unit (CAM-ICU) scale.

Results: 138 patients (65.1%) had preoperative serum 25-OHD levels <25 nmol/L and 74 patients (34.9%) had preoperative serum 25-OHD levels ≥25 nmol/L. Preoperative patient characteristics and intraoperative data did not assure statistical significance between the two groups other than gender and Euroscore. The overall incidence of postoperative delirium was 30.2% and occurred in 48 patients (34.8%) in Group I and 16 patients (21.6%) in Group II, p=0.032. On logistic regression analysis, the presence of lower serum 25-OHD levels preoperatively was shown to be associated with increased incidence of postoperative delirium (OR:0.517, 95% CI: 0.269-0.996, p= 0.049).

Conclusions: Vitamin D deficiency exacerbates delirium after CABG with CPB. Whether the effects of vitamin D deficiency on this event represent separate or interrelated activities with CPB is an important question to be addressed and prospective randomized studies are necessary to confirm these results.

ID: **497**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Oral**

IS GENDER AN ISSUE IN GERIATRIC PATIENTS UNDERGOING CARDIAC SURGERY?

Barış Timur, Taner Iyigün

İstanbul Mehmet Akif Ersoy Göğüs Kalp ve Damar Cerrahisi Eğitim ve Araştırma Hastanesi, İstanbul, Turkey

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Background

The average life expectancy of people is increasing. This situation brings cardiac diseases seen in advanced ages. Today most of the cardiac procedures were performed in elder people. Older age comes with great morbidities. These elder patients have increased risk of mortality, prolonged hospital stays and morbidities after cardiac surgery.

Methods

Our study consisted of 147 patients over 80 years of age who were undergone cardiac surgery. They were split into two groups. First group consisted of 61 female patients and group 2 was consisted of 86 male patients. We retrospectively collected the data from January 2011-December 2019. Our results were evaluated in terms of preoperative, intraoperative and postoperative data of these patients.

Results

Diabetes mellitus (DM) rate, urgent admission rate, EuroSCORE 2 were significantly higher in women than men ($p < 0.05$). The distribution of single versus combined procedures was not significant in women and men ($p > 0.05$). Cross clamping time, inotropic usage rate, Intra-aortic balloon pump (IABP) usage rate and hemofiltration rate did not differ significantly between women and men ($p > 0.05$). The use of erythrocyte suspension in men was significantly lower than women ($p<0.05$). The use of other blood products in males and females did not differ significantly ($p > 0.05$). Mortality rate in males and females did not differ significantly ($p>0.05$).

Conclusion

In conclusion gender in the aging population has no difference on the morbidity or mortality in the cardiac surgery. Every patient deserves to be given another chance and can safely undergo high risk procedures.

ID: **51**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

EVALUATION OF ISCHEMIA MODIFIED ALBUMIN LEVELS AS OXIDATIVE STRESS PARAMETER IN PATIENTS THAT UNDERWENT CORONARY BYPASS BY USING CARDIOPULMONARY BYPASS TECHNIQUE

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OBJECTIVE: Decrease in myocardial coronary blood flow causes ischemia, hypoxia, acidosis, increase in reactive oxygen derivatives and with its effect on serum albumin causes ischemia-modified albumin (IMA) formation. IMA, which provides detection of myocardial ischemia within minutes, shows the short-term oxidation effect. In this study, we aimed to investigate the utility of IMA as a marker of myocardial ischemia in cardiac surgery by measuring IMA levels before and after cardiopulmonary bypass (CPB) in coronary bypass operations performed by using the CPB technique.

METHODS: Fifty patients over 18 years of age who underwent isolated coronary bypass using CPB were included in the study. Blood samples were taken for IMA measurements before entering CPB (IMA-T1), 30 minutes after cross-clamp removal (IMA-T2) and postoperative 6th hour in intensive care unit (IMA-T3). Analysis of IMA values which measured at different times and postoperative effects of IMA-T2 measurements that covering the ischemic period were evaluated. In all tests, $p < 0.05$ was considered statistically significant.

RESULTS: When the findings were evaluated in the light of statistical data, we found that the measurements in the ischemic period (IMA-T2) were significantly higher, and as a result of coronary perfusion after revascularization, we revealed the IMA level (IMA-T3) returned to baseline levels (IMA-T1) from the sixth postoperative hour ($p<0,001$, Repeated measured-ANOVA). We also found a positive correlation between IMA-T2 levels and the development of postoperative atrial fibrillation and postoperative inotropic requirement.

CONCLUSIONS: In patients who have undergone isolated coronary artery bypass surgery, IMA levels increase in the early period. We consider that IMA measurements will replace myoglobin, CK-MB and cardiac troponins in early diagnosis of myocardial ischemia and in the treatment protocols.

Keywords: Ischemia modified albumin, ischemia, biomarkers.

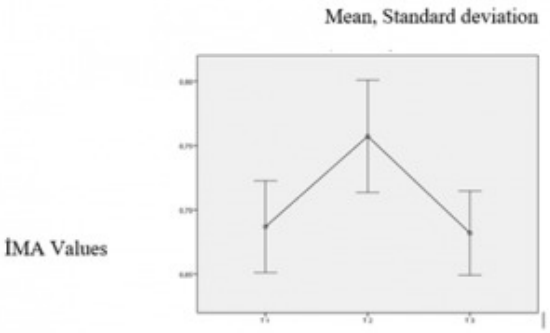

Figure 1. Variation of IMA measurements of patients. IMA: Ischemia modified albumin T: time periods of plasma concentrations of IMA (T1: before cardiopulmonary bypass, T2: 30 minutes after X-clamp removal, T3: 6 hours after operation). IMA (T1-T2-T3), p <0.001 (Repeated measured-ANOVA)

Table 1. Logistic regression analysis to identify PoAF determinants

	Univariate analysis			Multivariate analysis		
Variables	**p**	**Exp(B) Odds Ratio**	**95% C.I. Lower Upper**	**p**	**Exp(B) Odds Ratio**	**95% C.I. Lower Upper**
HT	**0.030**	6.176	1.184-32.076	**0.027**	7.885	1.258-49.424
DM	0.145	2.344	.745 - 7.370			
EF	0.759	1.010	.947-1.078			
Total KPB time	0.400	.991	.971-1.012			
X-klemp time	0.197	.982	.955-1.009			
İMA (T_2)	**0.004**	2503.643	12.85-487515.12	**0.004**	5894.602	14.848-2340212

PoAF: Postoperative atrial fibrillation, HT; Hypertension, DM; Diabetes mellitus, EF; Ejection fraction, KPB; Cardiopulmonary Bypass, IMA: Ischemia modified albumin, T: time periods of plasma concentrations of IMA (T2: 30 minutes after X-clamp removal)

ID: **564**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

PROTECTIVE EFFECTS OF METFORMIN ON THE PROCESS OF ATHEROSCLEROSIS WITH AGING IN THE RAT HEART

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OBJECTIVE

For cardiovascular protection, many pharmacological agents provide clues as to where the protective effects about insulin resistance and metabolic syndrome associated with atherosclerosis remain the focus of interest. Although developed as an antidiabetic drug, *Metformin* is still up to date with effective research showing its positive contribution to many anti-inflammatory processes.

With this laborious study on the elderly rat heart, we hope that the protective effect of metformin in the process of atherosclerosis will make an effective contribution to larger-scale studies, particularly vascular pathologies.

METHODS

Wistar-Albino male rats were separated into four groups: young mice (< 12months-old), young mice & metformin, old mice (24months-old), old mice& metformin. Metformin was supplemented into drinking water at concentration of 100mg/kg for 8 weeks. The apical half of left ventricle was excised. The effects on cardiac tissue cells in aging rat was evaluated by expression analysis of proliferation(*Ki67)*, oxidative stress(Superoxide Dismutase 1, *SOD1*) and inflammation (Transforming growth factor beta(*TGF-β*), Tumor necrosis factor - α (*TNF-α*), Interleukin-1β (*IL-1β*), Inducible nitric oxide synthase(*i-NOS*) markers. The expression of pericyte marker, *PDGFR-β* (Platelet derived growth factor receptor- β), was also estimated in tissue.

RESULTS

When compared to young tissue, expression of TGF-β, TNF-α and IL-1β were increased in tissue of aged tissue at rate of 1.89, 1.27 and 1.09-fold, respectively. Oral consumption of metformin by aged rat attenuated the expression of these inflammatory markers to levels of 1.41 (p=0.044), 1.03 (p>0.05) and 0.97-fold (p>0.05), respectively.

The SOD1 expression was increased in metformin groups. In young tissue, SOD1 expression was improved 1,89-fold (p=0.021) after metformin. Anti-oxidative capacity was slightly decreased in aged tissue (0.84-fold) when compared to young. SOD1-expression in old mice treated with metformin was improved to 2.67-fold (p=0.015). Cell proliferation in aged group with metformin was substantially improved (3.26-fold, p=0.007) compared to young animals. The i-NOS expression was also decreased after metformin treatment in aged animals, while no effect could be observed in young animals in both treated and non-treated groups. PDGFR-β expression level in young tissue was decreased slightly to 0.89-fold, while PDGFR-β expression was increased in aged tissue from 1.54-fold (p=0.056) to 1.78-fold (p=0.043).

CONCLUSIONS

Metformin supports pericytes and enhanced regeneration capacity, which deteriorated with aging. Metformin treatment strengthened antioxidant capacity and attenuated inflammation indicators in the aged group. Metformin may have a preventive effect on the process of atherosclerosis.

Oral Presentation Session

My Worst Complications and Interesting Observations

Date: 01.11.2020 Time: 18:00 – 19:15 Hall: 4

ID: **539**

Topic: **Cardiology » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Oral**

CASEOUS CALCIFICATION OF THE MITRAL ANNULUS: SCARY IMAGE DURING ROBOTIC SURGERY

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Introduction

Caseous calcification of the mitral annulus is a very rare form of mitral annular calcification (MAC). Caseous calcification of the mitral annulus (CCMA) accounts for 0.63% of all cases and 0.06-0.07% of the total population. It is usually seen in elderly and female patients. It mostly affects the posterior leaflet of the mitral valve, thickens the valve, and may cause mild stenosis and / or insufficiency. CCMA is composed of a mixture of calcium, fatty acid and cholesterol, similar to soft periannular wide calcification, tumor-like, and has a toothpaste-like structure.

Case

A 67-year-old woman presented with dyspnea. TTE revealed a 27 * 21 mm mass on the mitral valve posterior leaflet. The patient underwent TEE and a lobulated 30 * 20 mm mass was detected on the mitral valve posterior leaflet ventricular surface. The mass on the mitral valve caused moderate MS and mild MR. The patient underwent cardiac MRI and CT, and a mass formation of 42*29*20 mm calcified amorphous tumor on the ventricle surface of the mitral valve posterior leaflet was revealed. The patient was discussed in the cardiovascular surgery council and the decision of mass resection was decided. In the patient who underwent a robotic mass resection, it was observed during the procedure that the mass that completely covered the mitral valve posterior leaflet was gelatinous, disintegrated uncontrolled. The surgeon changed his plan and decided to perform mitral valve replacement. The pathology report was reported as caseous calcification and the patient died due to ischemic stroke in the postoperative period.

Discussion

The pathogenesis of CCMA remains unclear. Hypercholesterolemia and the dissolution of lipid-laden macrophages may be implicated in liquefaction necrosis. The name “caseous” comes from the cheese-like or toothpaste-like consistency of the mass, which is sterile and composed of fatty acids, cholesterol, and calcium. Cardiac MRI may help in differentiating MAC from CCMA and should perform. The first treatment option should be conservative treatment because of surgical complications of the procedure. Surgical intervention may be considered for a patient with embolic phenomena, valvular dysfunction or to rule out the possibility of a tumor.

Conclusion

In summary, CCMA represents a rare, underappreciated variant of MAC that should be differentiated from an abscess or tumor. Although echocardiography is the mainstay imaging modality for diagnosis of CCMA, multimodality imaging, including TEE, cardiac CT, and CMR, can be used to confirm the diagnosis and avoid unnecessary surgery.

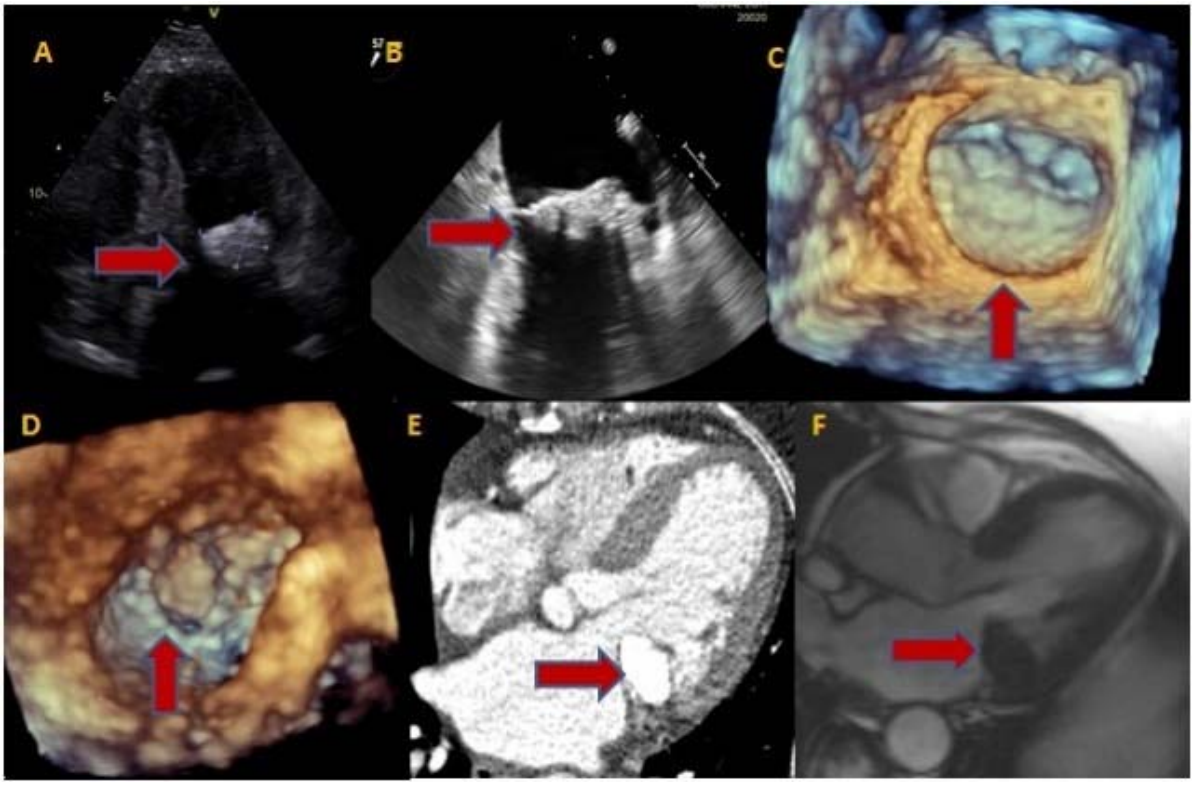

Figure 1: Multimodality imaging of the caseous calcification of the mitral annulus

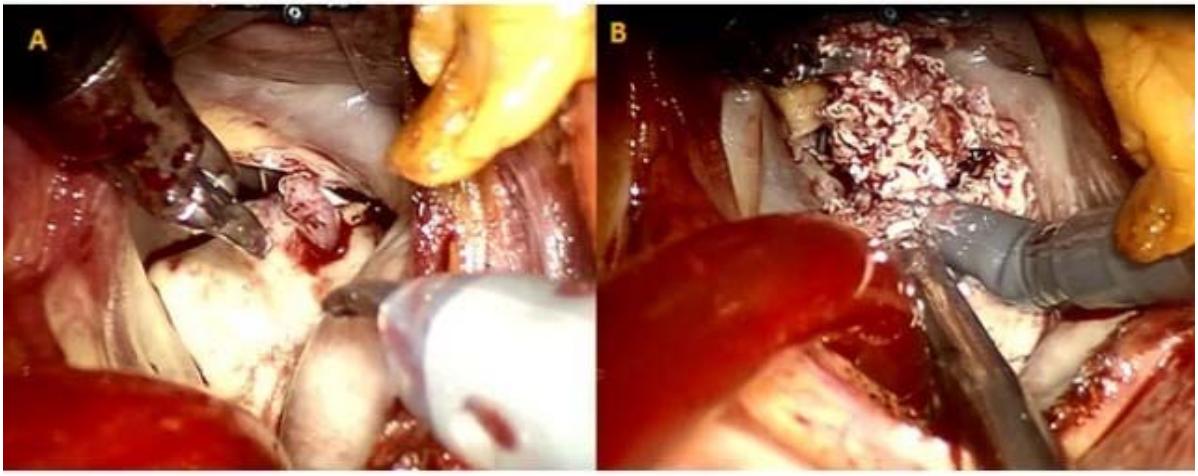

Figure 2: Toothpaste-like structure of caseous calcification of the mitral annulus in the robotic surgery image.

ID: **306**

Topic: **Cardiology » Percutaneous coronary interventions**

Presentation Type: **Oral**

AN UNUSUAL PERIPHERIC VASCULAR COMPLICATION AFTER PCI: INTRAMUSCULAR HEMOTOMA AT LEFT ABDOMINAL WALL DUE TO DISTAL BRANCH OF EXTERNAL ILIAC ARTERY RUPTURE

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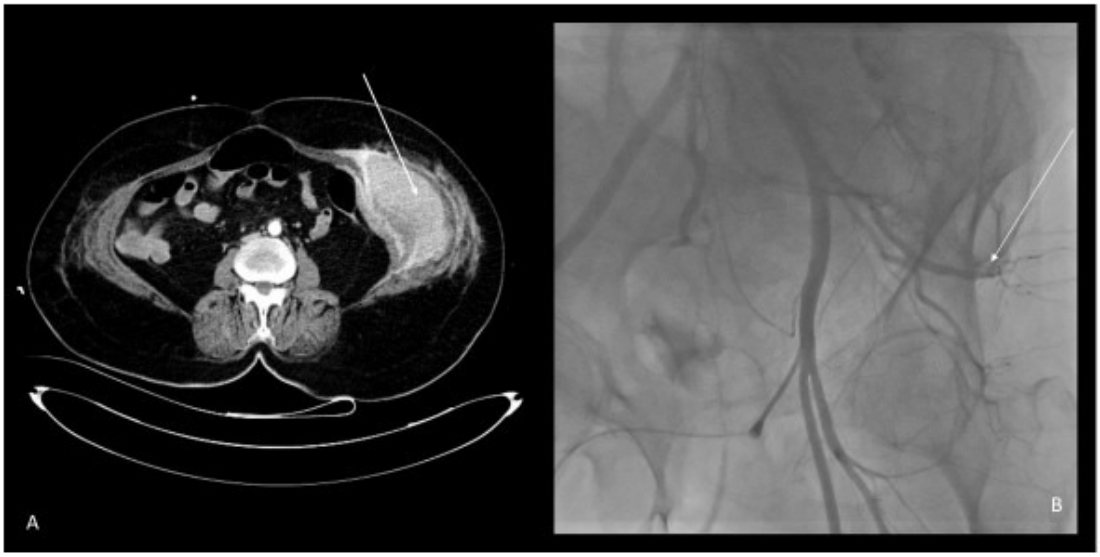
Introduction: Peripheric vascular complications after PCI performed by femoral route; such as hematoma, pseudoaneurysms or arteriovenous fistula were not rarely seen. But, some complications like retroperitoneal hematoma are more serious and life threatening that needs urgent recognization and intervention. Here we report an unusual peripheric complication occurred after PCI in which a left abdominal wall hematoma seen due to rupture of distal side branch of external iliac artery.

Case: 65 year-old female was admitted to our outpatient clinic complaining of effort dyspnea. She had a history of hypertension and hyperlipidemia. ECG and biochemistry were in normal limits. Myocardial perfusion scintigraphy revealed inferolateral and anterior ischemia. Coronary angiography (CAG) showed critical stenosis at LAD and Cx arteries and we planned PCI in a separate session. Because of the right femoral hematoma which occurred after previous CAG, we planned to perform PCI via left radial artery route. Due to diffuse radial artery spasm and filiform pulse at right radial artery, we had to carry on procedure via left femoral artery route. Control images showed that there was nothing unusual at bilateral iliac, femoral arteries, left brachial and radial arteries. After successful PCI to both LAD and Cx arteries patient was transferred to CCU. 3 hours after the procedure patient started complaining of left abdominal pain and she was also hemodynamically unstable. Due to suspected retroperitoneal hematoma, we immediately performed abdominal CT angiography. CTA showed that there was nothing at retroperitoneal area but there was a huge intramuscular hematoma image at left lateral abdominal wall. (Figure 1A) After that we immediately transferred patient to cath lab with IV inotropic support and performed peripheric angiography (PAG). PAG revealed a rupture at a distal side branch of left external iliac artery (EIA). (Figure 1B) This side branch of EIA was circumflex artery that was feeding left abdominal muscular wall. We planned to deploy covered stents to EIA to close ostium of this side branch. Immediately after we deployed two covered stents, her blood pressure raised quickly and came to normal limits. We stopped IV inotropic support and followed her in CCU. 5 days after the procedure, patient was discharged from hospital without any further complication.

Conclusion: Clinicians must be cautious about patients in whom deep hypotension or clinical signs of shock were developed after PCI. Bleeding complication sites other than retroperitoneal region, such as intramuscular area of abdominal wall, must be kept in mind as they may cause life threatening conditions.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ID: **171**

Topic: **Cardiology » PI for SHD - Others**

Presentation Type: **Oral**

A RARE COMPLICATION OF PRIMARY PERCUTANEOUS CORONARY ANGIOPLASTY: IATROGENIC RECTUS SHEAT HEMATOMA

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INTRODUCTION

Primary percutaneous coronary intervention (PCI) is an effective treatment modality for ST elevation myocardial infarction (STEMI). PCI can be safe and effective as well as procedure-related complications, as with any interventional treatment. Rectus sheath hematomas are rare abdominal wall hematomas due to trauma to the epigastric arteries of the rectus muscle. Common risk factors include anticoagulation, strenuous exercise, cough, coagulation disorders, and invasive procedures. We report a case with rectus sheath hematoma, a rare complication of primary percutaneous coronary angioplasty.

CASE REPORT

A 40-year-old female patient was admitted to the outpatient clinic with the complaint of chest pain, which started approximately 20 days ago, did not exceed 5 minutes, increased with effort, spread to the left arm, epigastric region and back, and had increased in severity over the last 1 week. After PCI, left anterior descending coronary artery (LAD) was totally occluded. Upon reperfusion failure, the patient was referred to our center. In our center, the primary intervention was passed without any problem with guidewire. When the distal flow was not achieved, the lesion was predilated with balloon support and TIMI 1-2 flow was provided. A stent (2.75x24 DES) was then placed. TIMI-3 flow is supplied. After the procedure, the patient complained of pain that started in the right hypogastric region and spread to the inguinal region. In the physical examination of the patient, defense and rebound were positive. There was a palpable mass about 3 cm in size in the same region. Superficial ultrasonography (USG) and abdominal tomography showed an appearance consistent with rectus sheath hematoma on the right side. When hemoglobin value decreased to 9 mg / dl on control hemogram, 2 units of erythrocyte suspension was given. complete blood count was monitored. Control hemoglobin level was 11.2 mg / dl. Conservative treatment was decided.

DISCUSSION

Rectus sheath hematoma occurs as a result of bleeding into the sheath that encircles the muscles of M. rectus abdominis and M. pyramidalis due to rupture of the epigastric artery or veins. Anticoagulant given before or during percutaneous coronary intervention can be seen as a result of antiaggregant treatment or as a rare complication of the intervention. Although ultrasonography is used as the first choice in diagnosis, tomography gives more meaningful results. Surgical or conservative methods are used for treatment.

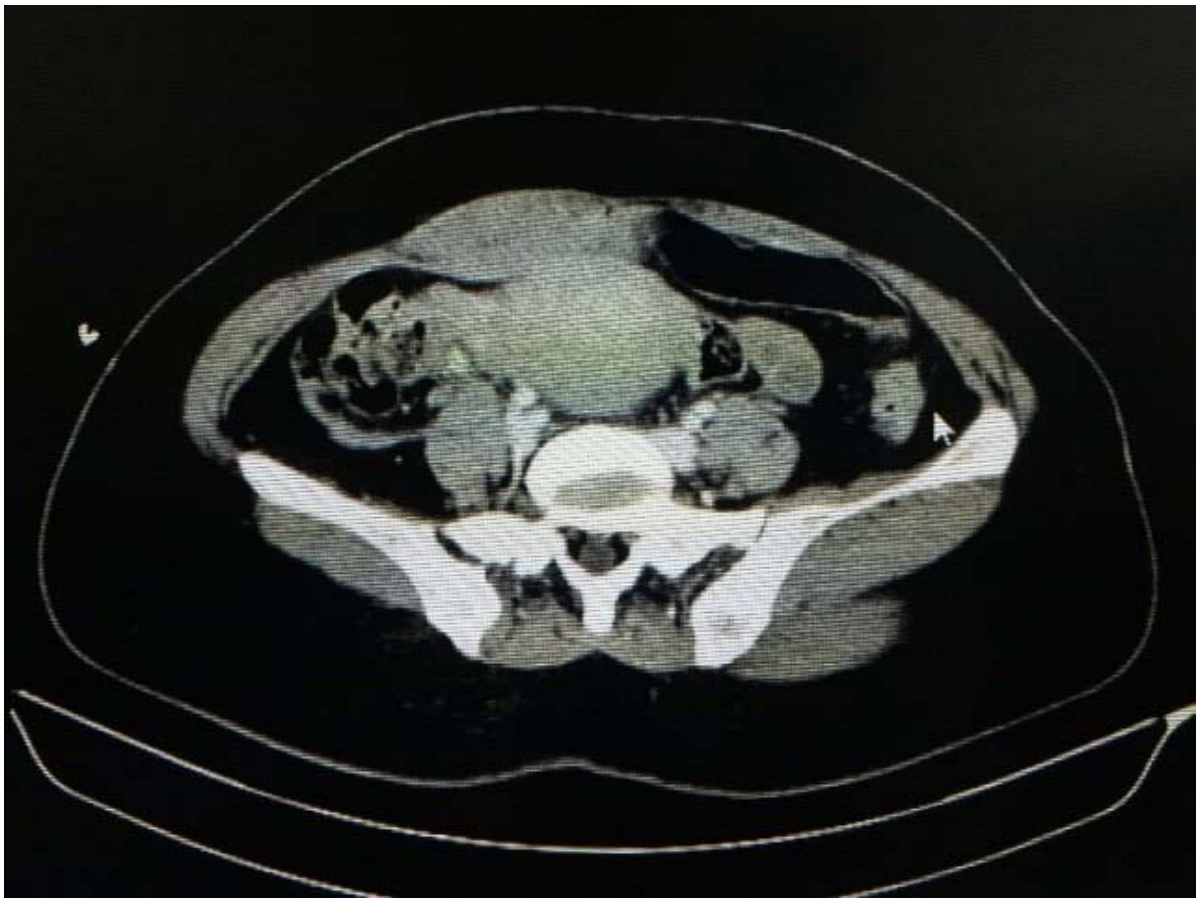

Figure: Rectus sheath hematoma in contrast-enhanced abdominal tomography section

ID: **506**

Topic: **Cardiology » PI for SHD - Others**

Presentation Type: **Oral**

PERCUTANEOUS AORTIC STENT IMPLANTATION IN PATIENT WITH AORTIC INTERRUPTION

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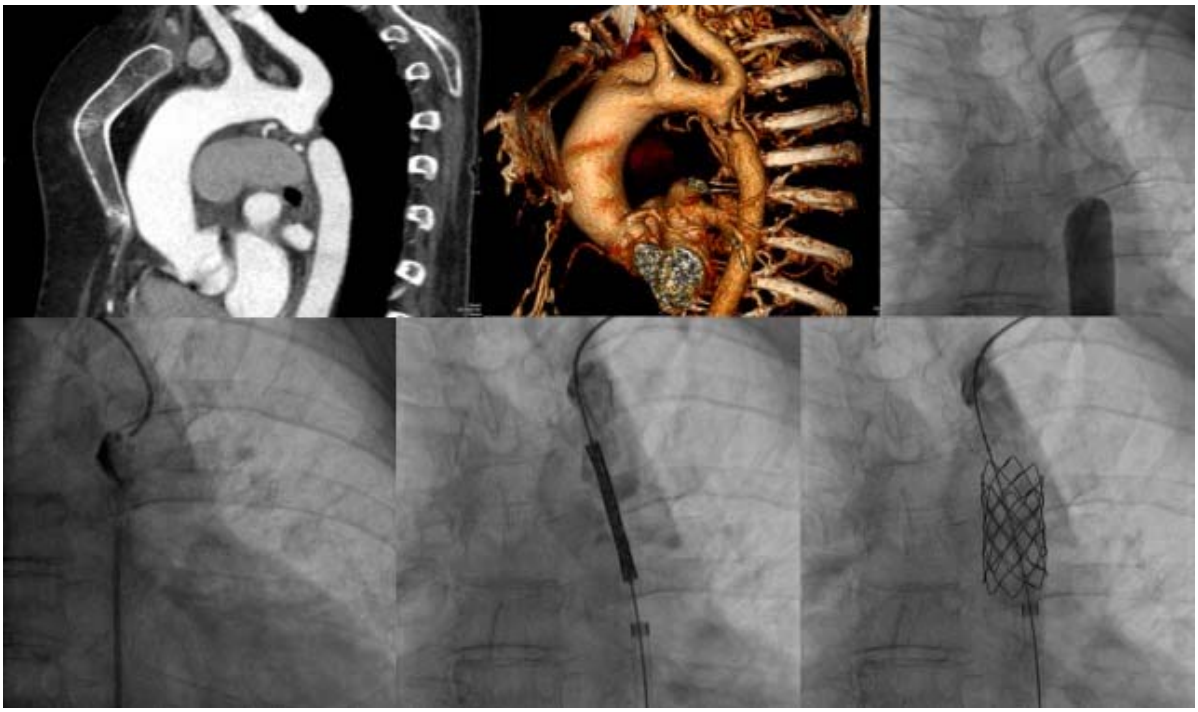
A 55 -year- old woman presented with our cardiology clinic because of uncontrolled hypertension although she was taking 10 mg amlodipine, 10 mg perindopril, 2.5 mg indapamide and 25 mg carvedilol. On physical examination, systolic blood pressure was 210 mmHg in both upper extremities in addition to strong pulses, but lower extremity pulses and pressure were weak. ECG showed left ventricular hypertrophy Sokolow-Lyon Criteria (S wave in V1+ R wave in V5 greater than 35 mm). Echocardiogram revealed left ventricular hypertrophy as well as normal left ventricular systolic functions. We decided to perform, aortic CT angiography due to lower extremity arterial pulses. CT angiography showed interruption of the descending aorta just 8 mm distal to left subclavian artery. The intercostal arteries were enlarged to provide collateral flow to the descending aorta, distal to interruption. Because of the high surgical risk, we planned to perform percutaneous aortic intervention. 6F sheaths were inserted into left brachial and right femoral arteries. Right diagnostic catheter was advanced from left brachial and multipurpose catheter was advanced from right femoral artery. Trans-stenotic gradient was 70 mmHg. The images were taken both catheter but there was no anterograde and retrograde dye flow. First, we tried to cross the coarctation segment with 0.014 inch Hi- Torque Progress 120 wire and we successfully crossed the distal segment of the aorta. However, we observed that dissection in the control image after advancing to the coarctation segment of aorta. So then we advanced a more soft -second wire Hi-Torque Pilot 150 and we crossed the distal aorta without any problem. Then we passed the distal aorta with right diagnostic catheter. We exchanged the wire with 0,035 inch amplatzer 300 cm super-stiff wire. The 0,035 wire was snared from the right femoral artery and externalized from the right femoral sheath. 45X18 mm covered Cheatham Platinum (CP) stent was pre-mounted on NuMED Balloon-in-Balloon catheters. The stent was advanced over the wire into coarctation segment and stent was implanted without problem. After stent placement, control angiography was good and pressure gradient was 5 mmHg. There was no complications after procedure and the patients' blood pressure was dropped dramatically to normal pressures.



ID: **323**

Topic: **Cardiology » Cardiac pacing for bradyarrhythmias**

Presentation Type: **Oral**

IN A PATIENT WITH PROSTHETIC TRICUSPID VALVE AND COMPLETE HEART BLOCK: UNIVENTRICULAR BIFOCAL PACING

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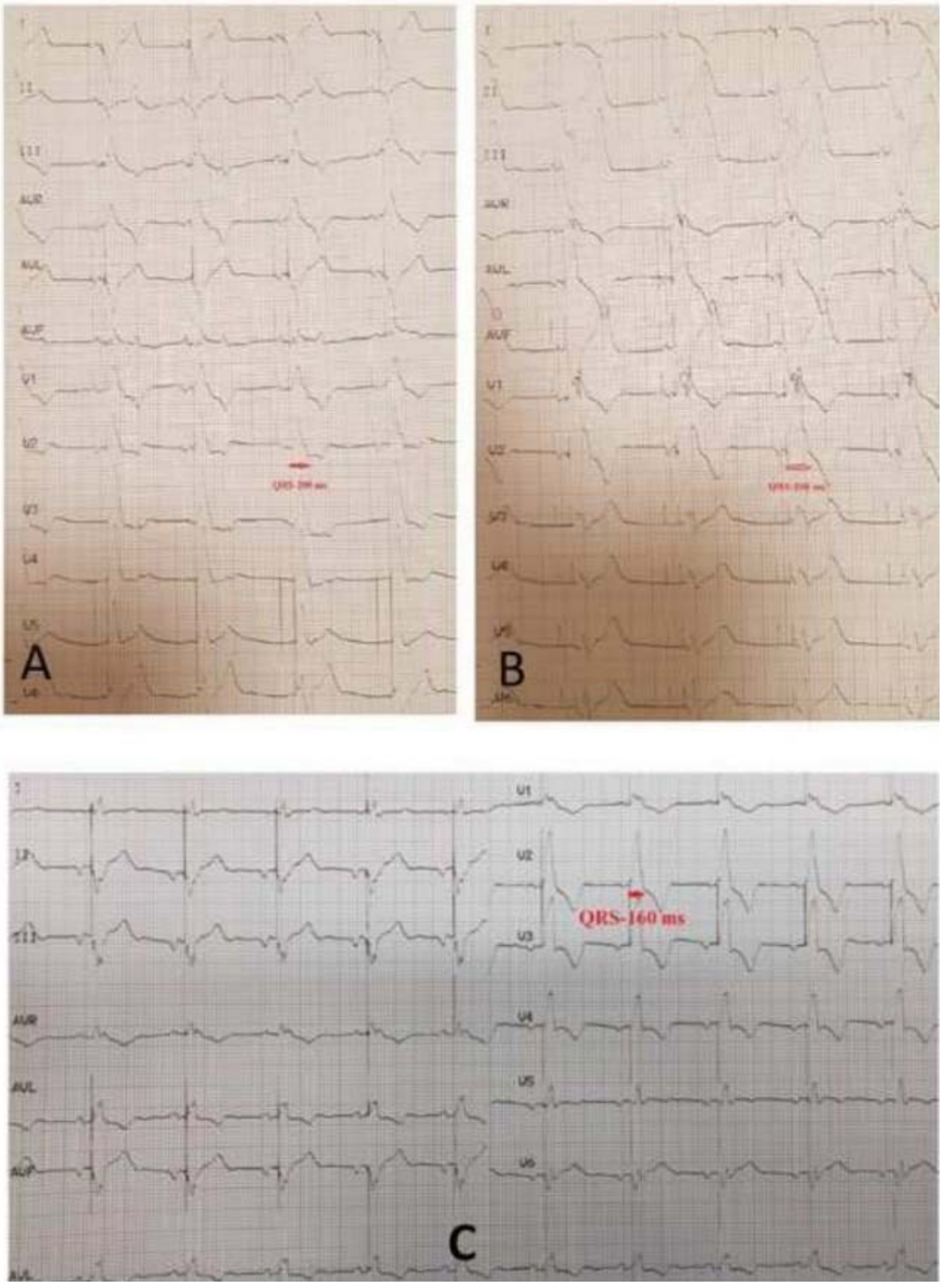
Objective: Complete heart blocks underwent to permanent pacemaker placement are a common complication of tricuspid valve replacement (TVR). If indicated, endocardial placement of a right ventricular (RV) lead is precluded in the presence of mechanical TVR. For the procedure of endocardial lead placement, tilting disk valve prosthesis is the absolute contraindication due to the risk of acute valve failure, damage to the lead, and death. We present an univentricular bifocal pacemaker implantation in a patient who underwent tricuspid valve surgery twice and developed complete AV block after the second operation.

Case report: A 20-year-old female patient firstly underwent metallic prosthetic valve operation with tricuspid valve endocarditis in 2014. Three years after the operation, echocardiography revealed dysfunction of the prosthetic valve thus reoperation decision was made. In the second operation, the patient underwent a bioprosthesis valve and AV complete block developed in the postoperative period. Left ventricular ejection fraction (EF) was 45% was found on echocardiography Pacemaker dependence of the patient, it was aimed to place two electrodes into the left ventricle. Electrodes were placed the target two branches in coronary sinus (CS) and right atrium (Figure 1. A. Coronary sinus angiography, B. Two sheats in coronary sinus, CD. Right atrium and coronary sinus electrodes). Univentricular bifocal pacing was enabled to work (Figure 2. Electrocardiography, A-B. Separately lateral branch and middle cardiac vein coronary sinus pacing, C. Univentricular bifocal pacing).

Conclusions: Electrode placement in the CS is a very good alternative to epicardial surgical lead placement in cases where endocardial lead placement from the right atrium to the RV is contraindicated. In patients with lower left ventricular EF who will be pacemaker dependent, the insertion of two electrodes into the CS to prevent pacemaker is a safe and effective treatment.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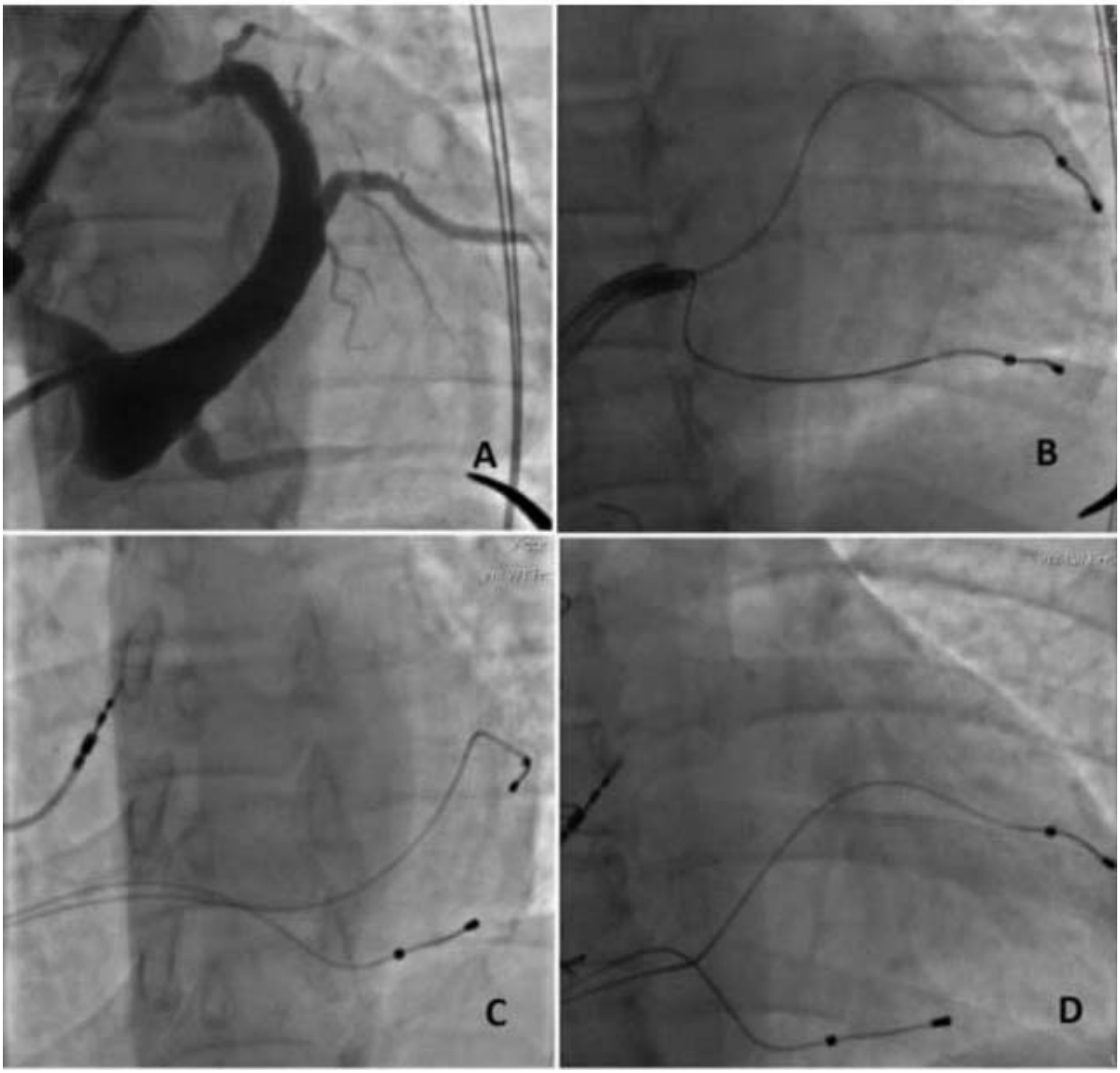
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D

ID: **9**

Topic: **Cardiology » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Oral**

DEVELOPMENT OF ACUTE STROKE DURING TREATMENT OF PROSTHETIC AORTIC VALVE THROMBOSIS WITH LOW-DOSE THROMBOLYTIC AGENT AND TREATMENT OF STROKE WITH HIGH-DOSE THROMBOLYTIC AGENT

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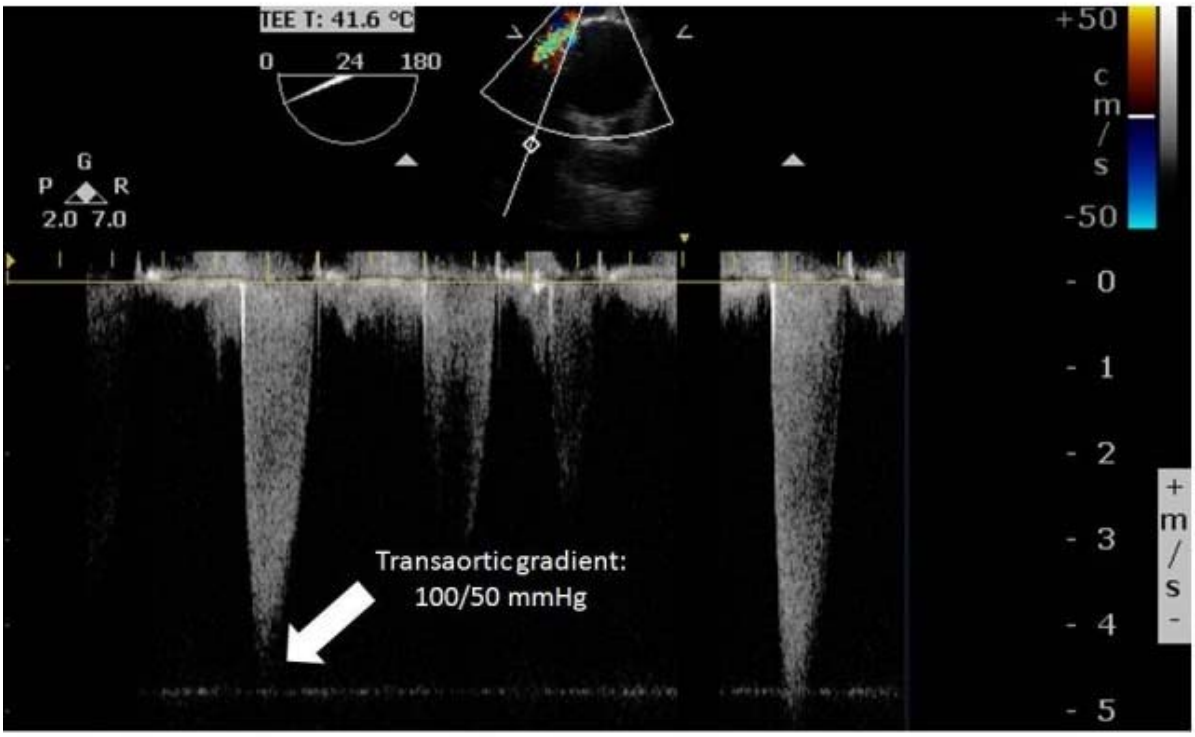
Heart valve thrombosis is a rare but serious complication, associated with partial or complete disability of the prosthetic valve functions by a non-infective material. While prosthetic mitral valve thrombosis in left-sided heart valves is more frequently encountered, the incidence rate of prosthetic aortic valve thrombosis is 0.5-8% (4). As known, the most common reason of valve thrombosis is insufficient anticoagulant treatment. While the golden standard in valve thrombosis is surgery, thrombolytic therapy has also been effectively used in recent years. One of the most important complications that might occur in patients undergoing thrombolytic therapy is ischemic cerebrovascular event. Therefore, we aimed to present a case in which low-dose, slow-infusion of alteplase was initiated due to prosthetic aortic valve thrombosis, but high-dose thrombolytic therapy was administered after the development of acute ischemic cerebrovascular event during infusion, and recovery was observed without any sequelae. As far as we know, our case is one of the first in the literature where a high-dose thrombolytic therapy is used among patients that presented with stroke during treatment of prosthetic aortic valve thrombosis with thrombolytic agent.



ID: **590**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Oral**

AN UNUSUAL PRESENTATION OF ISOLATED NATIVE TRICUSPID VALVE ENDOCARDITIS CAUSED BY STAPHYLOCOCCUS WARNERI FOLLOWING TATTOOING

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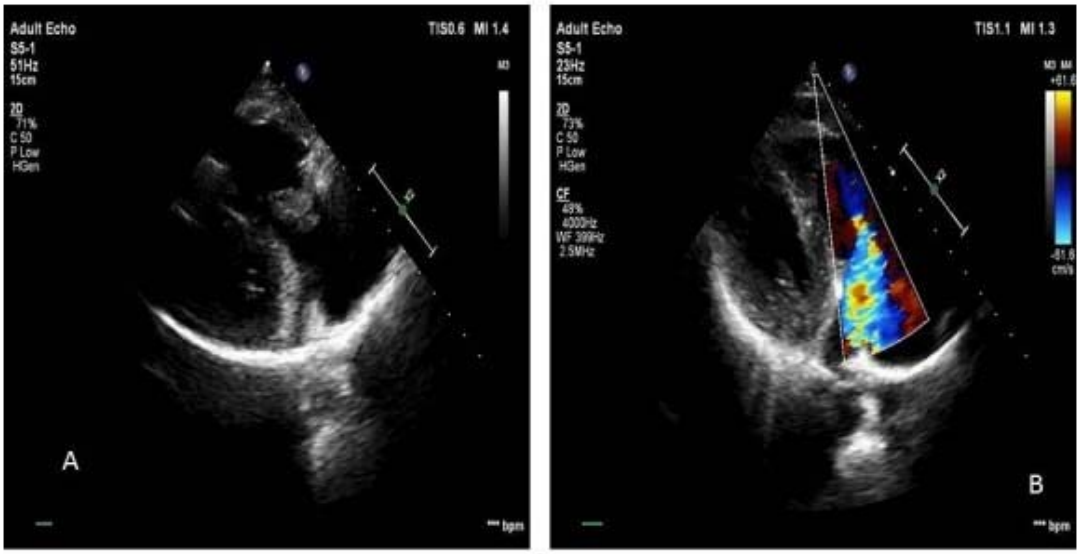
Introduction: Tattooing is becoming more popular, especially among younger age groups, and considered to be more hygienically applied. Nevertheless, a few infective endocarditis (IE) cases have been reported after tattooing, especially when they were done in an uncontrolled environment like home. Herein, we report an unusual case of isolated native tricuspid valve endocarditis (TVE) secondary to tattooing in a patient without known previous valvular or congenital heart disease.

Case: A 34-year-old male, with no related medical history, presented to our hospital with the complaint of high-grade fever, fatigue and significant weight loss for the last 2 months. He denied all high-risk behaviors like alcohol or intravenous drug abuse, recent dental procedures or sexually transmitted diseases. But we learned that he had been tattooed at his friend's house three months ago. For the last two months, he had received multiple courses of antibiotics, to which fever responded initially but reappeared later. Laboratory studies were remarkable for a temperature of 38.5°C, serum CRP level of 121 mg/L and erythrocyte sedimentation rate value of 56 mm/h. Electrocardiogram showed no abnormalities and blood cultures were negative. Besides, both the CT angiogram of the thorax and cranium were in normal limits. Echocardiography demonstrated a large vegetation (25x15 mm) attached to both septal and anterior leaflets of the tricuspid valve with moderate regurgitation. (Figure 1A-B) Also, abscess formation and septic cavities were seen along the moderator band. Transesophageal echocardiography was performed to confirm that there was no other valve involvement before the operation. On day three of admission, surgical resection of the vegetations and repair of the tricuspid valve were performed. Staphylococcus warneri was isolated from the tissue cultures that were taken during the surgery. The postoperative course was uneventful and he is still doing well.

Conclusion: Isolated native TVE is a very rare condition in an immunocompetent adult in the absence of risk factors and high index of suspicion is essential for early diagnosis. Clinicians must keep in mind to search for popular procedures like tattooing or piercing in native TVE, especially in younger age groups.


Adult Echo
TIS0.6 MI 1.4
S5-1
51Hz
15cm
2D
71%
C 50
P Low
HGen
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Adult Echo
TIS1.1 MI 1.3
S5-1
23Hz
15cm
2D
73%
C 50
P Low
HGen
CF
49%
4000Hz
WF 399Hz
2.5MHz
B

ID: **608**

Topic: **Cardiology » Preventive cardiology**

Presentation Type: **Oral**

INCREASED PULSE WAVE VELOCITY AND SUBCLINICAL LEFT VENTRICULAR SYSTOLIC DYSFUNCTION IN PATIENTS WITH THALASSEMIA MINOR

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OBJECTIVE

Thalassemia minor (β-Tm) is a disease caused by the defective production of beta chain of hemoglobin. Although clinical presentation is usually asymptomatic or mild anemia; it is thought that the disease may be associated with metabolic syndrome, lipid level and cardiovascular events in recent years. Myocardial performance index is an echocardiographic parameter which is used for determining subclinical systolic dysfunction. Pulse wave velocity (PWV), a noninvasive method of measuring arterial stiffness, is an independent predictor of cardiovascular events and mortality. In this study, we aimed to investigate pulse wave velocity and myocardial performance index in thalassemia minor patients whether they have susceptibility to cardiac events or not.

METHOD

In this study 70 patients who applied for premarital screening and diagnosed with thalassemia minor were compared with 71 healthy controls. Those with under age 18, known systemic disease that may affect the measurement, malignancy, smokers and body mass index over 30 kg/m2 were not included. Pulse wave velocity was measured with an oscillometric device and by the same operator and transthoracic echocardiography was performed for all the participants.

RESULTS

The study group was consisted of 36 male (50.7%) and 34 female (49.3%) and control group 32 male (45%) and 39 female (55%). PWV was measured as 5.4 ± 0.6 m/s in the control group and 6.0 ±1.1 m/s in thalassemia minor group. PWV was significantly higher in thalassemia minor group ($p<0.001$). Myocardial performans index was also higher in this group and the difference was statistically significant, too ($p<0.001$).

CONCLUSION

Although thalassemia minor prognosis is well defined, patients have an increased risk of cardiac events. For this group, cardiology should be included in routine controls and patients should be informed.

ID: **623**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Oral**

SOMETIMES, A HIGH DOSE OF INTRACORONARY NITRATE CAN CHANGE EVERYTHING

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OBJECTIVE: Coronary vasospasm plays an important pathogenetic role, not only in variant angina but also in a spectrum of acute ischemic heart disease. Among the possible vascular components contributing to the spasm, the endothelium may play an important role. Coronary vasospasm may also be the only valid mechanism in cases of acute coronary syndrome with varying frequency.

METHOD and RESULT: A 61-year-old male patient with coronary disease story before applied emergency service with approximately 1 hour chest pain. The patient diagnosed with acute inferior myocardial infarction in the emergency service, is taken to the catheter laboratory for primary percutaneous coronary intervention. Angiographically, a subtotal appearance resembling a typical plaque rupture was observed in the right coronary artery. Intracoronary 400 microgram nitrate was applied to evaluate vessel diameter and to decrease the blood pressure values of the patient who is in a hypertensive state. The second 400 micrograms and subsequent 200 micrograms additional nitrate were applied with the change in the patient's symptoms and decreased ST segment elevation on electrocardiography. After a total of 1000 micrograms intracoronary nitrate was made, it was observed that the right coronary artery was completely normal. In left coronary artery poses, vessel and stent mismatch was observed in the stent area previously implicated in the circumflex artery. This suggest that the vasospasm mechanism underlies similarly in the previous case.

CONCLUSION: When we suspect vasospasm in acute coronary syndrome, intracoronary high dose nitrate levels may show us that only vasospastic cause lies under the case. It can guide us for treatment by preventing unnecessary intracoronary interventions.

ID: **552**

Topic: **Cardiology » PI for SHD - ASD,VSD,PDA closure**

Presentation Type: **Oral**

OFF-LABEL USE OF CARDIAC SEPTAL OCCLUDER DEVICE FOR AN IATROGENIC RECTOVAGINAL FISTULAE

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Colovaginal and rectovaginal fistulas cause significant and distressing symptoms, including vaginitis, passage of feces through the vagina, and painful skin excoriation. The etiology of rectovaginal fistulas include obstetrical complications, inflammatory bowel disease, post-pelvic malignancies, trauma, and radiation effects.

Surgical correction of rectovaginal fistulae is best approach of treatment. In geriatric women due to high risk of general anesthesia, cardiac occluder device can be used as an alternative choice of therapy. We report an ASD occluder devise was performed to closing iatrogenic rectovaginal fistulae secondary rectal enema in very older comorbid woman .

Case

A 95- years- old female patient with clinic of advanced congestive heart failure and severe pulmonary infection, Alzheimer disease, systemic hypertension was admitted to our intensive care unite. The patient was also connected to mechanical ventilation due to severe hypoxia. After one week postrectal enema Rectovaginal fistulae (1cm diameter in 3cm above vulva) was observed. Due to poor general condition and high-risk of general anesthesia an alternative method to surgical operation, the fistula closed with cardiac Amplatzer ASD occluder device(3 cm) with bemannual method successfully. But the patient died after three weeks because of septic shock.
In our conclusion , cardiac occluder devices could be alternative method to surgical correction.

Discussion

Cardiac occluder devices using for ASD, VSD or PDA closure have now a recognized tool for closure non-septal defects such as Congenital coronary arteriovenous fistula, Pulmonary arteriovenous fistulae or malformations, Rupture of aneurysm of sinus of Valsava, Paraprosthetic leak, Fenestrated Fontan.

Recently these devices are using extracardiac conditions such as gastrogenital and urogenital fistula as a bridge or alternative therapy to surgical corrections.

ID: **60**

Topic: **Cardiology » Percutaneous coronary interventions**

Presentation Type: **Oral**

COMPLICATIONS OF PERCUTANEOUS CORONARY INTERVENTIONS: TWO CASES

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Özel Konya Farabi Hastanesi, Konya, Turkey

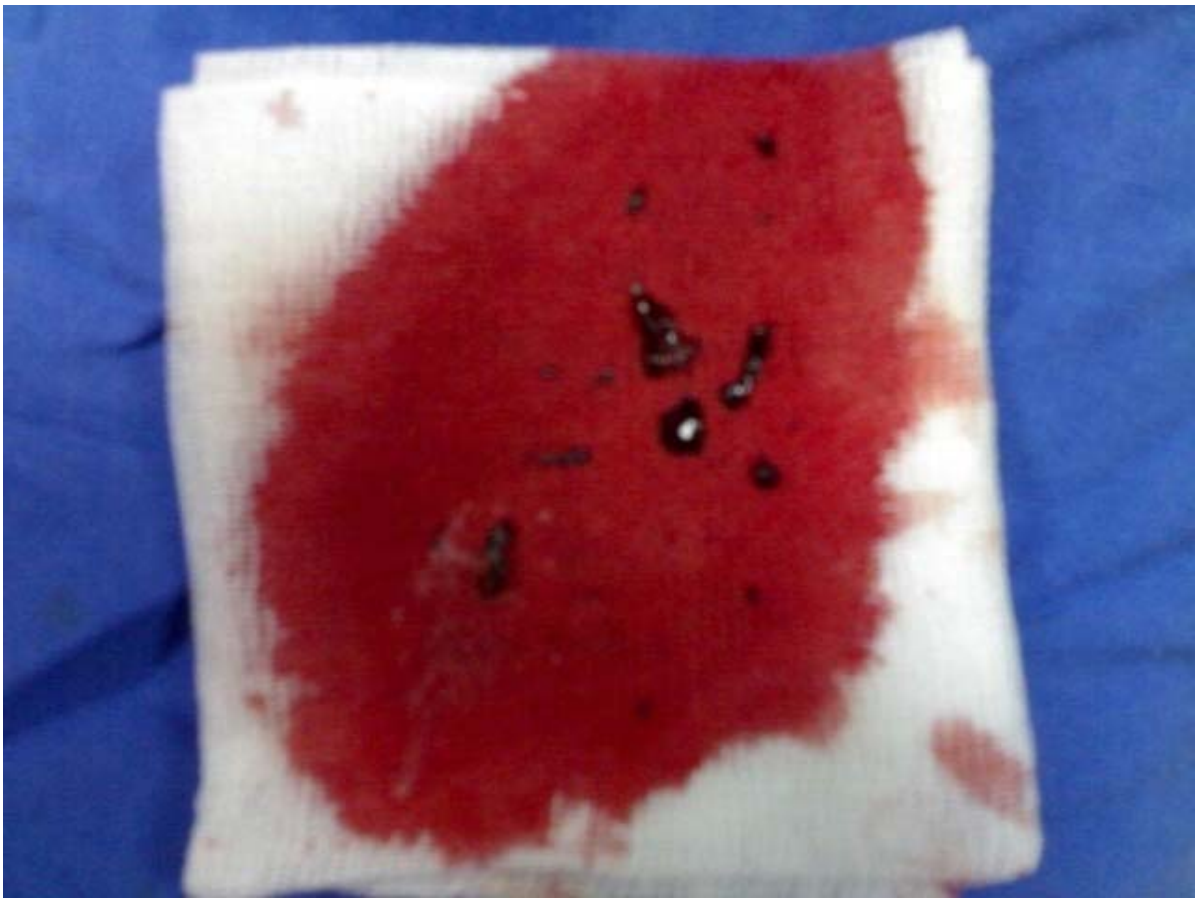
**Corresponding Author (hizirokuyan@gmail.com)*

Complications of Percutan Coronary Intervention Case: 1

A Rare Complication of Percutaneous Transluminal Coronary Angioplasty: Femoral Thromboemboli

A 72-year-old male patient with history of coronary artery disease, hypertension, smoking and hyperlipidemia admitted to the emergency room with shortness of breath. IV diuretic and nitrate therapy was given. Follow-up, cardiac enzymes and troponin elevated. Right femoral approach for performing coronary angiography was used. Osteal left descending artery (LAD) %100, proximal circumflex artery (Cx) %50, distal right coronary artery (RCA) % 60-70 lesions were observed. Measurement of Myocardial Fractional Flow Reserve (Myo FFR) of Cx and RCA was performed. Lesions were found hemodynamically significant. Direct stenting was performed to RCA and Cx lesions. Complete artery opening was achieved. After the procedure the patient was delivered to Coronary Intensive Care Unit. After 15 minutes right leg pain and coldness developed. Patient's right lower extremity distal pulses were not taken. Femoral artery thromboembolism was considered. Right leg arteriography was performed by entering from the right femoral artery. Femoral artery occlusion was detected at the level of the middle segment of femoral artery. We tried to open occlusion with aspiration from the proximal of the arterial occlusion. Blood flow was achieved.

Thromboembolism is a rare clinical problem during percutaneous transluminal coronary angioplasty. But this should be kept in mind. If any thromboembolis is considered arteriography should be performed immediately. Without tissue ischemia urgent percutaneous revascularization or urgent surgery was necessary.



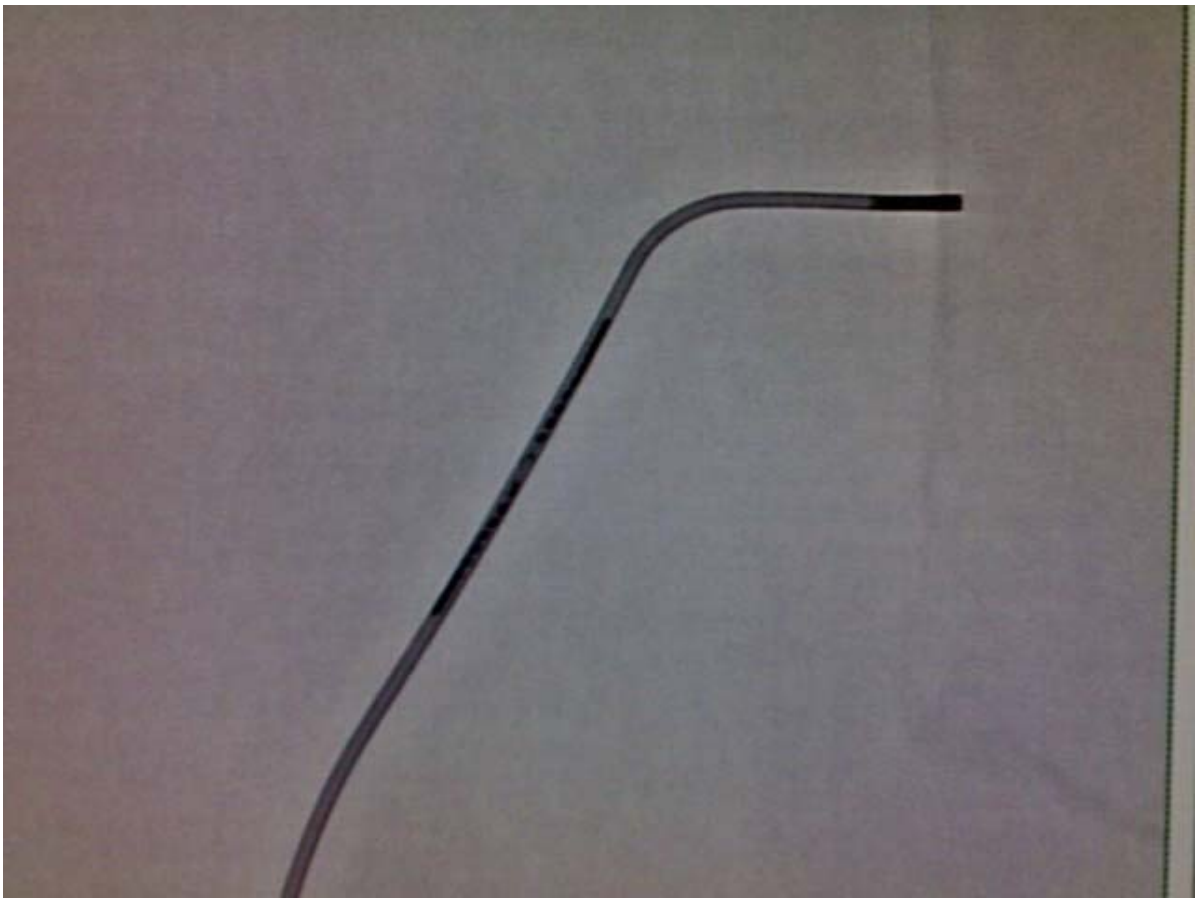
Complications of Percutan Coronary Intervention Case: 2

Fallowing Manipulation on The Catheter Where is The Stent?

A 54-year-old male patient with history of coronary artery disease, CABG, hypertension, smoking and hyperlipidemia was referred to our clinic for elective percutaneous coronary intervention (PCI) to the distal right coronary artery (RCA) stenosis.

The left radial artery was inserted with a 5 French(F) sheath. When engaged to right coronary artery by catheter to prevent dumping, holes were opened on the catheter by needle. 5F Judkins right 4 guiding catheters were placed in the RCA. RCA lesion was passed with 0.014 inc floppy guide wire. RCA lesion was dilated by 2.5/20 mm balloon. Then Xience V 3,5/28 mm drug-eluting stent implantation was decided. While we were advancing stent delivery system, stent was not observed on the system. For this reason, stent delivery system was withdrawn. We controlled stent-delivery system. The stent was not observed on the balloon. Fluoroscopy was applied on the patient. And the stent was also not observed in the patient. Catheter could be passed through a 0.038 inch guide wire. 0.038 inch guide wire was easily moved in the catheter. Finally fluoroscopy was used to check the guiding catheter. Stent was seen in the guiding catheter (Fig.1). Then stenting of right coronary artery was performed with a new 5F catheter without opening hole on that. Any complications did not happen and complete artery opening was achieved.

This case demonstrates that when a stenting is planned by especially 5F or smaller catheters, manipulations on these catheters should be avoided due to stucking or not advancing of the stent.



Oral Presentation Session

Pearls from Cardiovascular Nursing Practice

Date: 01.11.2020 Time: 18:00 -19:00 Hall: 5

ID: **636**

Topic: **Cardiology » Cardiovascular Nursing**

Presentation Type: **Oral**

OPERATING ROOM PREPARATION AND FLOW IN MINIMAL INVASIVE DIRECT CORONARY ARTERY BYPASS SURGERY

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**Corresponding Author (yasemincanatan.deu@gmail.com)*

Avoiding sternotomy facilitates patients' acceptance of surgery, healing quickly and feeling of well-being after surgery. CABG via lateral thoracotomy can be performed safely even multivessel diseases by using full arterial grafts.

6-8 cm long, anterolateral thoracotomy starting below the nipple in males and under the breast in females was performed and thoracic cavity was accessed through fifth intercostal space. Set-up of retractor system and harvesting for skeletonised LITA has importance for good results. We here describe step by step preparation of operating room and surgical instrumentation.

ID: **833**

Topic: **Cardiology » Cardiovascular Nursing**

Presentation Type: **Poster**

INVESTIGATION OF STUDIES IN TURKEY DELIRIUM RELATING TO THE HEART SURGERY

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[2]*Dokuz Eylül Üniversitesi, Hemşirelik Fakültesi, Cerrahi Hastalıkları Hemşireliği Öğretim Üyesi, İzmir , Turkey*

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OBJECTIVE: In this systematic review, in Turkey between the years 2010-2020 was carried out in order to examine the studies related delirium in cardiac surgery.

METHOD: In this literature review, Academic Search Complete (EBSCO), MEDLINE, PubMed, Science Direct, National Academic Network and Information Center (ULAKBİM), Google Academic Search electronic databases were scanned. In the study, the studies that have been published in the last ten years (2010-2020) using the keywords 'delirium and nursing', 'postoperative delirium', 'delirium after open heart surgery', the publication language of which is Turkish or English and whose full text has been reached, were selected. A total of 12 national and international studies and reviews were reached, and these studies constituted the sample of the study.
Results: The studies were published 58.3% (n: 7) in Turkish and 41.6% (n: 5) in English. The studies are 41.6% (n: 5) descriptive studies, 33.3% (n: 4) experimental studies and 25% (n: 3) rewiev articles. It was determined that 25% (n: 3) of the studies were done retrospectively and 53.8% (n: 7) were done prospectively. A total of five studies, three of which are descriptive research and two of which are rewiev, were conducted in nursing. In studies of cardiac surgery associated with delirium in nursing in Turkey it has not been demonstrated in experimental research.

Publications in Turkish; performed by doctors examining the frequency and risk factors of delirium in open heart surgery, the effectiveness of dexmedetomidine in delirium, the effect of on-pump and off-pump heart surgery on delirium development, the relationship between delirium and nitrite oxide are studies.

Publications in English; examining the relationship between cobalamin deficiency and delirium, the relationship between dopamine and delirium, post-operative delirium incidence, prevalence and risk factors are studies. In the reviews, risk groups for delirium in cardiac surgery, delirium preventive interventions, nursing care of patients with delirium before and after surgery, and delirium diagnosis methods were examined. In general, the sample group of the studies consists of elderly patients.

Conclusion: In the examination results of the majority of delirium in cardiac surgery with studies performed in our country it was found to be descriptive research. It has been found that there is no experimental research in nursing. Therefore, it is thought that conducting experimental studies on delirium in nursing in cardiac surgery will contribute to the literature and clinical applications.

Left Ventricular Asist Device and Cardiac Transplantation

ID: **393**

Topic: **Cardiology » Chronic heart failure**

Presentation Type: **Poster**

HOME MONITORING IS ASSOCIATED WITH FEWER GASTROINTESTINAL BLEEDING EVENTS FOLLOWING ASSIST DEVICE IMPLANTATION

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Background: Patients (pts) treated with a continuous flow left ventricular assist device (LVAD) are at increased risk for both bleeding and thromboembolic events. Maintenance of oral anticoagulation (AC) in the therapeutic range is difficult to achieve.

Methods: Increased frequency of international normalized ratio (INR) home monitoring (HM) decreases the incidence of gastrointestinal bleeding and thromboembolic events (stroke, pump thrombosis) compared to standard of care (SOC).

Methods: We analyzed the efficacy of outpatient AC monitoring in consecutive pts who underwent VAD implantation at our institution between 2008-2018. Time in therapeutic range (TTR) was defined as percent of time with INR 2.5-2.8. HM pts had biweekly INR measurements using the Coagucheck XS ROCHE, while SOC pts had INR measured every 1-3 weeks. Gastrointestinal bleeding (GIB) and thromboembolic events were assessed by retrospective blinded chart review. Logistic regression was used to model the impact of TTR on the risk of GIB and THROMB.

Results: There were 85 pts: 44 in HM and 40 in SC arm with similar characteristics. SOC patients were more likely to have ischemic cardiomyopathy (63% vs 30%, p=0.006) and an LVAD (60% vs 25%, p=0.002). The use of HM was associated with a 19.7% reduction in the risk of GIB (8.8% vs 28.5%, p=0.043) and a trend towards lower risk of THROMB (6.8% vs 14.9%, p=0.19). HM pts had significantly longer TTR (52±20% vs 39±22%, p=0.007). Each percentage increase in TTR was associated with a 5.2% decrease in the risk of GIB [Odds Ratio (OR) 0.95, 95% Confidence Interval (CI) 0.91-0.99, p=0.009] even after adjustment for aspirin use and monitoring duration (OR 0.95, 95% CI 0.91-0.99, p=0.020). There was a similar decrease in the risk of overall bleeding (OR 0.94, 95% CI 0.90-0.98, p=0.008).

Conclusions: Increased frequency of home INR monitoring achieved a higher TTR and was associated with a 20% reduction in risk of gastrointestinal bleeding.

ID: **214**

Topic: **Cardiology » Dilated Cardiomyopathy**

Presentation Type: **Poster**

DILATED CARDIOMYOPATHY IS A SERIOUS AND RARE COMPLICATION OF THE LITTLE-KNOWN CHRONIC HYPOCALCEMIA

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Dilated cardiomyopathy (CMD) is a serious and rare complication of the little-known chronic hypocalcemia, the etiologies of which are multiple and dominated by hypoparathyroidism. The peculiarity of this CMD entity comes from the fact that it is reversible to different degrees after the correction of hypocalcemia, this reversibility depends on the earliness and effectiveness of its early management of any hypocalcemia. We report two cases of complicated post-surgical hypoparathyroidism of CMD.
Observation 1: patient aged 60 years who had an anterior history of thyroidectomy 15 years ago. Hospitalized for generalized seizures without context of apyrexia. On examination finds an Arterial Tansion = 100/60 mm Hg and systolic murmur in the mitral focus 3/6 th and a sign of positive chvostek and keychain.
Echocardiogram: sinus without repolaisation disorder
Echotransthoracique: objective a dilated cardiomyopathy with a global hypokinesia FEVG = 40%.
Observation 2: 30-year-old patient who had a thyroidectomy as ANTECEDANTS 7 years ago, admitted for a tetany crisis, whose examination found a BP = 90/50 with a blast at the tricuspid focus 2/6 th.
Echocardiogram: shows a sinus tachycardia with a negative lateral t.
Echotransthoracic: CMD with global hypokinesia with FEVG = 30%.
The evolution was marked by an improvement in the LVEF of the first patient goes to 50% under optimized medical treatment with a correction of hypocalcemia, while for the second patient her condition remained stationary without improvement in the LVEF.

ID: **85**

Topic: **Cardiology » Chronic heart failure**

Presentation Type: **Poster**

BONE METABOLISM DISORDERS IN PATIENTS WITH CHRONIC HEART FAILURE BEFORE AND AFTER HEART TRANSPLANTATION

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Objective: to estimate bone metabolism disorders in patients with heart failure (HF) before and after heart transplantation (HT).

Methods: We examined 70 patients aged 53.6±9.6 years, 7 (10 %) of them were female. Dilated cardiomyopathy (DCMP) was the cause of HF in 23 (33 %), ischemic CMP – in 29 (41%), other CMP - in 18 (26%) of 70 patients. In 54 of 70 pts HT was performed in terms of 1 to 28 (average 10.6±8.1) months before, another 16 pts were put in to the "waiting list" of HT. 41 (59%) of 70 pts had hypertension, 13 (19%) had diabetes melitus, and 25 (36%) had chronic kidney disease (CKD). We performed in all pts transthoracic echocardiography(TTEchoCG), daily monitoring of electrocardiogram (DMECG), 6-minute walking test, dual-energy x-ray absorptiometry (DXRA), morphometry, FRAX questionnaire, Minnesota Living with Heart Failure Questionnaire (MLHFQ) for objectification of the functional status of the circulatory system, detection of disorders of bone metabolism, control of efficacy and safety of drug and physical aspects of rehabilitation in all included in the study. Laboratory diagnostics included: blood sample test, biochemical blood analysis with determination of lipid spectrum and glucose, interleukin-6 (IL-6), C-reactive protein (CRP), determination of calcium-phosphorus metabolism (total and ionized calcium, creatinine, phosphorus), determination of bone metabolism (alkaline phosphatase, osteocalcin, β-crossLaps).

Results and discussions: According to DXRA data, 78% of patients with HF before HT had ostopenia, osteoporosis was observed in 22% of the 16 pts, asymptomatic vertebral fractures were diagnosed in 11% of patients according to morphometry. Before surgery, all individuals with impaired bone metabolism had a low fracture risk calculated using the FRAX tool and averaged 2.1±1.2 points. After HT, osteopenia was detected in 73% of 54 pts, osteoporosis - in 19%, asymptomatic vertebral fractures - in 16%. According to the FRAX scale, only 8% of 54 pts after HT had a moderate risk of fractures, and it was low in all those who had asymptomatic vertebral fractures according to morphometry. All fractures in patients before and after HT developed in persons who did not have osteoporosis, in 83% of cases - against a background of minor osteopenia in 1-2 segments, in 13% of cases – with normal values of bone mineral density (BMD) in all analyzed areas. All posttransplant fractures were 2 times more likely to develop within 1 year after surgery.

Conclusion: Patients with heart failure before and after heart transplantation need a comprehensive assessment of metabolic disorders of bone tissue

ID: **395**

Topic: **Cardiology » Chronic heart failure**

Presentation Type: **Poster**

CENTRAL LINE ASSOCIATED BLOOD STREAM INFECTIONS IN INOTROPE DEPENDENT PATIENTS WAITING FOR HEART TRANSPLANTATION

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Background: Patients with advanced heart failure waiting for heart transplantation characterized as Status 1A require high-dose inotropes. Central line-associated bloodstream infection (CLABSI) is a severe complication in such patients.

Methods: We retrospectively studied 95 patients listed as Status 1A between 2003 and 2018 at our institution. Characteristics of the CLABSIs were further assessed. Logistic regression analysis was used to identify predictors of CLASBIs.

Results: The majority of our patients were men (82%). At the time of listing, mean age was 47±10 years and there were 52 (51%) past smokers with 27 (27%) diabetics. Ischemic disease was the etiology of cardiomyopathy in 39 (39%) patients and implantable defibrillators were present in 50 patients. The mean creatinine at time of listing was 1.37±0.3 mg/dL, while the mean BMI was 28±4 kg/m2. There were 14 (16%) patients who experienced a total of 19 CLABSIs. Among those with CLABSIs, a median of 6 PAC procedures (mean 7.3±5.3) were performed, with 44% placed in the internal jugular vein, 44% in subclavian vein and the remainder in the femoral vein. Patients who developed CLABSIs had catheters in place for a mean duration of 158±90. Co-agulase negative staphylococcus (CNS) was the pathogen in the majority of the cases. CLABSIs and Staphylococcus aureus was the cause for another 6 CLABSIs . The mean time to first CLABSI was 86±77 after being listed as Status 1A. The mean duration to CLABSI from catheter placement was mean: 15±11. Age, history of smoking, obesity, diabetes and renal dysfunction were not associated with CLABSIs.

Conclusions: Among heart failure patients listed as Status 1A for heart transplantation, nearly a quarter of all patients developed CLABSIs, leading to a downgrade of the status on the transplant waiting list. CNS was the most common pathogen.

ID: **83**

Topic: **Cardiology » Cardiac Resynchronization Therapy**

Presentation Type: **Poster**

VITAMIN D DEFICIENCY IN PATIENTS WITH HEART FAILURE AND METABOLIC SYNDROME

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BACKGROUND: Currently, more than 1 billion people are suffering from vitamin B deficiency worldwide. According to traditional estimates and the recommendations of the Institute of Medicine of the USA (IOM), vitamin D deficiency is defined as a concentration of 25 (OH) D in serum of less than 20 ng / ml, severe deficiency in a concentration of less than 10 ng / ml. Vitamin D deficiency is a concentration of 25 (OH) D in the range of 21-29 ng / ml.

METHODS: The study was conducted on the basis of the City Clinical Hospital No 9 among patients admitted on an emergency basis with symptoms of congestive heart failure. 16 people were examined, of which 14 people (87.5%) with heart failure 2 stage B, 2 people (12.5%) with heart failure 2 stage A, 14 people (87.5%) had metabolic syndrome. The study group included 11 women (68.75%) and 5 men (31.25%). The average age was 70.0 years. Patients were tested for vitamin D levels (in 100% of cases), PTH (75%), calcium (93.75%), magnesium (93.75%), objective status assessment, MT, GFR in 100% of cases.

RESULTS: The rate of magnesia for people living in our region was 0.82-1.02 mmol / L, the rate of calciumemia was 2.24-2.44 mmol / L. In 5 cases (35.7%), an increase in blood magnesium levels was detected. The level of calcium went beyond the norm in 40% of the studied. When calculating the body mass index (BMI), there was a weight deficit in 1 patient (6.25%), normal body weight in 2 patients (12.5%), overweight in 1 patients (6.25%), and grade I obesity in 2 patients (12.5%), grade II obesity in 5 patients (31.25%), grade III obesity in 5 patients (31.25%). Among patients with a BMI> 25 kg / m2, severe vitamin D deficiency was detected in 5 subjects (31.25%), deficiency - in 7 patients (43.75%)

CONCLUSIONS: It has been established that chronic heart failure is accompanied by a deficiency of vitamin D. A pattern of progressive decrease in GFR with severe vitamin D deficiency has been identified. Significant changes in the level of calcium and magnesium in the blood have not been identified in CHF 2 A and 2 B stages. Low serum vitamin D levels are associated with overweight and metabolic syndrome.

ID: **385**

Topic: **Cardiology » Acute heart failure**

Presentation Type: **Poster**

ENERGY DRINK ASSOCIATED CARDIOMYOPATHY

Muhammet Uyanık, Ömer Gedikli, Ufuk Yıldırım

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Uncontrolled consumption of energy drinks is becoming widespread in the young population. Basic components of energy drinks include caffeine, guarana, taurine, ginseng, and sugar. Although the amount of amino acid and caffeine in it is low, toxic level (4 g / day caffeine) can be exceeded with excessive consumption. It has been associated with cardiovascular events such as tachycardia and myocardial infarction in the literature. However, there exists limited evidence regarding its effects on acute heart failure and cardiomyopathy.

In the presenting case, a 24-year-old male patient was admitted to the emergency department with complaints of dyspnea, which had gradually increased over the past week. Her medical history and family history were unremarkable. It was learned that he had consumed 8-10 cans/day (3.5-4 Liters/day) energy drink during the two weeks prior to the hospital admission. He stated that dyspnea and fatigue occurred three days after the first energy drink consumption. Physical examination revealed orthopnea, bilateral diffuse rales, and 2+ pretibial edema. ECG recording showed sinus rhythm with a heart rate of 110 beat/minute and T wave inversion in leads V4-V6. Chest X-ray demonstrated a consolidated area in the right lower zones. Thorax computed tomography revealed pulmonary edema and pleural effusion. Echocardiography showed that left ventricular EF was 25% with global left ventricular hypokinesia and dilated left ventricular dimensions. The patient was diagnosed as acute heart failure and hospitalized. The etiologic investigation was performed after diuretic treatment and the relief of symptoms. Coronary angiography demonstrated normal coronary arteries. On cardiac MRI, the left ventricle was dilated and the systolic function was reduced, and no pathological enhancement was observed (Figure 1-A). Three months later, there was no improvement in echocardiographic parameters at the control visit.

This case report and many previous studies support a possible link between caffeinated energy drinks and cardiovascular events. Physicians should be aware of the risk of cardiomyopathy and arrhythmogenicity associated with the energy drink, and the use of these products should be questioned, especially in the young age group with unexplained heart failure. Further studies are required to better understand the relationship between energy drink consumption and cardiomyopathy.

ID: **848**

Topic: **Cardiology » PI for SHD - ASD,VSD,PDA closure**

Presentation Type: **Poster**

PERCUTANEOUS CLOSURE SHOULD BE GIVEN A CHANCE IN PATENT DUCTUS ARTERIOSUS WITH SEVERE PULMONARY HYPERTENSION

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Abstract:

Angiographic determination of morphological structure plays an important role in device selection during transcatheter Patent Ductus Arteriosus (PDA) closure. PDA can be closed surgically and percutaneously. Unless irreversible pulmonary vascular disease develops, it is recommended to close the defect to protect the patient from possible infective endocarditis, even if the shunt is small. However, in patients with high irreversible pulmonary arterial pressure, response to selective vasodilator therapies for pulmonary arterial hypertension should be reevaluated for closure. Today, the most commonly used methods for PDA closure are coil and PDA closing devices (exp ADO-1 and ADO-II).

Case:

A 24-year-old female patient was admitted to our clinic with dyspnea on exertion. There was a continuous murmur on the pulmonary focus. Transthoracic echocardiography showed ejection fraction of 63%, moderate tricuspid valve regurgitation (2/4), and pulmonary artery was measured as wide (33mm). In the parasternal short axis image, a large PDA (19 mm) was detected.

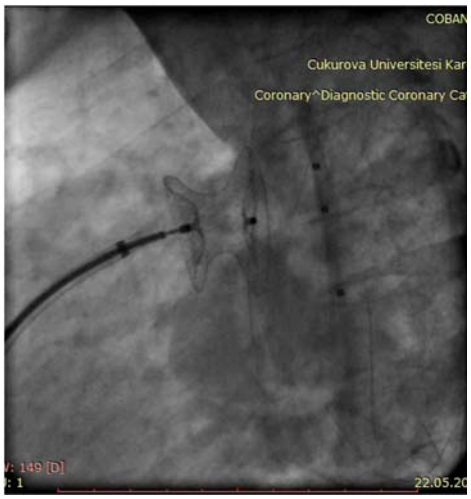
Results:

In echocardiography, pulmonary artery systolic pressure was measured 110 mmHg. Then, we has done right heart catheterization, we calculated mean PAB at 65 mmHg and pulmonary vascular resistance (PVR) at 76 dyne / sec / cm-5. PAH specific treatment (Endothelin Receptor Antagonists) was started the patient. Two months later, pulmonary artery systolic pressure decreased to 50 mmHg on echo and 35mmHg on catheterization. Then, PDA closure was planned. Because of the very large PDA, we planned to close with ASD devices (22 mm) (Figure 1). When the patient developed sudden dyspnea 6 hours after the procedure, the closure device was embolized to the right pulmonary artery in the scopy image. It was decided to take the device with the snare (Figure 3). The patient underwent PDA closure surgery. After surgery, pulmonary hypertension treatment was continued for 6 months. No increase was observed in PABs in control echocardiographic follow-up. The patient's dyspnea complaint regressed.

Conclusions:

Each congenital heart diseases with high pulmonary artery pressure case should not be considered inoperable. It should be kept in mind that it may be reversible PAH and benefit from PAH-specific therapy. In case of improvement in hemodynamic and echocardiographic data after PAH-specific treatment, patients should be reevaluated for percutaneous PDA and ASD closure.

Figure one: PDA was closed with ASD closing device.



ID: **508**

Topic: **Cardiology » PI for SHD - ASD, VSD, PDA closure**

Presentation Type: **Poster**

AN UNUSUAL TRANSCATHETER CLOSURE OF THE POST-MI VSD

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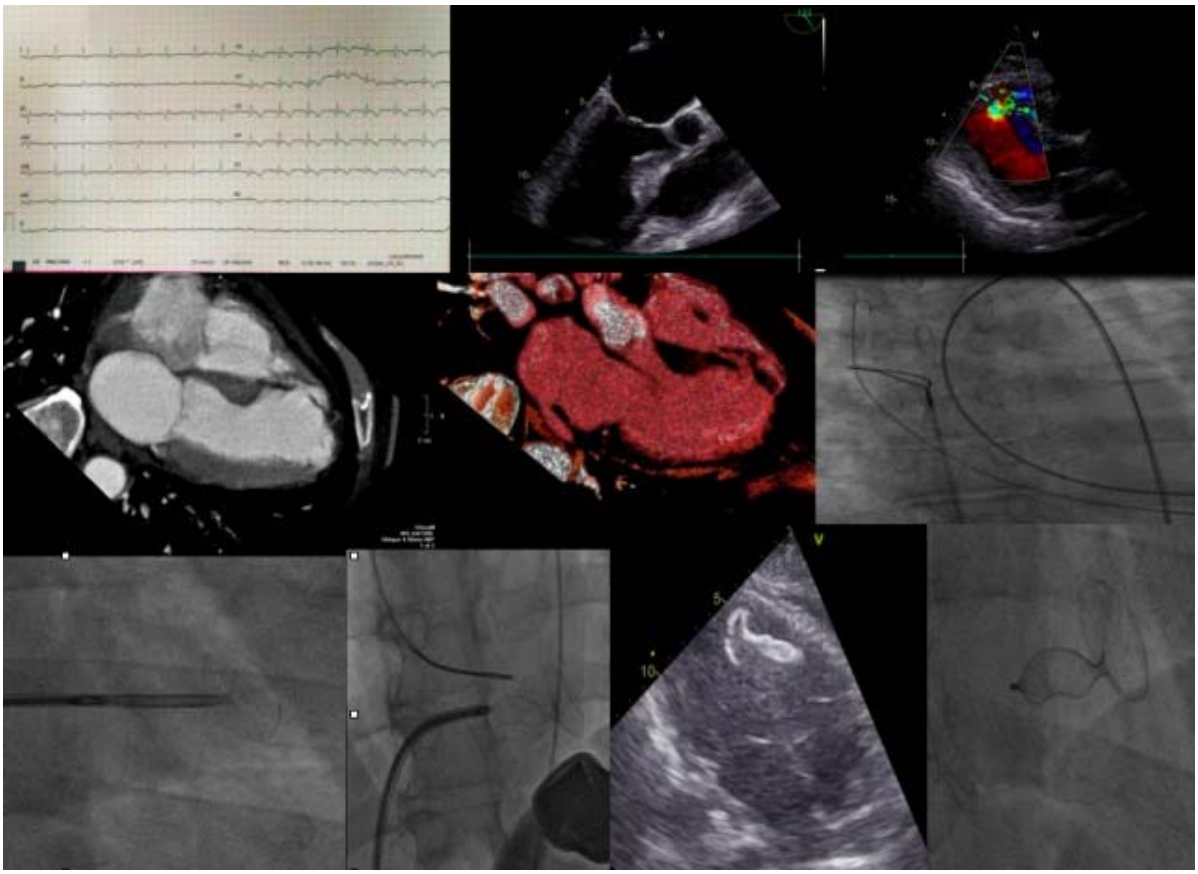
A 75-year-old male patient was referred to our clinic for treatment of advance heart failure due to recurrent extensive anterior wall MI. On physical examination, BP was 80/50 mmHg, heart rate was regular and 100 beats/min and diffuse lung crackles were present in both lungs. And also, a new pan-systolic severe murmur was detected. Transthoracic Echocardiography (TTE) and Transesophageal Echocardiography (TEE) showed LVEF %40, anteroseptal akinesia and an apical VSD approximately 10 mm length with color doppler. Cardiac CT angiography analysis revealed there was a 13x18 mm defect with thin in the mid and apical muscular septum. In addition, the right ventricular side of the defect was limited to the trabecular muscles. Our heart team decided to transcatheter closure of VSD because of high surgical risk for this clinical situation. The left ventriculography was performed with a pig-tail catheter showed the presence of a large, muscular VSD in the anterior apical location on RAO projection. After ventriculography, a hydrophilic guide wire was advanced from left ventricle to the right ventricle via right judkins catheter through the defect. After that hydrophilic guide-wire was exchanged with 0.035 inch 300 cm guide wire. This exchange wire was snared in the SVC and extruded via the right femoral vein to form an arteriovenous wire loop. 9 Fr. long delivery sheath was advanced from the right femoral vein to the right ventricle (RV), and crossed the VSD to LV on the wire. A 15 mm ASD closure device was loaded and advanced into LV. The distal disc was opened without any problem and pulled back onto the left ventricular side of the septum under echocardiographic guidance. However, proximal disc opening was not optimal due to the trabecular muscles of the right ventricular. The proximal part of the device did not take its optimal shape so this part was stretched out oddly. Nonetheless, when the Minnesota maneuver was performed under the fluoroscopy, the device did not move and was stable. So, the device was then released. The procedure was successfully terminated without any complication. TTE demonstrated that the device was in a good position with minimal residual shunt. The patient was discharged three days after the procedure. In the control TTE performed one month after the procedure, the intracardiac shunt almost completely disappeared.



ID: **805**

Topic: **Cardiology » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Poster**

PENTRAXIN 3 LEVELS AND CORRELATION WITH DISEASE SEVERITY IN PATIENTS WITH ACUTE RHEUMATIC FEVER

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Objective: The acute phase protein, pentraxin 3 (PTX3) plays an important role in the regulation of the inflammatory response and activation of innate immunity. PTX3 may also be involved in the pathogenesis of acute rheumatic fever (ARF) due to its effect on immune and inflammatory responses. This study investigated serum PTX3 levels during acute episode of ARF and their relationship with disease severity.

Materials and Methods: The study included 52 ARF patients experiencing an acute episode and 22 healthy children. ARF patients were classified into 3 groups based on the clinical course: isolated arthritis (n=17), mild carditis (n=19), moderate/severe carditis (n=16). Blood samples were collected from all patients before treatment and from the healthy children in the control group to measure PTX3 levels. PTX3 was measured using sandwich enzyme-linked immunosorbent assay method.

Results: Plasma PTX3 levels were significantly higher in ARF patients compared to the control group (4.7±5.2 and 1.2±1.7 ng/ml, $p<0.001$). Subgroup analysis of serum PTX3 levels in ARF patients with isolated arthritis, mild carditis, and moderate/severe carditis (3.2±3.1 ng/ml, 4.3±5 ng/ml, 6.7±6.6 ng/ml, respectively) showed that serum PTX3 was significantly higher in the moderate/severe carditis group compared to the other groups ($p<0.05$). Analysis of echocardiographic data showed that serum PTX3 was positively correlated with LVEDD, LAD, and mitral A velocity and negatively correlated with E/A ratio ($p<0.05$; $r=0.231$, 0.402, 0.562, -0.586, respectively).

Conclusions: High PTX3 level during an acute episode of ARF may help predict the clinical course and the severity of accompanying carditis. However prospective studies with larger sample sizes are needed.

ID: **98**

Topic: **Cardiology » Peripheral arterial diseases**

Presentation Type: **Poster**

ACUTE UPPER EXTREMITY ARTERIAL OCCLUSION IN A YOUNG PATIENT

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Acute artery occlusion is a real emergency that threatens the vitality of the extremity and the patient.

A 38-year-old female patient who had no previous risk factors other than smoking history was admitted to the emergency department with sudden onset complaints of pallor, coldness, and pain in her right hand. It was learned that there was a history of recurrent miscarriage in her history, but these abortions were not investigated adequately. On arrival at the emergency department, blood pressure 125/67mmHg, heart rate 68 / min; physical examination of the right radial, ulnar and brachial artery pulses were not palpable. Upper extremity computed tomography angiography performed with a preliminary diagnosis of acute arterial occlusion revealed distal occlusion of the right brachial artery, and preliminary diagnoses of thrombosis and dissection were consulted for cardiovascular surgery for further investigation and treatment. The patient underwent emergency endarterectomy by cardiovascular surgery. The patient was referred to the cardiology department because of the persistence of the complaints in the post-op follow-up and the absence of palpable arterial pulses. The cardiac evaluation revealed normal sinus rhythm on electrocardiogram and transthoracic echocardiography showed no signs of cardioembolic focus. Upper extremity angiography revealed total occlusion of the brachial artery at mid-level. The lesion was passed with 0.35 wires and exchanged with 0.14 wire under the support of microcatheter. Followed by dilatation with a 30x10mm balloon at 10-15 atm pressure. In case of insufficient flow in the distal region, 2 mg t-pa was pushed to the intense thrombus and then the infusion catheter was left in the lesion area and the patient was followed up with iv thrombolytic therapy at a dose of 1 mg/hour for 24 hours. At the end of the infusion, the control angiography procedure was repeated and the occlusion level decreased distally and residual 80% diffuse stenosis showed partial recanalization. In the follow-up of the patient, it was observed that her complaints decreased, her hand warmed and the radial and ulnar pulses could be taken even though weakly and the capillary filling time was measured <3,5 sec. It was planned oral anticoagulant therapy with warfarin at the target level of INR was 2-3. In the outpatient clinic follow-up, the right-handed patient was consulted to the physical therapy and rehabilitation department for rehabilitation purposes. The etiology research of the patient was performed with genetic and rheumatology tests. In the rheumatology and thrombophilia panel, no pathology was observed; but in the genetic tests plasminogen activator inhibitor -1 (PAI-1) /serpine 1 gene mutation analysis was homozygous and methylenetetrahydrofolate reductase (MTHFR) gene mutation analysis was heterozygous. The patient was then consulted with the Medical Genetics department for genetic and additional advice. Acute arterial occlusion requires a multidisciplinary approach in addition to urgent intervention. It was reported as acute artery occlusion of upper extremity rate in all acute extremity occlusions is 17%. The most common cause in elderly patients is atherosclerotic thrombosis, while embolism and nonatherosclerotic thrombosis are the common etiologies of young patients. The exclusion of genetic mutations is particularly important in young patients as in our patient.


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ID: **531**

Topic: **Cardiology » Interventions for peripheral arterial diseases**

Presentation Type: **Poster**

PERCUTANEOUS OPENING OF THE EXTERNAL ILIAC AND SUPERFICIAL FEMORAL ARTERY TOTAL OCCLUSION THROUGH THE ANTERIOR TIBIALIS ARTERY WHICH IS A VERY RARE ACCESS METHOD

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A 59-year-old male patient with a history of coronary artery disease that has a complaint of pain in the right leg for the last 6 months was admitted to our clinic. Physical examination revealed that right femoral artery pulses were weakened. In the lower extremity doppler usg, there was no flow in the mid-right superficial femoral artery and suspicion of Right external Iliac Artery Occlusion. Observations from the results of Lower Extremity Angiography on the patient shows that: subtotal occlusion of the right external iliac artery((REİA),total occlusion of the right superficial femoral artery (RSFA) and right popliteal artery which is filled with collateral arteries.(MOVIE 1-4) Percutaneous peripheral arterial intervention was planned with the decision of the cardiology and cardiovascular surgery council. For that purpose, a 7f sheat was inserted from the left femoral artery and by the right coronary artery catheter was returned to the left main iliac artery. 5f sheat was placed from right tibialis anterior artery thanks to opaque was given under scopy through that catheter(MOVIE 5-6) .The distal abdominal aorta was reached by passing the SFA and EIA lesions with retrograde route with 0.035 135 cm microcatheter support and 0.035 190 cm hydrophilic guide.(MOVIE 8) The true lumen was confirmed with opaque which was given from the microcater and then the hydrophilic wire was changed with 0.018 190 cm wire which is exstrasupport feature . A 5*200 mm balloon was dilated at 8-10 atm from EİA to popliteal artery. (MOVIE -9) A 7*100 mm self-expendable stent was implanted in the EIA lesion site. (MOVIE 13). Complete openness was achieved in the EIA and SFA (MOVIE 14-15).

ID: **99**

Topic: **Cardiology » Interventions for peripheral arterial diseases**

Presentation Type: **Poster**

ACUTE MESENTERIC ISCHEMIA IN ELDERLY PATIENT WITH ATRIAL FIBRILLATION

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Atrial fibrillation (AF) is an arrhythmia whose prevalence increases with age and leads to serious clinical problems. Although the prevalence of AF is 4 per thousand in the general population, the prevalence of over 75 years old has been reported as 11.6%. The problems related to atrial fibrillation are failure to provide atrial contribution to cardiac output, risks of continuous anticoagulation and embolic, especially stroke complications. The most common cause of mesenteric ischemia is arterial occlusion, while other causes are non-occlusive mesenteric ischemia and venous occlusion. Mesenteric arterial embolism must be considered in atrial fibrillation patients. A 70-year-old man with known chronic atrial fibrillation presented to the emergency department with abdominal pain for one day. The patient's history revealed that the new group of oral anticoagulant therapy was started but he did not use his medication regularly. On arrival, his laboratory parameters Wbc 7.47; Hb 13.5; platelet 265; CRP 20; BUN 43; Creatine 0.79; AST 34; ALT 19; cardiac enzymes were negative. Mesenteric computed tomography angiography (CTA) performed on suspicion of acute mesenteric ischemia revealed a thrombus in the approximately 2.5 cm segment that filled the lumen after approximately 6 cm of origin from the superior mesenteric artery. Contrast agent due to collateral filling was observed in later arterial segments. The patient was consulted to our cardiology department. His electrocardiogram showed atrial fibrillation with 97 /min heart rate and transthoracic echocardiography showed ejection fraction 50-55%, mild MR, TR, and biatrial dilatation. After the percutaneous selective angiography of the mesenteric artery revealed a lesion causing 100% stenosis following the jejunal branch of the superior mesenteric artery, the lesion was passed with 0.14 wires. Then the lesion was pre-dilated with a 50x 20 mm non-compliant balloon. Thrombus aspiration was attempted to the intense thrombus load lesion but the thrombus did not present. 60x29 mm Omnilink Elite Vascular Balloon-expandable peripheral stent was placed in the lesion. Uncomplicated complete patency was achieved. Regular anticoagulant therapy for a lifetime was planned for the patient. As a result, anticoagulation in atrial fibrillation is required in high-risk patients. Atrial fibrillation rarely presents with mesenteric ischemia clinic and blood flow in mesenteric ischemia needs to be restored immediately. And percutaneous angiographic procedures can be used to provide this blood flow safely.


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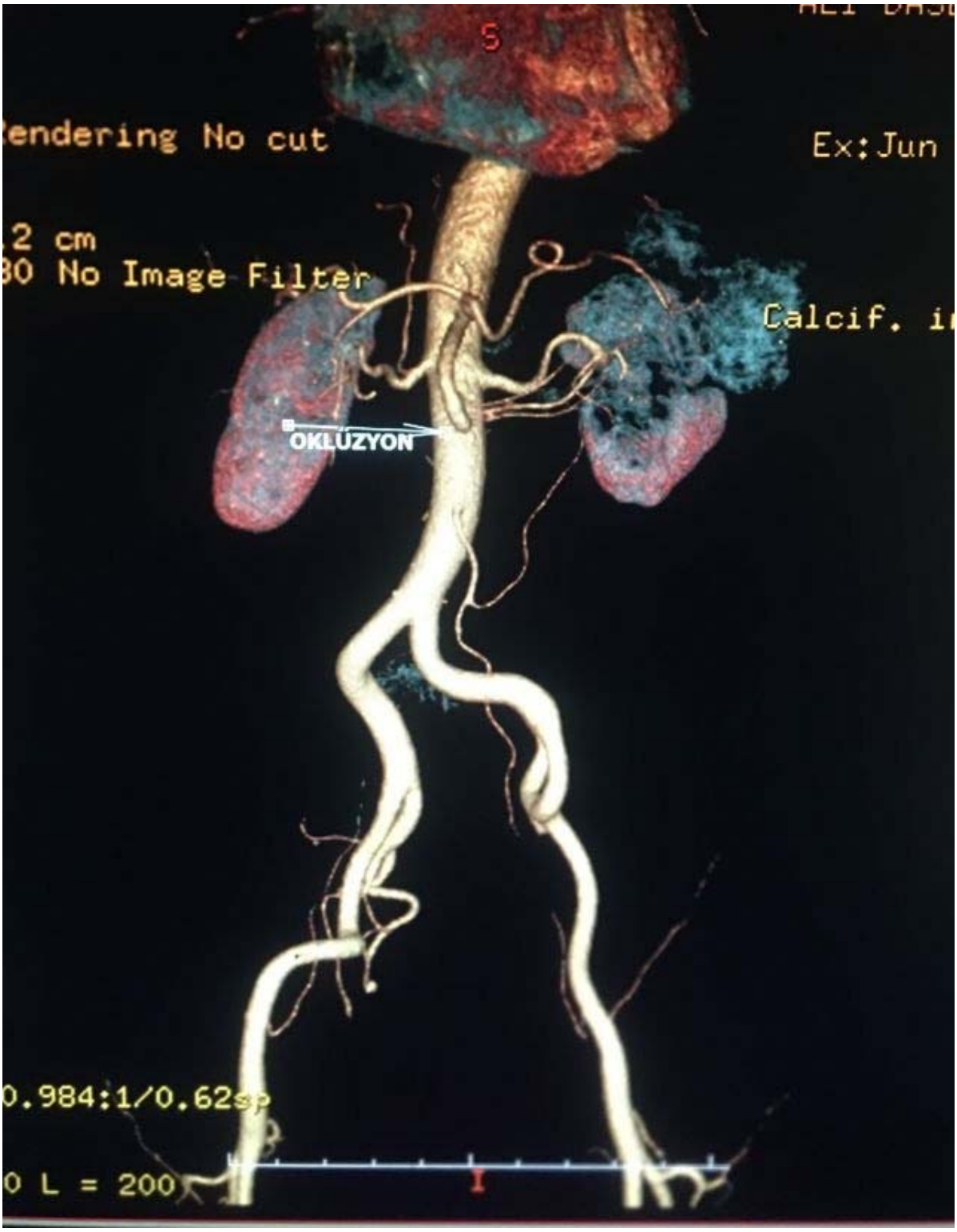
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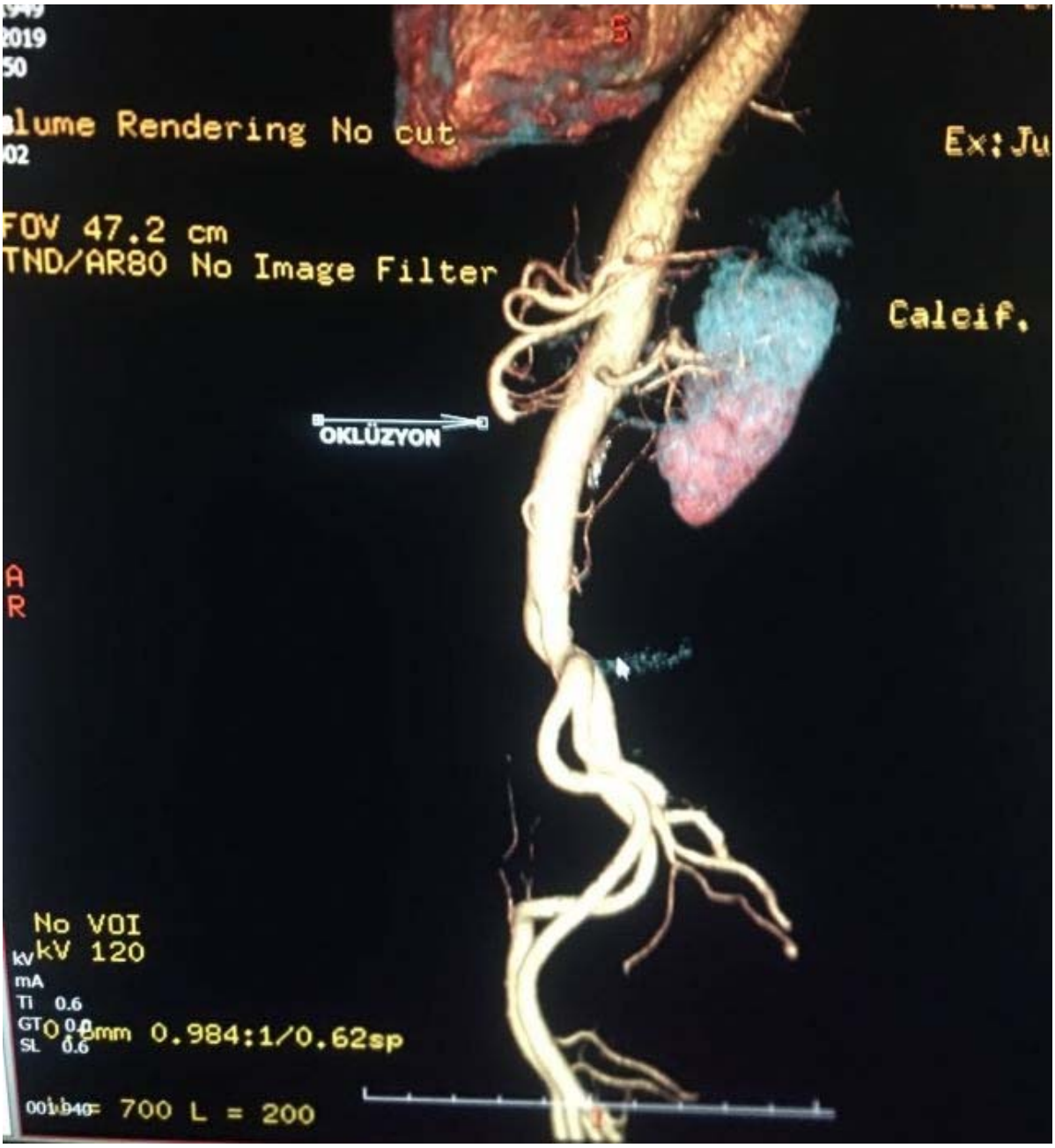
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ID: **110**

Topic: **Cardiology » Diseases of aorta**

Presentation Type: **Poster**

PERFECT COLLATERALS HIDING COARCTATION OF AORTA

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INTRODUCTION: Coarctation of the aorta is a relatively common defect that accounts for 5-8% of all congenital heart defects. The diagnosis of coarctation of the aorta may be missed and diagnosis is often delayed until the patient develops congestive heart failure, which is common in infants, or hypertension which is common in older children.

CASE: Here we present a case of 36 year-old man admitted to ophthalmology clinic with double and reduced vision accompanied by headaches. His ophthalmologic examination was compatible with severe hypertensive retinopathy and he was referred to the cardiology clinic. His blood pressure measured higher on upper extremities than lower extremities. An ejection-type systolic murmur heard at the base, and between the spine and the left scapula. Femoral pulses are weaker than the radial pulses, and when felt simultaneously with the radial pulse, the femoral pulse is delayed. His ECG revealed LV hypertrophy and showed signs of LV strain. Transthoracic echocardiography showed left ventricle hypertrophy with a normal left ventricle ejection fraction. There is not any associated congenital heart and valve abnormalities found. From suprasternal window narrowing within the lumen of the proximal descending thoracic aorta seen and a gradient at the site of coarctation detected. Computed tomographic angiography planned which define the anatomy clearly showing coarctation after left subclavian artery and show collateral vessels perfectly that connect arteries from the upper part of the body to the vessels below the level of coarctation. (Figure 1,2,3 and 4). Cardiac catheterization performed, elevations of left ventricular and ascending aortic peak systolic pressures with a 25-mmHg peak-to-peak systolic pressure gradient across the coarcted segment are found and after discussed in a heart team meeting surgery planned for the patient.

CONCLUSION: Collateral arteries are perceptible in over 50% of coarctation patients, and are prominent over the edges of the scapulae and paravertebral spaces. Our patient was asymptomatic probably due to dilated intercostal and internal mammarian collateral vessels.

DISCUSSION: Treatment results (stenting or surgery) of coarctation are better than for most other forms of critical congenital heart disease. Most patients do well after the obstruction is removed. If untreated, main inevitable complications are stroke, early-onset coronary artery disease, brain aneurysm and aortic rupture. Mortality rate in patients in whom coarctation of the aorta is not treated is 90% by age 50 years, with a mean age of 35 years. We should keep in mind that a good physical examination will help us to diagnose coarctation of aorta even collateral vessels perfectly developed. Another important point is to follow up patients carefully especially for restenosis and resting or exercise hypertension even they are fully treated.

Keywords: Aortic coarctation, Collaterals, Hypertension

ID: **355**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Carotid Artery Disease**

Presentation Type: **Poster**

THE RADIAL ARTERY; A NEW PATCH FOR CAROTID ENDARTERECTOMY? CASE REPORT

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OBJECTIVE

Atherosclerosis is the most common cause of carotid artery stenosis. Stroke is the second most common cause of cardiovascular mortality.

The most common site of atherosclerosis is carotid bifurcation with carotid baroreceptors and internal carotid artery. The main purpose of carotid endarterectomy is to protect the brain from ischemic damage. Carotid endarterectomy is divided into two as eversion and traditionally. Both methods used patch or primary closure. Internal carotid arteries with a diameter of 0.5 cm or more are known to be primary closure. Autologous patch (saphenous vein) or prosthetic patch (dacron) is used for patch closure. In recent publications, it has been reported that eversion and patch use have the lowest restenosis rates. In this study, we aimed to emphasize the use of radial artery as a new patch in endarterectomy.

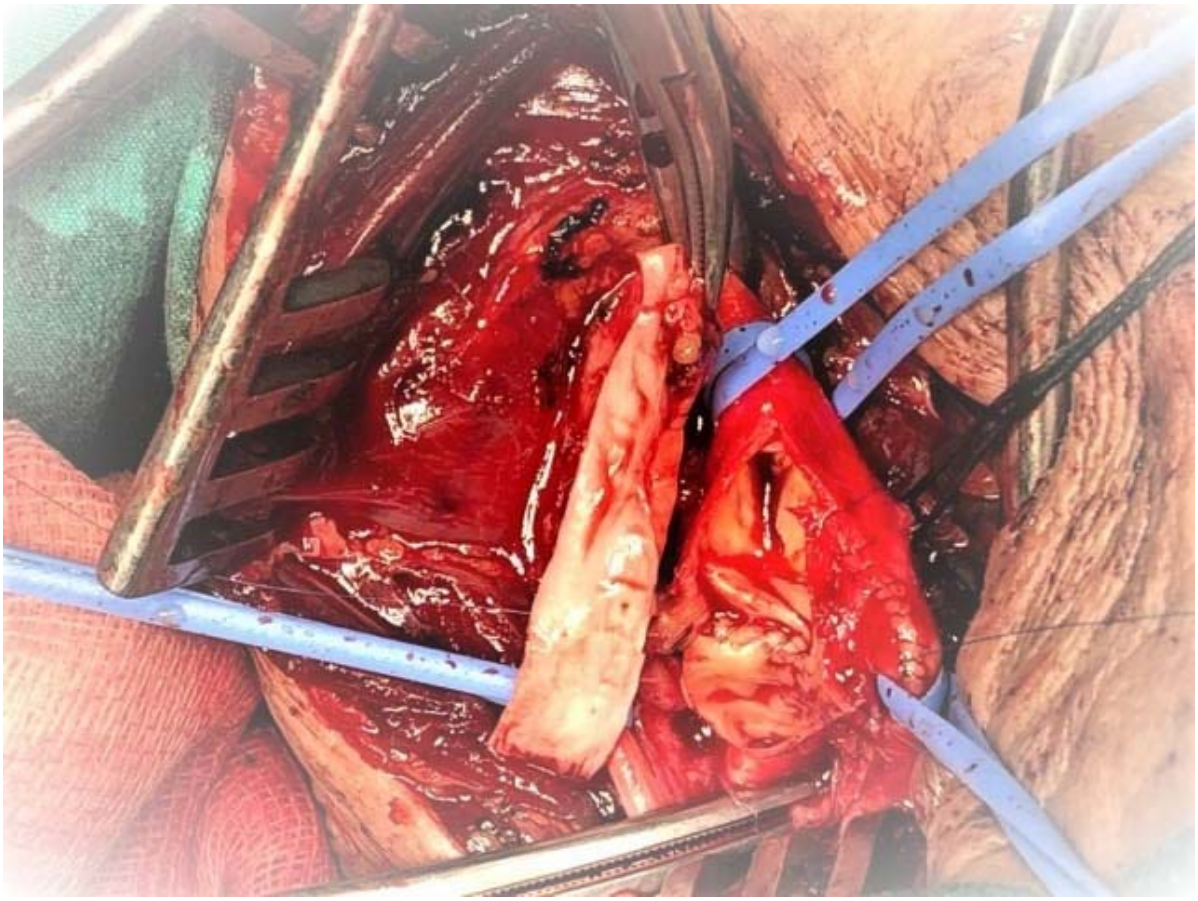
CASE

An 80-year-old male patient had plegia on the left side. 80-90% lesions in the right internal carotid artery and 70-80% lesions in the left internal carotid artery. After giving the necessary information to the patient and his relatives, the patient was referred to interventional radiology because of his age. When the patient and his relatives wanted to have open surgery, firstly, the patient's right carotid artery was patch-plasty with evacuation and dacron using local anesthesia only. After 3 months, control carotid doppler ultrasound was taken. Since there was no restenosis, endarterectomy preparations were started for the left carotid artery. Radial artery was planned to be used as a carotid patch. This time the patient underwent a procedure under cervical block. Radial artery was removed with local anesthesia. It was kept in a special solution to avoid spasm. Anastomosis was performed with 6/0 prolene. During the procedure, it was seen that the radial artery leaked less blood compared to the cases where the previous dacron patch was used (Image 1).

CONCLUSION

Radial artery is known to be used frequently in coronary artery surgery. In the literature, it has been used in popliteal trifucation, but it has not been used as a patch in the carotid artery.

We think that using the radial artery as a carotid patch, carotid artery patency rates will be very good and less bleeding will be observed during the operation, thus it will be more beneficial in terms of mortality and morbidity than other patches.



ID: **573**

Topic: **Cardiology » Metabolic Syndrome**

Presentation Type: **Poster**

RELATIONSHIP BETWEEN BILIRUBIN LEVELS AND CAROTID INTIMA-MEDIA THICKNESS IN POLYCYSTIC OVARY SYNDROME PATIENTS

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Objective:

To evaluate the plasma bilirubin levels and carotid intima-media thickness (IMT) in patients with polycystic ovary syndrome (PCOS).

Methods:

Thirty eight patients with a diagnosis of PCOS aged younger than 40 year and thirty seven healthy women were included in the study. Serum bilirubin levels and other blood parameters in at least 12-hour fasting states were determined. Carotid artery ultrasonography imaging was performed by the same experienced operator. Average of left and right carotid arteries was taken as one variable.

Results:

Serum bilirubin levels were significantly lower (p: 0,03)in PCOS patients. In addition, IMT in this group was significantly higher. There was a negative correlation between bilirubin levels and carotid intima-media thickness (r = 0368, P : 0.02)

Conclusions:

We found bilirubin levels associated IMT in polycystic ovary syndrome patients. Therefore, adverse effects of oxidative stress were shown on vessel structure.

ID: **731**

Topic: **Cardiology » PI for SHD - ASD,VSD,PDA closure**

Presentation Type: **Poster**

PERCUTANEOUS CLOSURE SHOULD BE GIVEN A CHANCE IN PATENT DUCTUS ARTERIOSUS WITH SEVERE PULMONARY HYPERTENSION

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Abstract: Angiographic determination of morphological structure plays an important role in device selection during transcatheter Patent Ductus Arteriosus (PDA) closure. PDA can be closed surgically and percutaneously. Unless irreversible pulmonary vascular disease develops, it is recommended to close the defect to protect the patient from possible infective endocarditis, even if the shunt is small. However, in patients with high irreversible pulmonary arterial pressure, response to selective vasodilator therapies for pulmonary arterial hypertension should be reevaluated for closure. Today, the most commonly used methods for PDA closure are coil and PDA closing devices (exp ADO-1 and ADO-II).

Case: A 24-year-old female patient was admitted to our clinic with dyspnea on exertion. There was a continuous murmur on the pulmonary focus. Transthoracic echocardiography showed ejection fraction of 63%, moderate tricuspid valve regurgitation (2/4), and pulmonary artery was measured as wide (33mm). In the parasternal short axis image, a large PDA (19 mm) was detected.

Results: In echocardiography, pulmonary artery systolic pressure was measured 110 mmHg. Then, we has done right heart catheterization, we calculated mean PAB at 65 mmHg and pulmonary vascular resistance (PVR) at 76 dyne / sec / cm-5. PAH specific treatment (Endothelin Receptor Antagonists) was started the patient. Two months later, pulmonary artery systolic pressure decreased to 50 mmHg on echo and 35mmHg on catheterization. Then, PDA closure was planned. Because of the very large PDA, we planned to close with ASD devices (22 mm) (Figure 1). When the patient developed sudden dyspnea 6 hours after the procedure, the closure device was embolized to the right pulmonary artery in the scopy image. It was decided to take the device with the snare (Figure 3). The patient underwent PDA closure surgery. After surgery, pulmonary hypertension treatment was continued for 6 months. No increase was observed in PABs in control echocardiographic follow-up. The patient's dyspnea complaint regressed.

Conclusions: Each congenital heart diseases with high pulmonary artery pressure case should not be considered inoperable. It should be kept in mind that it may be reversible PAH and benefit from PAH-specific therapy. In case of improvement in hemodynamic and echocardiographic data after PAH-specific treatment, patients should be reevaluated for percutaneous PDA and ASD closure.

ID: **136**

Topic: **Cardiology » Acute Coronary Syndromes**

Presentation Type: **Poster**

A CASE REPORT LEFT VENTRICULAR TRUE ANEURYSM AND PERICARDIAL EFFUSION FOLLOWING MYOCARDIAL INFARCTION

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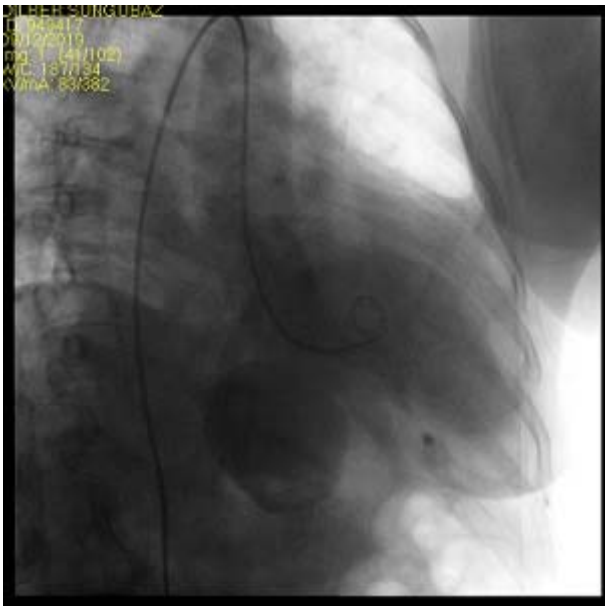
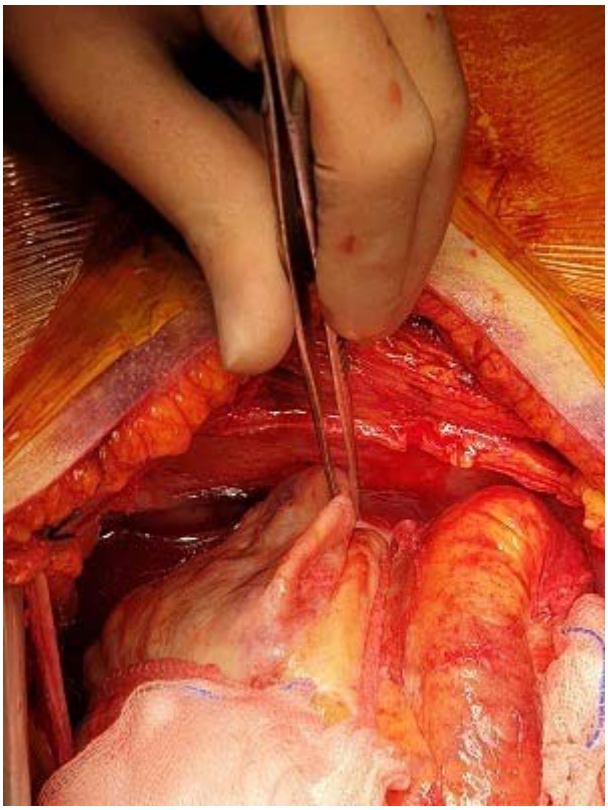
OBJECTIVE: In this article, we aimed to draw attention to a true aneurysm associated with pericardial effusion and a late complication of myocardial infarction in a patient with pericardial effusion who admitted to the emergency department with dyspnea.

METHODS: An 80-year-old female patient was admitted to the emergency department of our hospital with the complaints of chest pain and dyspnea for the last month. The patient was also conscious and oriented. Blood pressure was 110/70 mmHg and heart rate was 100 beats /min. In the ECG, the QS pattern was detected in inferior derivations and troponin was 0.332 ng / mL in laboratory tests. Two-dimensional transthoracic echocardiography revealed a 20 mm pericardial effusion behind the posterior wall of the left ventricle and an aneurysmatic appearance in the posterobasal region of the left ventricle. Pericardiocentesis was performed by subxiphoidal approach in catheter laboratory and the amount of drainage was 1000 mL. Coronary angiography performed on the second day of admission showed total occlusion of the circumflex artery and diffuse coronary artery disease and left ventriculography showed aneurysmatic structure in the left ventricular posterobasal region. (Figure 1A) One day after pericardiocentesis, pericardial fluid accumulation was observed by transthoracic echocardiography. The patient was evaluated in the joint case council of cardiology and cardiovascular surgery. In the council; CABG operation and aneurysmectomy was decided. CABG (AO-SAFEN-LAD, AO-SAFEN-OM) operation was performed. In the same session, an aneurysmectomy was performed and a 7x4 cm true aneurysm was removed from the posterolateral wall. (Figure 1B) The patient did not have any cardiac problems in the postoperative period.

DISCUSSION: Another complication after myocardial infarction is mechanical complications apart from important complications such as myocardial dysfunction, heart failure, arrhythmia. Left ventricular true aneurysms and pseudoaneurysms are high-mortality complications of myocardial infarction. It should be kept in mind that the underlying cause may be aneurysm which is a late complication of myocardial infarction in a patient with pericardial effusion detected in emergency department.





ID: **529**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Poster**

SUCCESSFUL PCI FOR ACS WITH ANOMALOUS ORIGIN OF THE CIRCUMFLEX CORONARY ARTERY

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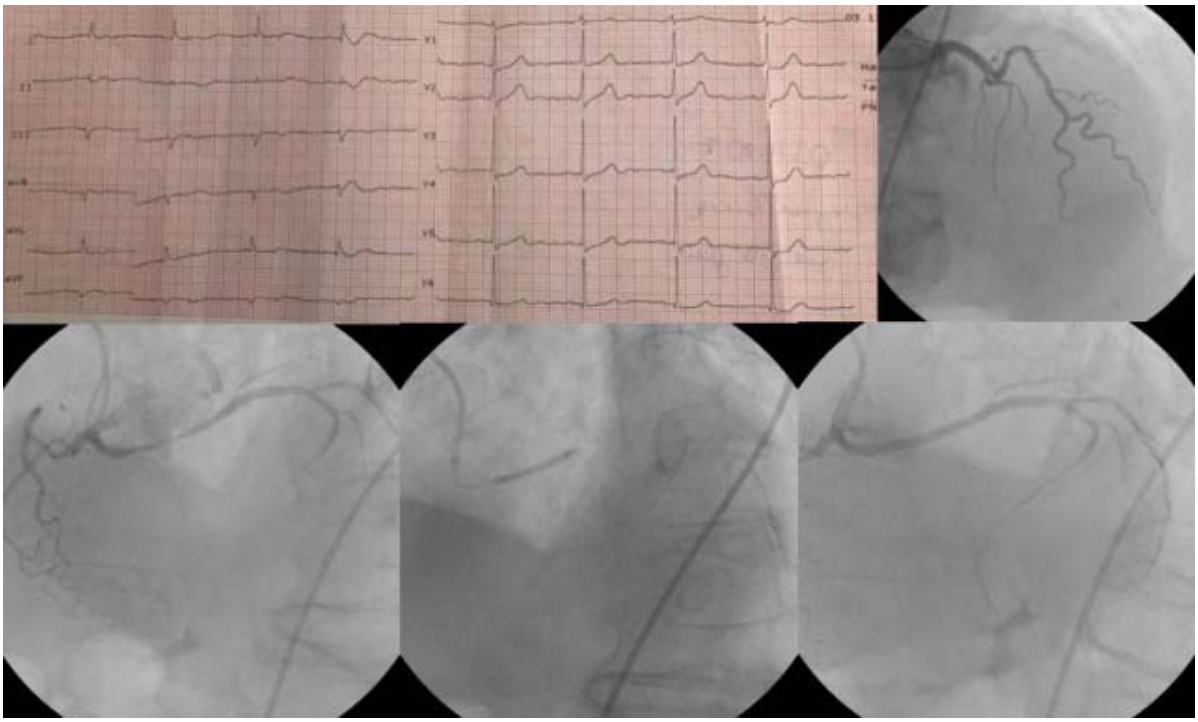
The incidence of coronary artery anomalies in patients undergoing coronary angiography varies from 0.6% to 1.5%. The occurrence of an acute coronary syndrome (ACS) with an anomalous connection of coronary artery identified as a culprit artery is very exceptional. This relationship may lead to delay in coronary reperfusion time in some anatomical forms. We present a case of an 76-year-old male patient who was diagnosed with NSTEMI and underwent a successful PCI with stenting of LCx arising from the right sinus of valsalva through the femoral route.

A 76-year-old man was admitted to our emergency room with chest discomfort, shortness of breath and cold sweating who has as cardiovascular risk factor CAD equivalent diabetes. On his physical examination bilateral crackles were noted below to half in both lungs and BP was 80/50 mmHg. Rest ECG recorded a sinus rhythm at 55 bpm, with negative T waves of inferior leads and minimal ST segment depression in the v2-v3 leads. Transthoracic echocardiography revealed a regional hypokinesia in the infero-posterior segments of the left ventricle with an estimated LVEF of 35%. High sensitive troponin I was too high at >50.000 pg/ml (normal range = <36 pg/ml). An early invasive approach was reasonable for this patient. Coronary angiography showed atherosclerotic plaques on type I dual LAD, but circumflex was not visualized in the left coronary system. RCA visualized diminitive but we saw that significant lesions in proximal LCx which was arising from a separate ostium located in adjacent to the right aortic sinus. The LCx was selectively cannulated with 6Fr. AR-2 guiding catheter. Then the lesions were crossed with PT2 hydrophilic moderate support guidewire successfully. Balloon angioplasty was performed with a 2,0x20 mm Maverick balloon catheter (Boston scientific) and Xience 3,0x24 mm DES was deployed at 16 atm at the proximal lesion finally. There was no complication at the end of the intervention. The patient was followed-up with medical therapy and was discharged with clopidogrel (75 mg/day), acetylsalicylic acid (100 mg/day), perindopril (5 mg/day), metoprolol succinate (25 mg/day) atorvastatin (40 mg/day) without any adverse cardiac event. Interventional cardiologists should be aware of coronary artery anomalies and know how to deal with these abnormalities in order to avoid prolonged processing time and further radiation exposure.



ID: **473**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Poster**

A CASE OF CONCOMITANT LEFT AND RIGHT CORONARY OCCLUSION: COMBINED MYOCARDIAL INFARCTION

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In clinical practice, simultaneous thromboses lesions are generally not expected in the right and left coronary systems. A 39-year old male patient admitted to the emergency room with severe chest pain of 1-hour onset. ECG showed normal sinus rhythm with 70 heart bpm and ST segment elevation was detected in the inferior and anterior leads (Figure 1). Emergency coronary angiography was performed due to a diagnosis of simultaneous acute inferior and anterior myocardial infarction. Angiography showed that total occlusion was detected in the proximal left anterior descending artery (LAD) and a significant lesion was detected in the right coronary artery (RCA) (Figure 2). Primary direct stenting was performed to the both lesions. Acute coronary syndromes may present with different ECG findings. Simultaneous elevations of anterior and inferior leads are rarely detected. Here, we present a case of combined acute coronary syndrome.

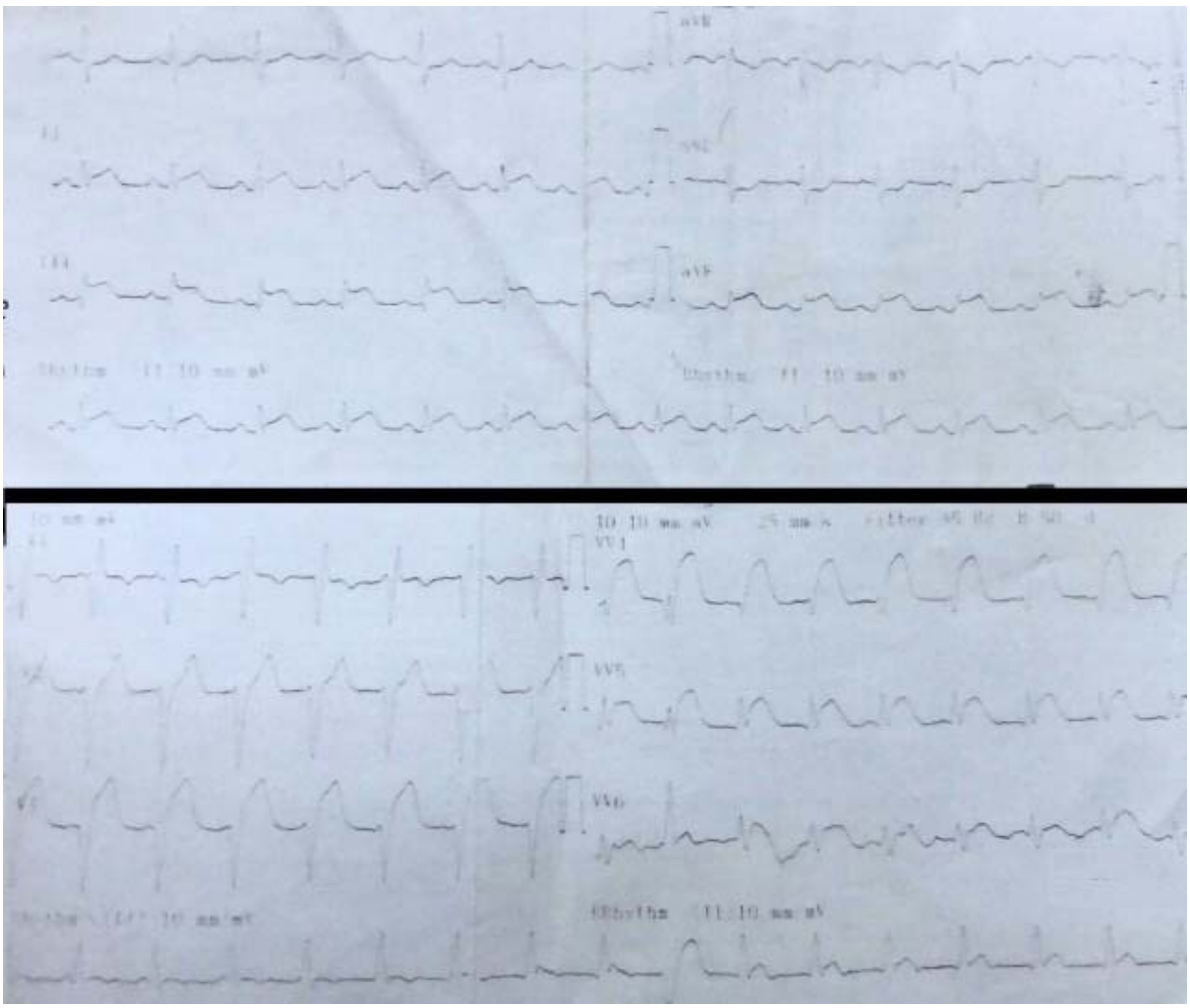

Figure 1: ST segment elevations in leads II, III, aVF, and V1-5 at presentation (anterior and inferior leads)

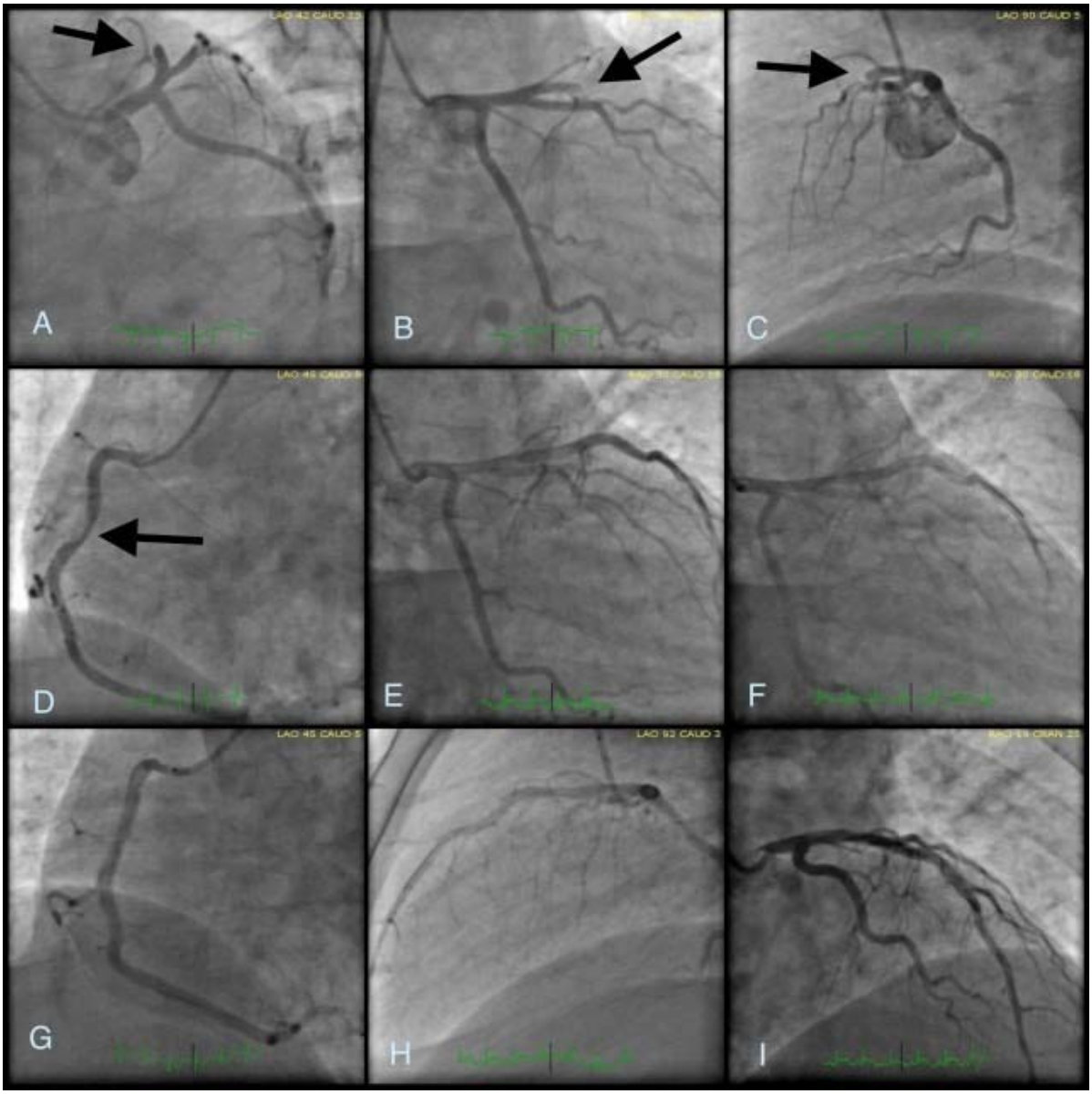

Figure 2: A, B, C and D: The image of angiography during acute STEMI and lesions were marked with black arrows E, F, G, H and I: The image of left and right coronary system after complete revascularization

ID: **374**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Poster**

UNPROTECTED LEFT MAIN CORONARY INTERVENTION DUE TO ACUTE ANTERIOR MYOCARDIAL INFARCTION

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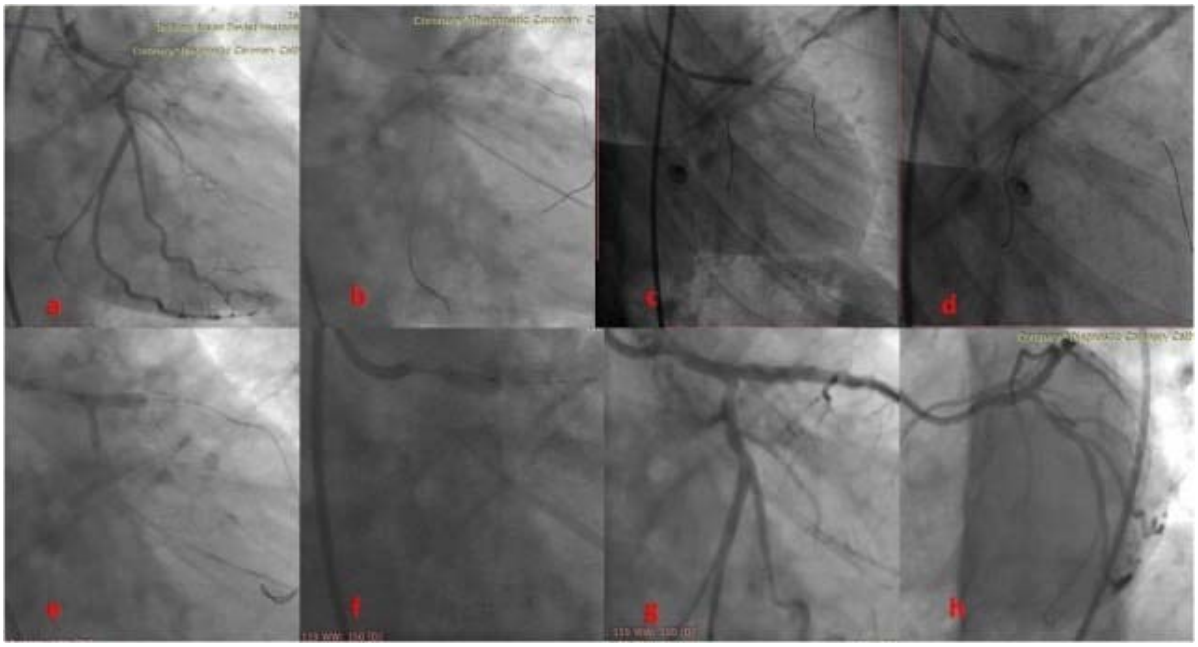
Background: Ostial occlusion of the left anterior descending (LAD) is a troublesome condition. Presize osteal stenting may cause incomplete lesion coverage or plaque shift into the left main or circumflex artery (Cx). Therefore, stent implantation from the distal left main coronary artery (LMCA) across the LAD may be reasonable for LAD osteal occlusion. We presented a case treated with stenting from LMCA across LAD due to acute anterior myocardial infarction (MI).

Case: 59 years old male patient, without any cardiovascular disease history, admitted to emergency service due to ongoing chest pain. ECG relived acute anterolateral MI, echocardiography showed global left ventricular akinesia and ejection fraction was %25. Patient was taken to urgent coronary angiography and total thrombotic lesion on LAD proximal part was seen (Figure1a). After wiring both of LAD and Cx, 2.0 x20 mm balloon angioplasty was done to LAD proximal and TIMI 2-3 flow was established (Figure 1b). After balloon angioplasty; firstly 3.0x33 mm DES (Promus, 14 atm) was implanted from LMCA to LAD ostium (Figure 1c). After LAD stent implantation, first POT was done with 4.0x9 mm NC balloon (Figure 1d). After POT, Cx rewired and kissing balloon inflation was performed by 2.0x20 and 3.5x12 mm NC balloons (Figure 1e). Final POT was done with 4.0x9 mm non compliant balloon on LMCA (Figure 1f). Final angiogram showed excellent stent expansion and there isn't any residual lesion (Figure 1g, h) After coronary intervention, patient was discharged without any complication. Ejection fraction was improved to %45 on one month later control visit.

Conclusion: Main branch stenting with proper kissing balloon inlation and POT should be recommended for the treatment of ostial LAD disease due to acute anterior MI.



ID: **222**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Poster**

PERCUTANEOUS CORONARY INTERVENTION TO SAPHENOUS VEIN GRAFT IN A PATIENT WITH DEXTROCARDIA UNDERGOING CORONARY ARTERY BYPASS SURGERY

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Dextrocardia is a rare congenital anomaly with a prevalence of 1 in 10,000 births. There are limited published case reports of percutaneous coronary intervention (PCI). A 59-year-old patient was admitted to our hospital with complaints of chest pain. Coronary angiography (CAG) revealed totally occluded left anterior descending artery (LAD) and totally occluded ramus circumflexus (RCX) which was filling antegradely. CAG demonstrated that the LAD was perfused by the saphenous vein graft (SVG). SVG to RCX was totally occluded. Aortocoronary SVG to the LAD was stenosis 95% and displayed hazy image. The SVG to the LAD was selectively cannulated with a guiding catheter and 3.0×15 mm drug eluting stent was implanted. The final result of coronary angiography showed that there was no residual stenosis in the stent of the saphenous vein graft to the LAD with the TIMI 3 grade flow. CABG in a patient with dextrocardia was described in 1982. PCI in dextrocardia with situs inversus was first reported in 1987.On the other hand, published literature about percutaneous intervention in underwent CABG patients with dextrocardia was not reported. This case was presented successful PCI in situs inversus dextrocardia who underwent CABG using a transradial approach. To the best of our knowledge this is the first case in literature of saphenous vein graft PCI in situs inversus dextrocardia using transradial approach.

ID: **554**

Topic: **Cardiology » Percutaneous coronary interventions in acute coronary syndromes**

Presentation Type: **Poster**

SUCCESSFUL TREATMENT OF ACUTE LEFT MAIN CORONARY ARTERY OCCLUSION WITH PERCUTANEOUS INTERVENTION IN A PATIENT WITH MITRAL METALLIC PROSTHESIS VALVE

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A 55-year-old male patient with a history of mitral valve replacement 14-years ago, was admitted to the emergency department of our hospital with sudden onset severe chest pain and dyspnea. He had a history of smoking as a cardiovascular risk factor. He used warfarin for 1-year after the mitral valve replacement and he didn't used any other cardiac medication including warfarin for the last 13 years. His ECG showed acute ST-segment elevations on anterior and inferior derivations. He was also in cardiogenic shock status. Three hundred mg aspirin, 600 mg clopidogrel and 0.1 mg/kg IV enoxaparin bolus were given immediately. The patient was transferred immediately to the catheterization laboratory and 7F sheat was introduced through the right femoral artery. Diagnostic coronary angiography showed no lesion in the right coronary artery and acute total occlusion of the proximal left main coronary artery (LMCA) with no anterograde flow (Video 1). The first floppy guidewire was advanced from the LMCA to the left anterior descending artery (LAD) and the second floppy guidewire advanced to the diagonal artery. The 3.0x20 mm semi-compliant balloon was inflated at the LMCA to LAD bifurcation. Then, another wire was advanced to the circumflex (CX) artery and 3.0x20 mm semi-compliant balloons were inflated repeatedly in the LAD and CX artery. Tirofiban treatment was started and was continued because of the intense thrombus burden during procedure (bolus of 25 µg/kg over 3 min i.v., followed by an infusion of 0.15 µg/kg/min for up to 24 hour). We planned simultaneous stenting of the LAD and CX arteries that extends to the LMCA with an aim of jailing the thrombus located at the LMCA, ostial LAD and ostial CX. For this reason, we decided to use a simple and fast bifurcation method because the patient was in cardiogenic shock. 4.0x15 mm stent for LAD extending LMCA and 3.5x12 mm stent for CX extending LMCA were implanted with the simultaneous kissing stent technique. Final angiography showed TIMI 3 flow at the LAD and CX arteries (Video 2). After the procedure, the patient recovered hemodynamically and his complaints regressed. Ejection fraction was 15% on transthoracic echocardiography and thrombus images were present on the prosthetic valve in mitral position. The following day we performed transesophageal echocardiography showed thrombus particles in the metallic prosthetic valve and a giant thrombus in the left atrium. The cardiology and cardiovascular surgery council decided to remove the thrombus surgically, but the patient did not accept the operation. Heart failure treatment was optimized during hospitalization and he was discharged 45 days after admission. In follow-up, Acetylsalicylic acid 100 mg + Clopidogrel 75 mg + Warfarine were given for triple therapy for 6 months after the myocardial infarction.

ID: **615**

Topic: **Cardiology » Percutaneous coronary interventions**

Presentation Type: **Poster**

A RARE COMPLICATION OF RADIAL ARTERY ACCESS FOLLOWING CARDIAC CATHETERIZATION: RADIAL ARTERY PSEUDOANEURYSM

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77 year-old male patient presented our hospital with the complaint of chest pain for 1 week duration suggestive of unstable angina 8 months ago. Coronary angiography was done through the right radial artery. Radial artery puncture was done with a single puncture and 5F sheath was secured in place. Patient's coronary angiogram showed double vessel disease. (significant left anterior descending and Cx midportion lesion) which was planned for LAD stent implantation.

The patient was loaded with dual antiplatelet therapy (aspirin 300 mg and clopidogrel 600 mg) with heparin of 5000U.Hemostasis was achieved completely after the procedure by using TR band with 10 cc of air for compression. The TR Band was deflated as per protocol over the next 2 h and discontinued. He had noticed that a swelling occurred in the region of wright hand wrist. The size of the swelling was 3 cm diameter (Picture 1). In clinical examination of the wright hand we could not detect any thrill and murmur with palpation and auscultation. There was no increase in temperature and color changes in this region. We decided to perform right brachial arteriography and detected pseudoaneurysm formation in radial artery. There was no connection with venous system and the other arteries and no extravasation. Only organized hematoma formation was seen around the pseudoaneurysm (Picture-2).

We decided to send the patient to operation for surgical repair of radial artery and swelling. The patient had a successful surgical intervention and the swelling disappeared with surgical repair. There was no complication after the procedure. Radial artery pulse amplitude was felt forcefully. The patient had not used any anticoagulant drugs before cardiac catheterization except anti-aggegant drugs named clopidogrel and aspirin. We thought that radial band could not be placed correctly over radial artery to prevent oozing to the surrounding tissues.

Pseudoaneurysm(PSA) is described as a tear through the all layers of artery which results hemorrhage and hematoma formation contained by surrounding tissue creating a false sac. PSA with radial access is rare with ≤0.1% incidence reported in large case series.
There are several factors that predispose the development of PSA with radial access including multiple puncture attempts, hypertension ongoing systemic anticoagulation, inadequate hemostasis or postprocedure compression, elevated body mass index ,the use of GPIIb/III inhibitors, a vascular site infection and the use of larger sheath. Very elderly patients may also be at increased risk . Some of the potential risks of PSA include rupture and distal limb ischaemia. Treatment optipons range from percutaneous thrombin injection, surgical repair, sonographically guided compression ,external compression devices and close monitoring for spontaneous resolution.

A small PSA can be treated with compression to occlude the flow into the PSA, while a large PSA require surgical intervention like our case. However excision of the vessel wall with vein patch angioplasty may be recommended for large neck aneurysm. Surgical approach like our case should be thought asa a last line treatment.
Other treatment strategies include the use of an external compression device or thrombin injection when the PSA has a narrow neck.

In conclusion, it is necessary to apply adequate compression over radial artery in the correct region of the wrist after procedure and avoid using larger sheath to prevent PSA formation after radial access.


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ID: **757**

Topic: **Cardiology » PI for SHD - Others**

Presentation Type: **Poster**

AN UNUSUAL RIGHT CORONARY ARTERY EMERGING FROM DISTAL CIRCUMFLEX ARTERY

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Introduction:

The coronary arteries arise from the aortic sinuses, converging towards the apex of the heart. Normally, there are three main coronary arteries, the right coronary artery (RCA), left circumflex (LCX) artery and left anterior descending (LAD), with the LCX and LAD arteries arising from a common stem, the left main coronary artery (LMCA).

According to the literature, coronary arteries anomalies (CAAs) affect around 1% of the general population, ranging from 0.3%-5.6% in studies on patients undergoing coronary angiography, and in approximately 1% of routine autopsy. One of the rarest coronary artery anomaly is a single coronary artery (SCA). In this anomaly SCA is arising from either the right, left or posterior sinus of Valsalva. The prevalence is approximately 0.024% to 0.066% in population who undergo coronary angiography.

In this case we represent a 53 years old male with SCA in whom the RCA originates from the distal LCX artery.

Case:

A 53 year old male was admitted to the hospital due to chest pain. He underwent coronary angiography. The angiography showed a very short left main coronary artery diving into LAD and LCX arteries in several milimetres. He had a big which had the same diameter in the distal part as the proximal part after giving a big obtuse marginal branch a smaller obtuse marginal branch and a posterolateral branch the circumflex continued to the right side of the heart with a slightly smaller diameter than the preceding parts. It was found that the patient had an anatomically different RCA which originates from the distal circumflex artery.

Discussion

Single coronary artery is a relatively rare congenital anomaly and incidentally detected during routine coronary or CT angiography. It is commonly associated with other congenital cardiac anomalies such as bicuspid aortic valve, coronary arteriovenous fistula and transposition of great arteries.

Classification of SCA anomalies was proposed by Lipton et al. This classification takes into account the origin of the ostium from the sinus of Valsalva, anatomical course of the vessel, and the course of the transverse trunk. R or L are used to identify the ostial origin of the vessel, I,II,III are used to represent the anatomical distribution of the vessel. I, represents either normal course of the right or left coronary artery. II, represents a large trunk of vessel arises from the proximal portion of SCA and crosses the base of the heart to arrive in the vicinity of normal contralateral coronary artery. III, represents LCX and RCA arise from a common trunk separately. Letters A (anterior to the right ventricular outflow tract), B (between the aorta and pulmonary artery) and P (posterior to aorta) are used to delineate the course of the vessel with respect to the pulmonary artery and aorta. Our case represents an L-I type, based on this classification.

Most of the patients with SCA are asymptomatic. In some cases, the disease may appear with life threatening symptoms, including angina, myocardial infarction, syncope, arrhythmias, congestive heart failure or sudden death.

Treatment options include medical management, percutaneous coronary intervention and surgical correction. Most patients do not require invasive therapy and should be managed with strict regulation of risk factors.

In conclusion SCA is a rarely seen disease. Recognition of this rare anomaly will be helpful in the differential diagnosis of coronary artery abnormalities

ID: **535**

Topic: **Cardiology » Percutaneous coronary interventions**

Presentation Type: **Poster**

A RARE TYPE OF CORONARY ARTERY ORIGIN ANOMALY SINGLE CORONARY OSTIUM

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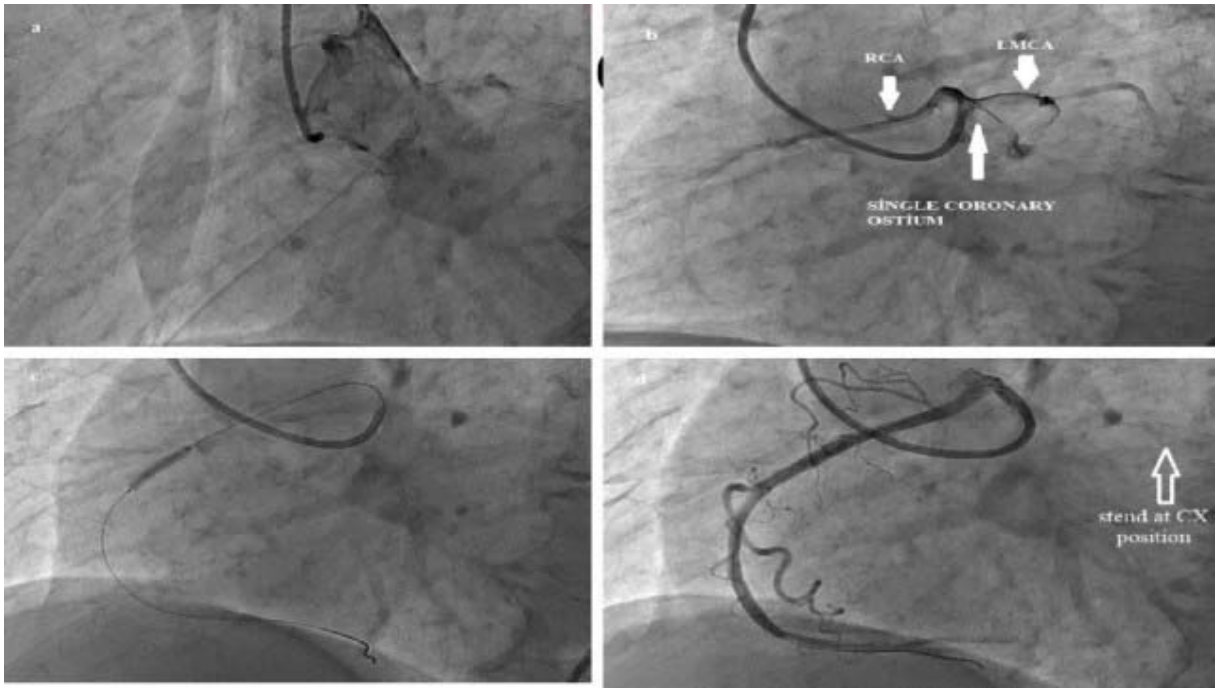
Introduction:
Although the frequency of the coronary artery origin anomalies couldn't be determined exactly, they were about 1% reported in coronary angiography series. Single origined osteal coronary artery anomaly was a rare anomaly reported about 0.03-0.04% of all coronary origin anomalies. Although the effects of originating right coronary artery from left coronary sinus couldn't be determined on coronary circulation, cases can be seen from symptomatic clinic to sudden
cardiac death or myocardial infarction.

Case:

65 year old female patient, history of stent implantation to circumflex coronary artery (Cx) about 1 years ago in another medical center, was admitted to our emergency service for having anginal type chest pain. There were no electrocardiographic (ECG) changes determined and on blood tests, mild elevation of cardiac enzymes was observed. She was hospitalized as non ST elevated myocardial infarction diagnosis. Emergent coronary angiography was performed and there was no occlusion was determined on left anterior descending artery (LAD) and a patent stent was observed on Cx artery. After examining left arterial system, catheter was positioned on right coronary artery ostium but catheter couldn't positioned on right coronary artery ostium. After many attempts of positioning of the catheter on right coronary ostea, non selective right coronary visualisation tried for visualising the right coronary system. After performing non selective right coronary angiography by giving contrast to aotic root, it was observed that right coronary ostea was originated from the site adjacent to left main coronary artery (LMCA) ostea. After determining this pathology, repositioning to left main coronary ostea was tried. By this visualisation, it was observed that left main coronary and right coronary arteries originated from single coronary ostea on left coronary sinüs (Picture 1). By using this single main coronary stem, right coronary artery was catheterised and a drug eluting stent was placed on right coronary artery. After determing the patency of the stent on control angiography, operation terminated without complication.

Comment:
As a result, although single coronary osteal origin was very rare among all coronary origin anomalies, cardiologists and cardiovascular surgeons must kept this anomaly in mind while performing operations.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ID: **421**

Topic: **Cardiology » Electrocardiography and Non invasive electrocardiology**

Presentation Type: **Poster**

EXTREME BRADYCARDIA WITH VARIABLE BLOCK IN SEVERE HYPERKALEMIA: A FORGOTTEN CULPRIT IN BRADY-ARRHYTHMIA

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Bradycardia is commonly encountered in emergency department. Hyperkalemia may sometime cause bradycardia with block and also synergize with AV node blockers to cause bradycardia and hypoperfusion. We report a 53 year old male with history of hypertension, congestive heart failure and coronary artery disease was admitted to hospital for sudden onset of breathlessness. He underwent percutaneous coronary intervention (PCI) to left anterior descending (LAD) artery and left circumflex (LCx) artery one year ago and taking Aspilet 80 mg for daily, Clopidogrel 75 mg daily, Ramipril 5 mg daily, Atrovastatin 20 mg daily, Metoprolol 25 mg daily, Spironolactone 25 mg daily and Frusemide 40 mg daily. Significant physical examination was remarkable for a temperature 97.5'F, blood pressure of 110/70 mmHg, heart rate of 40 beats per minute, oxygen saturation was 99% on air and both lungs were full with audible crepitation by auscultation. He was given atropine 0.6 mg bolus and transcutanaeous pacing with unimproved heart rate and then a transvenous pacing was immediately placed before the blood investigation results were returned. His relevant laboratory values were significant for a potassium of 7.99 mmol/L(ref range : 3.5-5.2 mmo/l) , creatinine of 458 micmol/L (ref range : 59-104 micmol/L) , Urea of 33.9 mmol/L (ref range : 2.7 – 8.0 mmol/l), random blood glucose of 233mg/dl , sodium 126.8 mmol/L (ref range 135-145 mmol/L) , anion gap of 13.5 mmol/? (ref range: 3.6 -11.0 mmo/L) and bicarbonate of 15.6 mmil/L (ref range: 22-29 mmol/L). He was given calcium glucoronate, insulin with dextrose, kaexylate , nebulizer salbutamol with significant improvement in his potassium levels to 4.6 in 24 hours . In Cardiac intensive care unit his heart rate was improved and the transvenous pacemaker was turned off the next day.
Keywords: Hyperkalemia, Bradycardia, Pacemaker, Heart Block

ID: **429**

Topic: **Cardiology » Inherited arrhythmia syndromes**

Presentation Type: **Poster**

BRUGADA ECG PATTERN INDUCED BY ACCIDENTAL DRINKING DIESEL FUEL

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Introduction

The Brugada syndrome (BS) is an inherited disease that is characterised by incomplete right bundle branch block and ST segment elevation in right precordial leads. BS is commonly caused by cardiac sodium-channel gene mutation. The electrocardiogram (ECG) manifestation of BS are often dynamic and can be unmasked by sodium channel blockers, fever, cocain, psychotropic drugs, hyperkalemia, alcohol, lithium . Provocation of typical ECG findings by accidental drinking diesel fuel has not been described till now. We would like to report typical ECG changes of BS unmasked by drinking diesel fuel.

Case Report

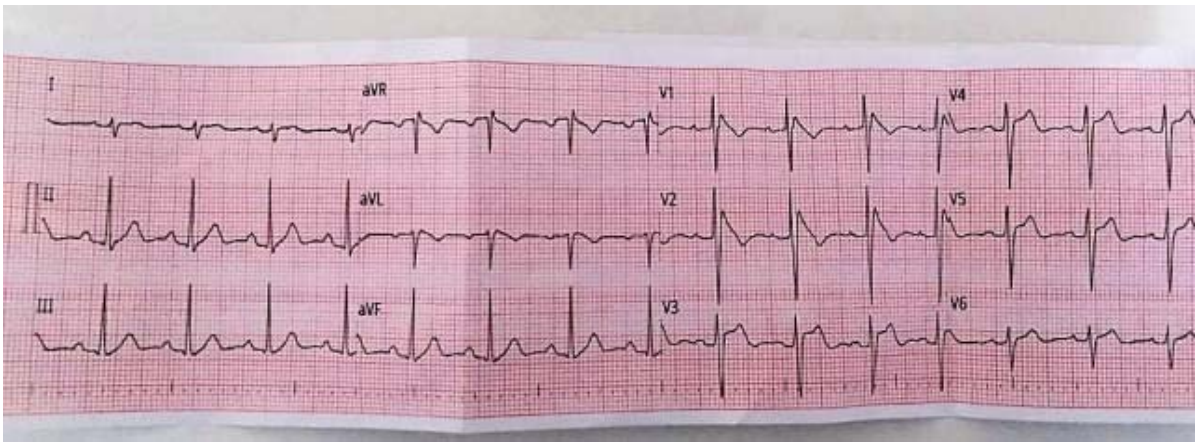
A 30 year old male presented to emergency department with epigastric pain and nausea. He first referred a state hospital and after the ECG he was transferred to our hospital with pre-diagnosis of anterior ST segment elevation myocardial infarction. He was a truck driver and trying to transfusion diesel fuel from the storage to a container by sucking a hose when he accidentally swallowed a large amount of diesel fuel. There was no medical history of taking any medication. On admission, his vital signs were all normal. There was neither a family history of sudden cardiac death nor a history of previous syncope. The serum level of electrolytes, wbc count, crp, troponin were normal. The ECG was compatible with type 1 Brugada pattern on presentation (figure 1). Echocardiography was normal. We planned holter ECG to reveal ventricular arrhythmias and there was no arrhythmia. Initial and 24th hour ECGs in our hospital was similar (figure 2). Two day after admission, Brugada type 1 pattern on his ECG disappeared and follow up ECGs showed type 2 Brugada ECG pattern (figure 3). The patient remained asymptomatic and was discharged.

Discussion

BS is diagnosed when a spontaneous type 1 ECG findings in addition to one of the following clinical situations: Documented polymorphic ventricular tachycardia, ventricular fibrillation, unexplained syncope, family history of sudden cardiac death at age younger than 45 years, family history of type 1 Brugada pattern ECG changes, inducible ventricular tachycardia during electrophysiology study, nocturnal agonal breathing. There are three types of ECG abnormalities in BS (figure 4). Type 2 and 3 are not definitive for brugada syndrome, but only suggestive. Brugada ECG pattern is dynamic, variable and can alternate between three types. The patients having only typical ECG changes are described as ''idiopatic Brugada ECG pattern or Brugada phenocopy'' not BS.

In this case, we report a male presented with type 1 Brugada ECG pattern unmasked by accidental drinking of diesel fuel which has not been reported before. Inhalation of gasoline vapors can unmask the Brugada typical pattern and was reported by Kranjcec et al. Petroleum derived diesel is composed of %75 saturated hydrocarbons and %25 aromatic hydrocarbons. Alcohol and petroleum products have nearly identical subunits like hydrocarbons. Alcohol intoxication and inhalation of gasoline is thought to have pro-arrythmic effects by inhibiting sodium-channel gating. Diesel oil may induce the typical ECG findings in the same way.

In conclusion, Brugada ECG pattern is concealed, can be triggered by various conditions and may be misdiagnosed as ST-segment elevation myocardial infarction like in this case. Pysicians should consider Brugada pattern in differential diagnosis.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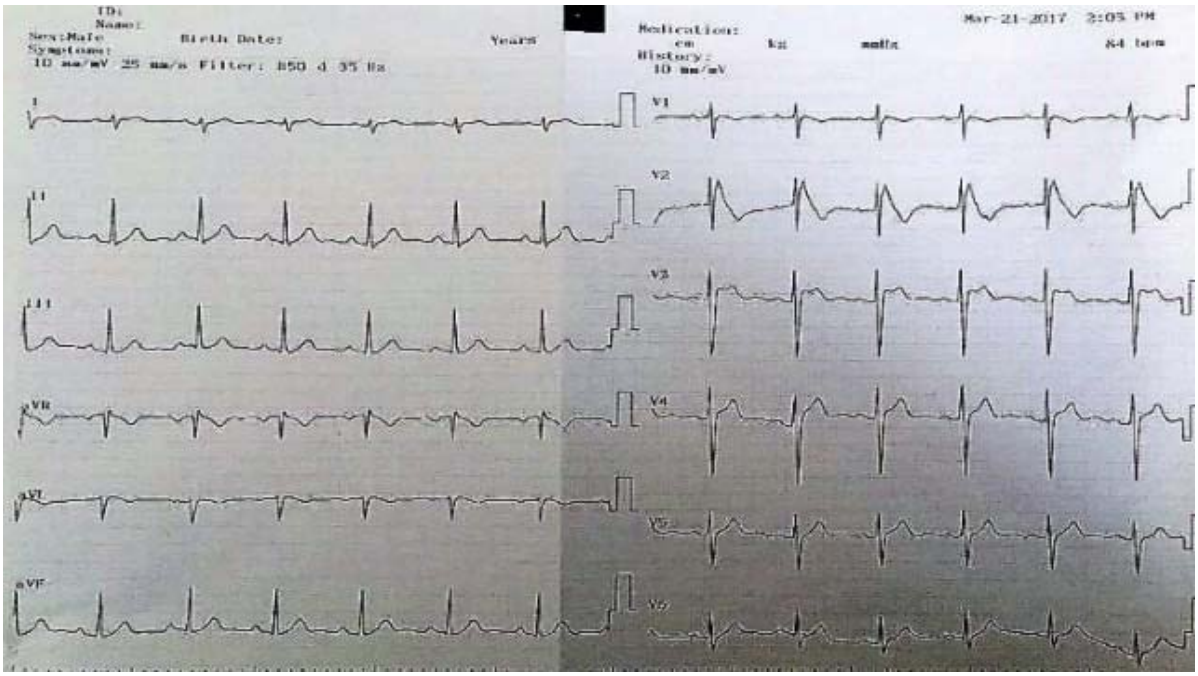
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Sex:Male
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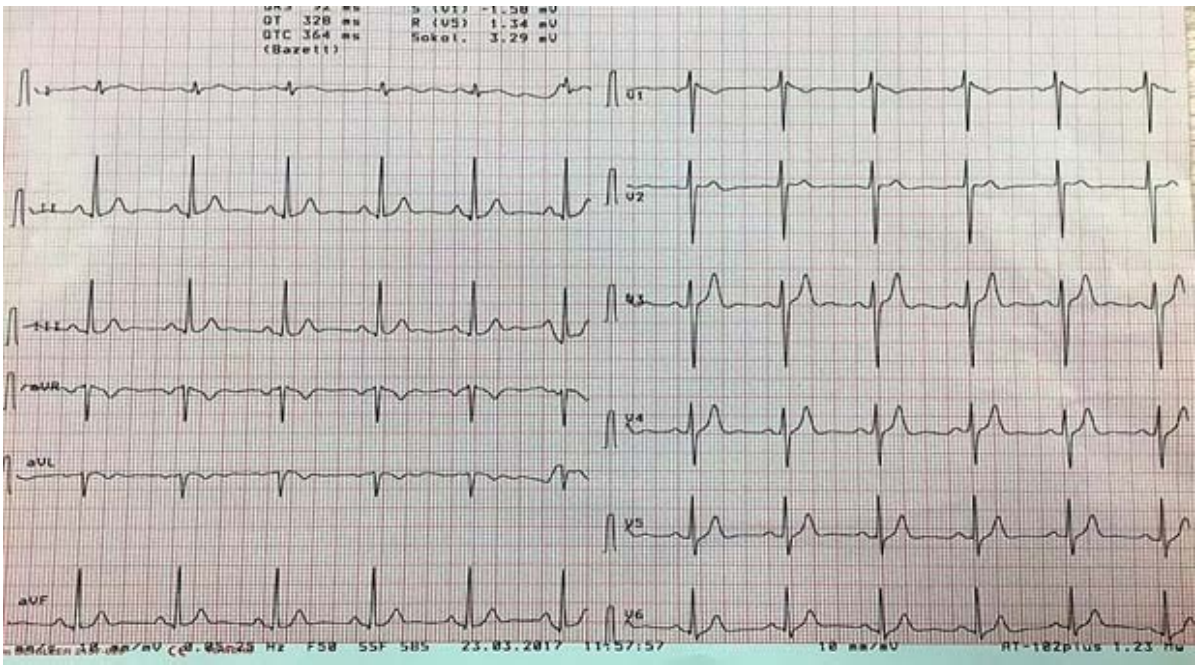
QT 328 ms
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(Bazett)
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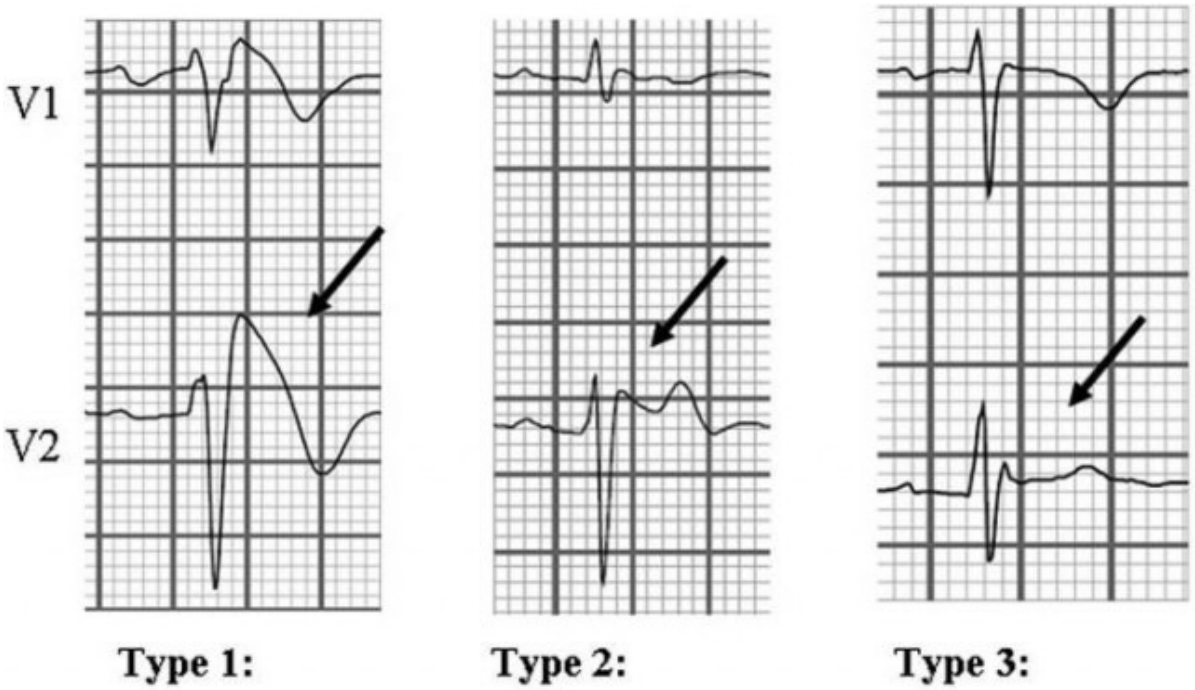
V1
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ID: **398**

Topic: **Cardiology » Arrhythmias and antiarrhythmic therapy**

Presentation Type: **Poster**

RARE COMPLICATION OF CATHETER ABLATION: SUCCESSFUL REMOVED OF THE FRACTURED CATHETER FRAGMENT

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INTRODUCTION

The treatment of cardiac arrhythmias by RF ablation technique is an effective and safe method. In the following case, we demonstrated that the fractured catheter fragment, which is a rare complication of catheter ablation, was successfully removed by snare.

CASE

Seventeen - year - old male patient presented to our clinic with palpitation. The patient was scheduled for EPS and RF ablation with the diagnosis of Wolf-Parkinson-White syndrome. The patient underwent RF application through the proximal coronary sinus to eliminate accessory pathway transmission. At the end of the procedure, seeing that the CS catheter was inserted during removal. Fluoroscopy revealed that the catheter tip was held in the left iliac vein. We decided to remove the fractured catheter fragment percutaneously.4 –FR judkins right catheter was contrasted from the right and left femoral vein to visualize the fractured catheter fragment, and it was removed from the proximal by snare. One day later, the patient was discharged without any complications.

DISCUSSION

The complication rate of radiofrequency catheter ablation has been reported to be approximately 3% depending on patient characteristics and procedure. The fractured catheter fragment is a rare complication of catheter ablation. Percutaneous transcatheter removed is usually the first choice in the treatment of these complications. Techniques for non-surgical removal of impurities include simple snare, basket catheter, pigtail catheter, and suture. Cook flexible myocardial biopsy forceps is an important option in difficult cases Nowadays there are various types of snare drum which enable efficient catheter uptake. Due to its properties, it is the most preferred and widely used method. Therefore, we decided to use the simple snare method fort his treatment of the case. We used snare to capture the fragment of catheter, the we hold this catheter by snare, and then we removed it.

CONCLUSION

Catheter breakage with or without embolization can cause fatal complications and in most cases should be removed. Because of its safety and success, percutaneous transcatheter uptake using a loop-snare should be the preferred technique. We recommend percutaneous transcatheter technique for removal of embolized or broken catheter fragments prior to surgery.

a) b)

Figure 1

(a) Removed catheter fragment (b) Angiographic image during percutaneous transcatheter removal

ID: **468**

Topic: **Cardiology » Arrhythmias and antiarrhythmic therapy**

Presentation Type: **Poster**

A CASE OF ICTAL BRADYARRHYTHMIA IN TEMPORAL LOBE EPILEPSY: EPILEPTIC ASYSTOLE

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[2]*school of medicine, Trakya University, Edirne, Edirne, Turkey*

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Some of the SUDEP cases are cardiogenic sudden deaths triggered by seizures. In this group, ictal arrhythmias, notably ictal asystole, are significantly detected. A 24-year-old female patient with a diagnosis of drug-resistant epilepsy was admitted to the Neurology Clinic video EEG monitoring unit (VEM) to record her seizures. Although the patient was using anti-epileptic drugs, her seizures were reported to be 1-2 times a month. VEM was performed to patient. During the VEM, asystole, which persisted for 20 second was observed immediately after epileptic discharges and starting with bradycardia (Figure 1). During this 20-second asystole period, the patient's head dropped, and she developed myoclonic jerks of the trunk. The patient's clinic returned to normal spontaneously without any medication shortly after normal cardiac rhythm. After consultation between neurology and cardiology, pacemaker was implanted to the patient. We wanted to draw attention to this diagnostic challenge which is rarely reported in our country. Furthermore, we think that neurology and cardiology departments should focus on this subject in order to prevent this situation which may lead to sudden unexpected death, and to make more effective evaluations

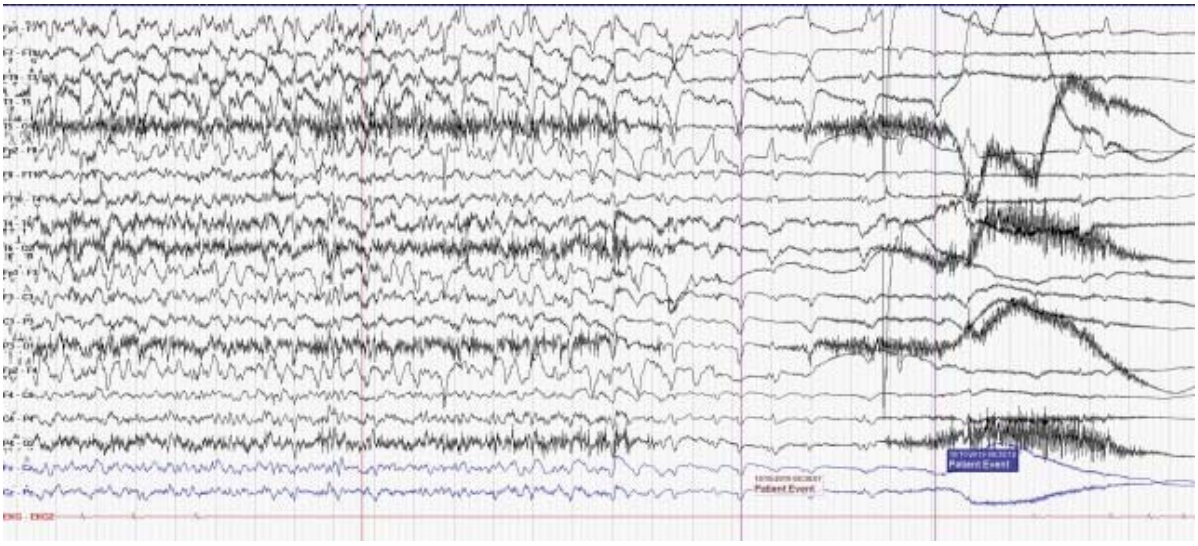

Figure 1: Simultaneous electroencephalogram and electrocardiogram recordings of the patient showing the asystole lasting 20 seconds.

ID: **15**

Topic: **Cardiology » Inherited arrhythmia syndromes**

Presentation Type: **Poster**

PRESENCE OF SUPERNORMAL CONDUCTION OF ACCESSORY PATHWAY IN A PATIENT WITH CONGENITAL AV BLOCK

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[2]*Baskent University Medical School, Ankara, Turkey*

[*]*Corresponding Author (keremcny@hotmail.com)*

Objective:

We want to present a rare case with congenital AV block and accessory pathway. Also we discussed supernormal conduction in this accessory pathway.

Methods:

A 48-year- old male patient with congenital AV block referred to our hospital for cardiac pacemaker evaluation. His coronary angiography was normal. His electrocardiogram showed complete AV block, narrow QRS complexes and intermittent accessory conduction. Electrophysiologic study (EPS) was performed.

Results:

In EPS, VA conduction was dissociated, HV distance was 35 msn. There was 1:1 conduction by accessory pathway from 430 msn to 320 msn with intravenous dobutamine infusion, and blocked under 320 msn. So we showed supernormal antegrade conduction of this accessory pathway. In this examination we showed left posterior accessory pathway. Ablation was not performed, as the patient was asymptomatic and the accessory pathway contributed to AV conduction from time to time. Ablation and pacemaker implantation is planned if the patient is symptomatic. Antegrade conduction over accessory AV pathways is considered the main determinant of the risk of sudden cardiac death. This risk can be estimated by noninvasive methods including the resting ECG and the behavior of ventricular preexcitation during exercise. Complete electrophysiology, study although invasive, is the most reliable method to assess antegrade and retrograde conduction over an AP. Supernormal conduction (as opposed to the gap phenomenon) is defined as a conduction that occurs at a time when block is expected. It can occur in the abnormal His-Purkinje system as well as in accessory pathways with prolonged refractory periods. Linking in an accessory A–V pathway occurs when antegrade conduction over the normal AV conduction system modifies the conduction properties of an accessory pathway through retrograde concealed activation. But in our patient VA conduction was dissociated. And accessory pathway refractory period was 330 msn with iv dobutamine.

Conclusion:

There was no malign arrhythmia risk for this patient. So we decided to follow up our patient till he has symptoms linked with AV block or accessory pathway.


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CS 3
CS 4
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ID: **752**

Topic: **Cardiology » Pregnancy and Heart diseases**

Presentation Type: **Poster**

IS THERE ANY ROLE OF ENDOMYOCARDIAL BIOPSY IN PERIPARTUM CARDIOMYOPATHY?

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[2]*Burhan Nalbantoglu State Hospital, Lefkoşa, Cyprus*

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[*]*Corresponding Author (ozgecetinarslan@windowslive.com)*

Peripartum cardiomyopathy (PPCM) is a rare idiopathic cardiomyopathy frequently presenting with heart failure secondary to left ventricle (LV) systolic dysfunction towards the late pregnancy or more commonly, the early postpartum period.

There is some evidence that viral infection with or without standard definition myocarditis, involving an inflammatory cardiomyopathy, is the initial trigger in some cases of PPCM

In 2013 a position statement of the ESC Working Group on Myocardial and Pericardial Diseases emphasized one of the ancillary features which support the clinical suspicion of myocarditis is the peri-partum period. Also in that position statement the working group states that endomyocardial biopsy (EMB) might be considered when myocarditis is strongly suspected.

A 39 year old female patient, gravida 2, para 1 was sent to our clinic for end-myocardial biopsy (EMB). She presented with dyspnea 3 months after delivery. She had NYHA class II heart failure symptoms and signs under medical theraphy for last month. Her transthoracic echocardiografic examination revealed global hypokinetic left ventricular function and dilatation of both ventricules. The patient's left ventricular ejection fraction and tricuspid annular plane systolic excursion were calculated as 40%, and 1.4 cm, respectively. Her pulmonary artery pressure was 55 mmHg. Coronary angiography demonstrated normal coronary arteries.

The patient presented with preeclamsia at 28 weeks of gestation. Caesarean section was performed at 32 weeks of her gestation. She has no history of disease. The diagnosis was PPCM which affects both ventricules

EMB procedure was done under fluoroscopic and TTE guidance. 9 tissue samples, 1-2 mm in the diameter was withdrawn from the interventricular septum of the righ ventricule. An inflammatory cardiomyopathy or a clinically relevant viral infection could not be confirmed by the EMB analyses.

Althuough EMB is the gold standard method in the diagnosis of myocarditis itdoes not add any diagnostic or prognostic information in the case of PPCM as in our case. Most PPCM patients improve without having to do EMB.

Only a few PPCM cases have been related to myocarditis so far. Rare cases in which another cause of heart failure is suspected may merit biopsy when an alternative diagnosis, such as heart block and ventricular tachyarrhythmias suggesting giant cell myocarditis or cardiac sarcoidosis, would change management.

Whether or not myocarditis can be a mechanism of PPCM or whether myocarditis is a distinct entitiy is unclear. Myocarditis has been identified occasionally in patients thought to have PPCM. So routine EMB is not recommended in patients with PPCM.

ID: **638**

Topic**: Cardiology » Treatment of Hyperlipidemia**

Presentation Type: **Poster**

EVALUATION OF ANTI-INFLAMMATORY EFFECT OF PITAVASTATIN WITHMONOCYTE COUNT TO HDL CHOLESTEROL RATIO

Seyda Gunay1, Serhat Çalışkan2, Ali Aydınlar1

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2Istanbul Bahçelievler State Hospital, Istanbul, Turkey

**Corresponding Author (seydagunaymedical@yahoo.com)*

Background: Monocyte to HDL cholesterol ratio (MHR) was proposed as a novel inflammation marker. Some pleiotropic effects of statins are anti-inflammatory. Aims: To examine the effect of lipid-lowering therapy with pitavastatin on MHR in patients with coronary heart disease Study Design: Cross sectional study, Methods: A total of 150 patients were enrolled for this study. Hospital registries between October 2018 and April 2019 were reviewed retrospectively.Eligible patients were those who had both stable coronary artery disease and hypercholesterolemia of LDL>100 mg/dl and were started to be treated withpitavastatin 4 mg/day. Complete blood count values and lipid parameters before and after treatment were evaluated and monocyte count to high densitylipoprotein ratios were calculated before and after treatment. Results: Pitavastatin 4 mg/day was administered for 1-7 months. The difference between the mean total cholesterol, triglyceride, LDL-C levels before andafter treatment was statistically significant ($p<0.001$, $p=0.020$, $p<0.001$, respectively)). Monocyte/HDL ratio was similar between groups Conclusion: In our study, it was concluded that pitavastatin improved serum lipid leves but did not decrease MHR.

Eye Catching Findings in Cardiovascular Imaging

ID: **453**

Topic: **Cardiology » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Poster**

ASSESMENT OF AORTIC BIOPROTHESIS VALVE THROMBOSIS: TWO- AND THREE-DIMENSIONAL TRANSESOPHAGEAL ECHOCARDIOGRAPHY STUDY

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kartal kosuyolu kalp hastanesi, Istanbul, Turkey

**Corresponding Author (semihby1@gmail.com)*

A 66 years old male patient with history transcatheter aortic valve replacement (TAVR) 8 months earlier, type 2 diabetes mellitus and hypertension, had admitted the emergency department with New York Heart Association Class III symptoms. On admission, cardiac auscultation revealed pathologic 4/6 systolic murmurs, electrocardiography demonstrates sinus tachycardia. Bedside transthoracic Echocardiography (TTE) indicated increased bioprosthetic aortic valve gradient (Max gr: 74 mm-Hg Mean Gr 52 mm hg), the normal ejection fraction of left ventricle, moderate mitral regurgitation and mild tricuspid regurgitation. Further investigation with two-dimensional (2D) and real-time three-dimensional (RT-3D) transesophageal echocardiography (TEE) revealed thrombus like image and obstruction, on mid-esophageal long-axis view at bioprosthetic aortic valve (Fig 1,2 and Movie 1,2). However, bioprosthetic valve thrombosis (BVT) is thought to be uncommon beyond 3 months of implantation, so we had to brighten the pathology. Subsequently, on deep transgastric long-axis view (TG LAX), the aortic valve was assessed distinctly. We achieved precious information with TG LAX 2D (Fig 3 and Movie 3) and RT-3D (Fig 4,5,6 and Movie 4,5) images and ensured that the pathology was the obstructive thrombus. After the diagnosis the patient treated with systemic anticoagulation therapy with vitamin K antagonist with a target international normalized ratio (INR) of between 2 and 3, Follow-up TEE performed after 10 weeks of anticoagulation revealed significant improvement in AV gradients and thrombus formation was resolved.

Valvular heart disease affects more than 100 million patients worldwide. Since the last decade, there has been a shift from mechanical to bioprosthetic valve replacement. This could be explained by the mechanical heart valve's restrictions. Prosthetic valve thrombosis, long term warfarin usage, and its complications are important ones. In spite of less thrombogenic, bioprosthetic valve thrombosis (BVT) can also lead to bioprosthetic valve dysfunction.

BVT incidence may vary depending on the valve type. It might be underestimated because valve imaging is not routinely performed post-valve implantation and the limitations of current imaging techniques. TEE and computed tomography (CT) are both good for BVT because the image quality is generally good with fewer artifacts in comparison with the mechanical heart valve.

However, except tertiary referral hospitals, cardiac CT experts cannot be reached easily. Hence, in daily practical transgastric TEE plans are should be used more frequently to provide precious data about BVT. The case presented above emphasize the importance of 2D and RT-3D transgastric TEE plans to evaluate bioprosthetic aortic valve thrombosis.

ID: **485**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Poster**

AORTO- RIGHT ATRIAL FISTULA: INCIDENTAL DETECTION IN ASYMPTOMATIC PATIENT 10 YEARS AFTER AORTIC VALVE REPLACEMENT

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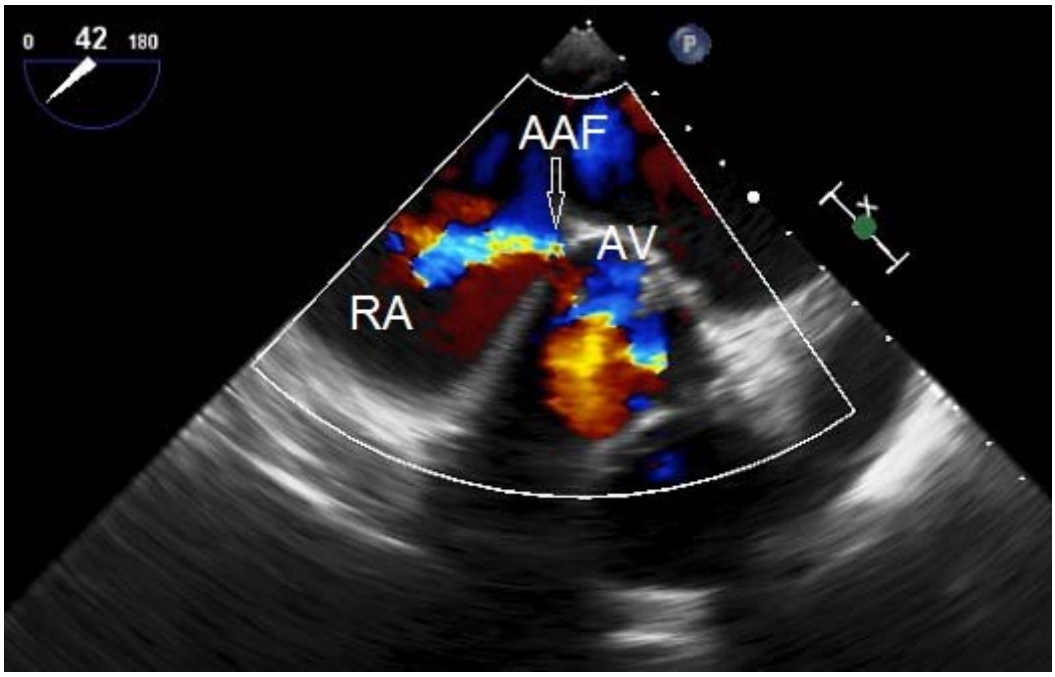
Introduction

An aorto-right atrial fistula after aortic valve replacement is an extremely rare complication. Herein we report a case of incidentally diagnosed aorto-right atrial fistula 10 years after aortic valve replacement.

Case Report

A 78-year-old male patient, hospitalized with lower gastrointestinal bleeding, was consulted to our clinic for cardiac evaluation. He had history of hypertension and surgery of coronary artery bypass grafting and aortic valve replacement 10 years ago. In physical examination, blood pressure was 120/70 mmHg, heart rate was 80 b.p.m. A grade 3/6 continuous murmur was heard over the left sternal border. Electrocardiogram showed normal sinus rhythm. No evidence of clinical heart failure or infection was noted. Transthorasic echocardiography demonstrated normally functioning bioprothesis aort valve. Mitral regurgitation was severe, tricuspit regurgitation was moderate and left ventricular ejection fraction was 45% with wall motion abnormality. Color Doppler revealed an unusual continuous flow from aorta, above the noncoronary cusp toward the right atrium throughout the cardiac cycle but mainly in systole.

Transesophageal echocardiography (TEE) confirmed the diagnosis of aorto-right atrial fistula (Figure 1).



AV: aortic valve, AAF: aorto-atrial fistula, RA: right atrium

The patient was hemodynamically stable and asymptomatic. Because of the high operative risk and the comorbidities of the patient, an initial conservative medical treatment was initiated.

Discussion

Aorto-right atrial fistulas (AAF), abnormal connections between the aorta and the right atrium, are rare pathophysiologic conditions of the aorta. These fistulas can be congenital or mostly caused by aortic dissections or infective endocarditis. They can also result from operations involving the aorta or aortic valve. Acquired aorto-right atrial fistula after AVR is extremely rare. There are only few cases which have no evidence of aortic dissection or infective endocarditis. Very late detection after surgery is also a rare entity, as in our case. The most common fistula tracts are the right coronary sinus to right ventricle, the noncoronary sinus to right ventricle and the left coronary sinus to left atrium. The fistula formation between the aortic root and right atrium is relatively rare among intracardiac fistulas.

Since physical exam in this condition may be misleading, definitive diagnosis can be made by a through echocardiographic evaluation. Computer tomography and cardiac catheterization can also be used for diagnosis.
In conclusion, aorto-right atrial fistula after aortic valve replacement is an extremely rare complication. If a continuous heart murmur is heard in a patient with aortic valve replacement, aorto-cameral fistula should be considered, even if the patient is asymptomatic.

ID: **93**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Poster**

A RARE ETIOLOGY OF PERICARDITIS; BRUCELLA SPP.

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OBJECTIVE: Brucellosis is one of the most common zoonotic diseases in the world. It is transmitted to humans by contact with the fluids of infected animals, by consuming infected meat, unpasteurized milk and dairy products, or accidentally transmitted to laboratory personnel working on infected body fluids. Because it affects many organs and tissues, it presents with many different clinical manifestations and therefore difficulties in diagnosis are encountered. Cardiovascular involvement is a rare complication of the disease and has been reported in 1-2% of patients. The most common cardiovascular complication of brucellosis is endocarditis. Pericarditis is a complication usually associated with endocarditis and it is rarely reported as isolated pericarditis. Our case is a rare case of isolated pericarditis due to brucellosis presenting with cardiac signs and symptoms.

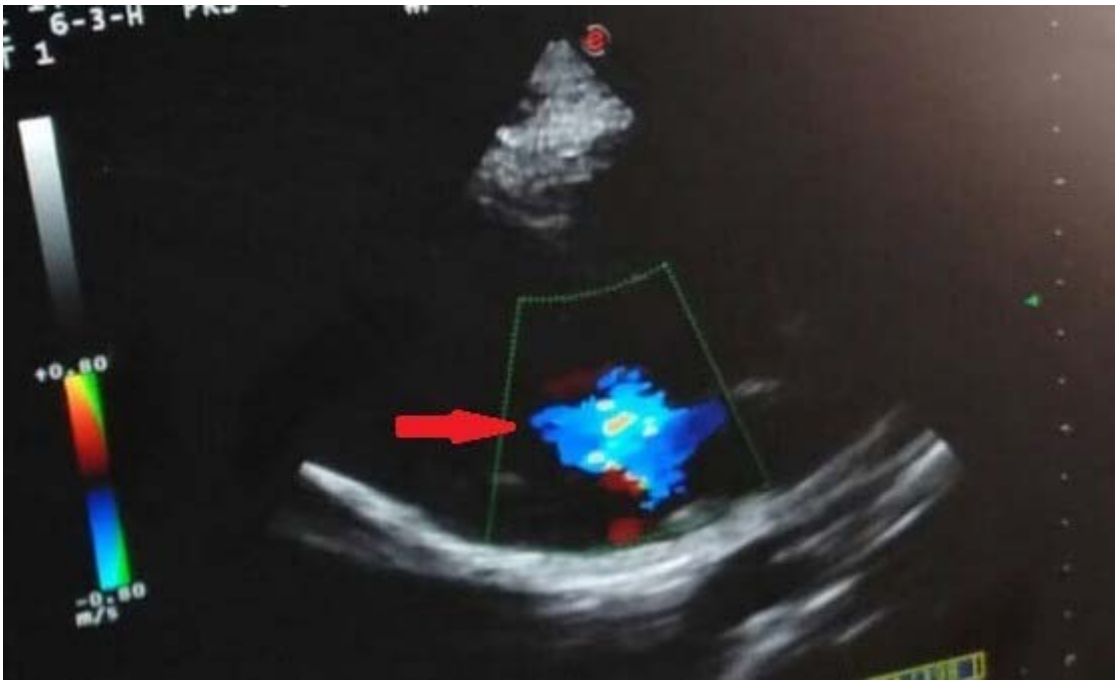
CASE REPORT: A 19-year-old male patient was admitted to the outpatient clinic with complaints of severe chest pain, fever, joint pain and weight loss for about one week. The patient had been living as a shepherd and he had lost 5 kilograms in the last month. The patient complained of joint pain especially in the knee joint and occasional fever, and a sharp chest pain was added to his complaints for the last week. Chest pain was reduced by leaning forward and sitting. In his animals had a history of miscarriage and he was described eating fresh cheese. On physical examination, no pathological findings were detected except frotman. Complete blood count, biochemical tests were normal, erythrocyte sedimentation rate: 63 mm / h, C-reactive protein (CRP): 4.9 mg / dL. Autoimmune markers were normal. Brucella Rose Bengal test was positive and Wright tube agglutination test was 1/5120 positive. Two peripheral blood cultures were requested. Echocardiography (Echo) was performed in the patient who had widespread ST elevation on ECG. Echo showed normal LV and RV ejection fraction (EF), 1-2 degree mitral regurgitation, mitral valve prolapse, and mild pericardial effusion with no evidence of compression in the LV posterior and increased pericardial luminescence. No vegetation / abscess / mass echogenicity was observed in all heart valves and papillary muscles. Brucella spp. reproduction was detected. The patient was prescribed doxycycline 2x100 mg, rifampicin 1x600 mg, trimethoprim sulfamethoxazole 160/800 mg 2x1 and ibuprofen 3x400 mg with a diagnosis of Brucella pericarditis. In the third month of antibiotherapy, clinical and laboratory responses were obtained, and control echo showed decrease in pericardial brightness and regression in effusion.

DISCUSSION: Brucellosis is one of the diagnosis that should be considered in the differential diagnosis of pericarditis in patients living in endemic areas. Pericarditis is rarely seen during the course of brucellosis as an isolated cardiac symptom. It may be clinically asymptomatic or manifest with chest pain and ECG changes, and may mimicking ischemic heart disease. Clinical suspicion, adequate antibiotic therapy and a multidisciplinary approach result in complete recovery in brucellosis, where the main cause of death is heart disease.

Figure 1: Echocardiography showed pericardial effusion in the left ventricle posterior and increase in pericardial brightness

Figure 2: Echocardiography showed the non-classical type MVP

Figure 3: Appearance of moderate mitral regurgitation on echocardiography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ID: **91**

Topic: **Cardiology » Cardiac imaging - Echocardiography**

Presentation Type: **Poster**

A RARE CASE OF LEIOMYOSARCOMA ORIGINATING FROM MITRAL VALVE

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INTRODUCTION

Primary cardiac tumors are very rare (1). 25% of these primary tumors are malignant. Angiosarcomas are the most common malignant primary cardiac tumors. Leiomyosarcoma, however, is the least common one (2).

CASE

A fifty-seven year old female patient presented with the complaint of shortness of breath during physical activity. Electrocardiography (ECG) showed sinus tachycardia. During her physical examination, an apical 3/6 systolic murmur was detected during cardiac auscultation. Therefore, transthoracic echocardiography and transesophageal echocardiography was performed. It demonstrated a 5x3.5 cm immobile mass with lobules on the atrial side of posterior mitral leaflet (figure1).

The mass was tightly attached to the valve and led to severe mitral stenosis and insufficiency. It was decided to remove the mass through surgery. The preoperative whole - body computed tomography did not demonstrate any metastasis. Mitral mechanical valve replacement and intracardiac mass extirpation were performed for the patient. During the operation, the pulmonary veins were also found to be attached and the tumor was removed from the left pulmonary vein. The histopathological examination of the mass revealed that it was leiomyosarcoma. Adjuvant radiotherapy and chemotherapy were offered to the patient postoperatively but she refused. Postoperative TTE demonstrated a functioning mitral mechanical valve. The patient was discharged for follow-up through polyclinic visits.

DISCUSSION

Angiosarcomas are the most common malignant primary cardiac tumors. This is followed by rhabdomyosarcoma, mesothelioma and fibrosarcoma. Leiomyosarcoma, however, is the least common one (2).

Sarcomas may be localized in different parts of the heart. Sarcomas originate from the atrium and pulmonary veins by 74%, ventricles by 14%, mitral valve by 3.7% and epi-pericardium by 7.4% (3). TTE is important for the diagnosis; however, cardiac MRI is the golden standard to describe the malignant tumors and decide on resectability (2).

The mean survey is 6-8 months (4-7). The optimum treatment of cardiac leiomyosarcoma is not known while there are many different treatment options including heart transplantation (8-9). Although radical surgical approach seems to be the most appropriate treatment option, complete surgical resection is usually difficult. The role of adjuvant radiotherapy and chemotherapy in this patient group is not fully known (8-10).

CONCLUSION

Cardiac leiomyosarcomas are rare tumors with poor prognosis. Although there is no consensus on the treatment of leiomyosarcomas, aggressive and complete surgical resection as well as adjuvant therapies seem to be the most appropriate options.


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ID: **20**

Topic: **Cardiology » Cardiac imaging - Cardiac MRI**

Presentation Type: **Poster**

GIANT MORGAGNI HERNIA WITH CARDIAC SYMPTOMS ONLY

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ABSTRACT:

İntroduction:

Morgagni's diaphragmatic hernias, which are not well known for their pathophysiology, were first described in 1769 as anatomical defects in the anterior diaphragm, which caused abdominal organs to herniate into the thorax. We reported this case because Morgagni Hernia (MH) is very rare in adults and when it is seen it has the least cardiac symptoms.

Case Presentation:
A 41 year old female with antihypertensive drug use history presented to our clinic for hypotension attacks and palpitations started 3 months ago. Transthoracic echocardiography showed right paracardiac mass. Mediastinal MRI revealed a 5 cm defect in the left hemidiaphragm anteromedial segment and hepatic segments 2 and 4a were herniated from this defect to the middle mediastinum. In late-phase images taken by the hepatocyte-specific agent, it is clear that the hernia which is herniated in the herniated region is the liver. It was observed that the left lobe medial of the liver was applying advanced pressure to the right atrium. The patient was referred to chest surgery for repair of diaphragmatic defect and liver mass of compressing right heart from foramen of Morgagni (sternocostal hiatus) with diagnosis of MH.

Discussion:

MH most commonly seen in children; it is very rare in adults and is mostly asymptomatic. This case report; because morgagni hernia has been revealed by cardiac symptoms, it is highly valuable for the literature. The definitive treatment for MH is only surgery.


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Cardiac Involvement by Tumors and Hydatid Cyst: Unusual Pathologies

ID: **109**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Poster**

SURGERY OF EMBRYOSARCOMA OF HEART IN 05 YEAR OLD GIRL: CASE REPORT

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Ehs Dr Djaghri Mokhtar, Constantine, Algeria

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Introduction: The primary cardiac tumors are extremely rare. 25% of primary cardiac tumors are benign. Primary cardiac sarcomas remain exceptionally rare. The rhabdomyosarcoma account for 10% of the sarcomas. They are diagnosed by various methods of cardiac imagery, such as echocardiography, the imagery by magnetic resonance and the tomodensitometry. The goal of this work is to bring back this rare case and to show its gravity.
Methods: We report the observation of a 05 year old girl to the antecedents of right cardiac decompensation Pulmonary radiography: CTI at 0.55. ECG: RSR. Echocardiography: LV:24,5/18,6 mm. Operational exploration: Pericardial outpouring of great abundance , infiltration of the LA, the RA, the SVC by taking space interaorticocave and inter aortopulmonary returning the control of these structures and difficult cannulation of the VCS and presence of adenopathies .The IVC were much infiltrated. Exploration after cardiac arrest: Bilobate, friable tumor of yellowish color taking all the RA and extending towards the valve tricuspid, the VCS and the IVC. The gesture: Resection of the mass carrying with it the wall of the RA, of the SVC, IVC and the IAS and the septal tricuspid valve. Closing of the IAS by a synthetic patch, reconstitution of the right atrial wall and the SVC by a synthetic patch.

Results: The postoperative course was unfavorable with impossible exit of heart tumor and death of patient by rebels cardiogenic operationally shock. The anatomopathological study returned in favor of a heart embryosarcoma.

Conclusion: The sarcomas account for 90% of the malignant tumours. The cardiac observations are given mainly by the localization of the tumour and the intracavitary degree of obstruction. Relative incidence of rhabdomyosarcoma is: Adults:11%, Children: 41%, Young and children: 50%. These tumors are intracavitary, or diffuse and infiltrating, the echocardiography is a tool for initial tracking realise effective. The CT and the MRI offer a higher characterization of soft fabrics and make it possible to determine the extent of the infiltration of the tumor. The extremely poor forecast in spite of their complete resection, chemotherapy as well as the autotransplantation. New therapies are thus necessary to improve the survival of the patients at which one diagnosed this aggressive tumor.

Key words: Cardiac, embryosarcoma, surgery, cardiopulmonary bypass.

ID: **105**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Poster**

SURGERY OF CARDIAC PARAGANGLIOMA : CASE REPORT.

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The cardiac paraganglioma is a very rare tumor, constituting only 1% of the cardiac tumors, of slow evolution what pose a diagnostic and therapeutic problem. The localizations carotidienne and jugulo-tympanic are most frequent, very seldom the aortic localization. The association of two, three or four localizations is possible in the multiple forms. These forms are generally met within a family setting. The surgical exerese is the treatment of first intention of these tumors. The surgical exerese is the treatment of first intention of these tumors. In the multiple forms, the therapeutic strategy must be adapted to each case: one starts generally initially, by the localization carotidienne. We report the observation of 57 year old woman, diabetic presenting since one month palpitation and peaks hypertensives whose exploration echocardiography revealed the presence of a cardiac mass. It is the anatomopathologic study which confirmed diagnoses it. The originality of this observation rests on the one hand the scarcity of the cardiac localization and on the other hand on the typical mode of the clinical expression of the cardiac paraganglioma.

Keywords: Paraganglioma, heart, surgery, cardiopulmonary bypass.

ID: **106**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Poster**

SURGERY OF LEFT VENTRICULAR TUMOR IN CARNEY COMPLEX: CASE REPORT.

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Introduction: The Carney complex is a genetic disease characterized by the association of pigmentary anomalies of the skin, myxoma, tumors or dysfunction of the endocrine tumors and the schwannomists. The prevalence is unknown. The goal of this work is to bring back a case of Carney complex.

Methods: We report the observation of 10 year old boy to the antecedents of testicular tumors having a mass in intraventricular left will. Pulmonary radiography: CTI at 0,50. ECG: RSR. Echocardiography: Bilobate homogeneous mass has broad base of establishment with the level of the left ventricle. Preoperative exploration: Mass 07/05 cm has broad base of implantation encrusted in the left ventricular wall. The gesture was section of the ventricular mass carrying its base of implantation sent for anatomopathologic study.

Results: The immediate postoperative course was favorable.

Conclusion: Affection rare a dominant autosomic transmission responsible for myxomas, cutaneous pigmentation and endocrine hyperactivity. The cardiac myxoma appear at any age and meet in any cardiac cavity. The cardiac myxoma must be withdrawn by surgery. The treatment of the other demonstrations must be discussed and can include a follow-up , surgery or a medical care according to the localization of the tumor, its size , the existence of clinical signs of tumoral mass or hormonal excess, and of the suspicion of a malignant tumor.

Keywords: Myxoma, Carney complex, familial, surgery, cardiopulmonary bypass.

ID: **187**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Poster**

PRIMARY MALIGNANT HEART TUMORS: CASE REPORTS

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OBJECTIVE

Heart tumors may be seen in primary form, sometimes they are seen a spread of a neighboring tumor and a metastasis of a distant tumor. Myxoma is the most common primary benign heart tumors. Primary malignant tumors are rare and mostly sarcomatous. Secondary heart tumors originate mainly from lung and breast or occur during hematologic malignancies. Heart tumors are seen myocardium, endocardium, epicardium, pericardium, or all of these together. The most common localization of metastasis is pericardium. Clinical findings are generally nonspecific and variable and occur late. Transesophageal and transthoracic echocardiography is used primarily as a diagnostic method. Magnetic resonance and computed tomography have also been used. Treatment of benign tumors is in principle surgery and usually has a good prognosis. As the surgical treatment of malignant tumors is often incomplete, the approach should be discussed according to the case. Despite adjuvant chemotherapy, postoperative deaths occur quickly due to metastases. Cardiac metastases are treated symptomatically with exceptions.

We present two cases of intracardiac rare malignant mesenchymal tumors and discuss further treatment.

Case 1 : A 52-year-old male patient. He was admitted to the hospital with dyspnea for 2 weeks. On admission to hospital, the patient crp was high and diagnosed with hypertension. Echo was detected mass in the right atrium (4 * 4.2 cm) and pericardial effusion. The patient was operated after coronary angiography and the mass was diagnosed as **angiosarcoma** by pathology (*malignant mesenchymal tumor*). The location of the mass in the right atrium was clearly visible from the outside (image 1). The patient was discharged on the 6th postoperative day without any problem and oncology control was recommended.

Case 2 : A 61-year-old female patient. She was admitted to the hospital with dyspnea. Echocardiography revealed a 3 * 2.5 cm diameter mass in the posterior leaflet, second degree mitral regurgitation and pulmonary hypertension (45 mmhg). The patient underwent mitral valve replacement and the pathology reported that the mass was **malignant fibrous histiocytoma** (*malignant mesenchymal tumor*). The patient was discharged on the 6th postoperative day without any problem and oncology control was recommended.

Angio sarcomas are the most common primary malignant heart tumors (37 %) and constitute more than half of the cases. These tumors usually originate from the right atrium. Malignant fibrous histiocytoma is a sarcoma and less common (11%).
The signs and symptoms of heart tumors are related to their anatomic location rather than their histological type.

Although malignant tumors are diagnosed early by echocardiography, their prognosis remains poor despite the improved treatment methods. Paraneoplastic syndrome in metastatic tumors treatment may be symptomatic and rarely are also utilized.

CONCLUSIONS

A satisfactory primary tumor of the heart surgical intervention is rarely possible; complete excisions usually is not possible. What is currently available for these is to follow up metastatic spreads that chemotherapy cannot prevent. Malignant tumors that have not metastasized yet a widely accepted treatment option is complete resection and cardiac transplantation.

Recurrence in malignant tumors risk is available. The use of rare donors in this indication leads to questioning.

Recently, the success of targeted therapeutic agents in metastatic diseases has increased hopes.

ID: **191**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Poster**

LEFT VENTRICULAR TUMORS: ABOUT 03 CASES.

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Introduction: Left ventricle tumors are rare, less frequent than left auricle ones. Often responsible of repeated syncope, those tumors can remain in rare asymptomatic cases and fortuitous discovery during an echocardiography.
The aim of our work is to show 03 cases of left ventricle tumors.

Methods: From January 2000 to December 2015, among 100 open heart surgery for cardiac tumor we deplore 03 cases of left ventricle tumors; 01 man and 02 women. An average age of 27 years old (younger10 – older 44years old). The symptomatology: the youngest patient had a Carney complex, the second an important dyspnea, the third patient had palpitation. CTI: 0.47-0.50. ECG: regular sinus rhythm. The echocardiography allowed the diagnosis of left ventricular wall mass in all 03 registered cases. The surgical treatment under cardiopulmonary bypass for all cases.

Results: No operational mortality is deplored and the postoperative course was favorable. The anatomopathological examination showed a myxoma in all the cases.

Conclusion: The diagnosis of heart tumors in general and those of the left ventricle in particular is facilitated by echocardiography; especially in the asymptomatic forms which are of fortuitous discovery. However, purely surgical management poses a serious problem in our developing countries.

ID: **193**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Poster**

CARDIAC ANGIOSARCOMA OF THE RIGHT VENTRICULAR: A CASE REPORT

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Introduction: The cardiac angiosarcoma is the most frequent of cardiac differentiated sarcomas (37% of sarcomas). Reaches the adult man. Its favorite location is the right auricle in 90% of cases. The goal of this work is to present this rare type of malignant cardiac tumors.

Methods: We report an observation of a 60 years man old with medical history of parotid gland carcinoma, operated then treated in July 2014 by chemotherapy and radiotherapy presentant a mass of the right ventricular. The Patient presented a dyspnea; atypical thoracic pain. ECG: sinusal regular rhythm.CTI:0,56.
Echocardiography: Presence of a homogeneous round mass, infiltrating the free wall of the right ventricular and the atrio ventricular junction. Exploration reveals: An induration of the right ventricular which appears infiltrated by a tumoral process. The patient operated under circulatory assistance. Exploration finds: An infiltrating mass of right ventricular wall extended until the right atrium. One proceeded to: A biopsy of the tumor: partial tumorectomy.

Results: The immediate postoperative course was simple, anatomopathologic study showed an angiosacroma, the patient oriented to chemotherapy.

Conclusion: The angiosarcoma and the undifferentiated cardiac sarcoma are the most frequent primitive cardiac tumors. The treatment is surgery associated with chemotherapy. the prognostic is poor.

ID: **194**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Poster**

CARDIAC HYDATID CYST IN LEFT VENTRICULAR WALL: CASE REPORT

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Introduction: It is extremely rare 0.5-2% in all hydatid cases. Although it is generally asymptomatic. The diagnosis might be difficult on account of varying clinical presentations and non specific symptoms. Serious complications such as pericardial tamponade, pulmonary embolism. Surgical excision is the preferred treatment. This new report case is an opportunity for us to make a reminder of this little-known entity.

Methods: We report the case of an 11 years old child who was admitted in our hospital, he presented dyspnea and persistant fever. Physical exam revealed nothing unusual. A chest radiography showed a cardiomegaly. Computed tomography and magnetic resonance thoracic imaging wasn't realised. An echocardiography revealed a large left ventricular posterior wall cyst measured 63/50 mm. the ELISA (enzyme-linked immunosorbent assay) was positive for echinococcus. We decided to excise the hydatid cyst. Surgical approach by median sternotomy and the patient placed on cardiopulmonary bypass. The left atrium was vented. Sponges soaked with hypertonic saline solution were distributed throughout the pericardial cavity. Don't found a cyst at the time of opening the left atrium chamber but after cardiac luxation. We aspirated the entire contents of the cyst, removed its germinative membrane, and washed the cavity with hypertonic saline solution. Capitonnage was performed, and the incision was closed with the use of Teflon felt.

Results: The immediate postoperative course was simple. At the routine follow-up examination 2 months postoperatively, the patient was in NYHA functional class I, with no trace of cysts on echocardiography.

Conclusion: Patients who have cardiac echinococcosis can present with a variety of clinical manifestations. Cardiac hydatid cyst should be considered, particularly in endemic regions, in the differential diagnosis of patients with chest pain.

ID: **195**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Poster**

CARDIAC HYDATID CYST IN CHILD: REPORT OF 2 CASES

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Introduction: hydatic cyst cardiac localization is extremely rare 0.5-2% in all hydatid cases. Although it is generally asymptomatic. The diagnosis might be difficult on account of varying clinical presentations and non specific symptoms. Serious complications such as pericardial tamponade, pulmonary embolism. Surgical excision is the preferred treatment. This review Focus our results on this technique in our institution.

Methods: It is a retrospective and monocentrique study from January 2012 to June 2016. We analyzed the results of mortality and morbidity in post operative follow-up.

Results: The immediate postoperative course was simple. There were no early deaths. Intensive care unit stay was 02 days; hospital stay was 6-8 days. Mean age is 11 years. Without sex predominance. All patients had fever and dyspnea. Physical exam revealed nothing unusual. A chest radiograph showed a normal cardiothoracic ratio. Computed tomography and magnetic resonance imaging Thoracic CT don't realizable. ELISA was positive for echinococcus antibodies. The diagnostic of cyst was made by echocardiography Doppler. All patients were placed on cardiopulmonary bypass. Sponges soaked with hypertonic saline solution were distributed throughout the pericardial cavity to prevent local invasion by the parasite. We aspirated the entire contents of the cyst, removed its germinative membrane, and washed the cavity with 20% hypertonic saline solution Capitonnage was performed, and the incision was closed with the use of Teflon felt. All patients were in NYHA functional class I, with no trace of cysts on echocardiography.

Conclusion: Patients who have cardiac echinococcosis can present with a variety of clinical manifestations. Cardiac hydatid cyst should be considered, particularly in endemic regions, in the differential diagnosis of patients with chest pain, even for those who do not have a history of hydatid disease.

ID: **197**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Poster**

LEFT ATRIUM TUMOR COMPLICATED BY ACUTE ISCHEMIA OF THE LOWER EXTREMITY: CASE REPORT.

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Introduction:

Cardiac masses represent a very mixed group of tumoral and pseudo-tumoral affections, characterized by clinical symptomatology, and morphological imagery diversity. Echocardiography and magnetic resonance imaging have a preponderant place in tumor analysis than computed tomography, give morphological characteristics of the mass and could predict its nature, histological confirmation is required.

We report a case of a mass in the left atrium complicated by member ischemia and splenic infarction.

Methods:

We report the observation of a 37-year-old woman who presented to the emergency room with an outdated right lower member ischemia. The etiological evaluation after amputation revealed the presence of a left atrium mass on echocardiography, and a splenic infarction on abdominal ultrasound. The patient underwent emergency surgery, surgical exploration revealed a left atrium mass implanted near the right pulmonary veins. The mass was sent for anatomopathological study after total resection.

Results:
The immediate postoperative course was marked by an acute bilateral lower members ischemia, having benefited of an arterial obstructions removal. the anatomo-pathological study returned in favor of a myxoma

Conclusion:

The cardiac masses pose an etiologic and diagnostic problem. The echocardiography, the MRI have a dominating place in the analysis of the anatomical and morphological characteristics of the mass, to guide the surgical gestures and to predict the histological nature, confirmation often requires an anatomo-pathological study.

ID: **401**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Poster**

HUGE HEART TERATOMA IN A 14-DAY-OLD BABY: CASE REPORT

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Introduction: Heart tumors of the child are rare. Most are found in children under one year old. Rhabdomyomas are by far the most common, followed by fibroids, intrapericardialteratomas, myxomas, and hemangiomas. Echography is the basic examination of diagnosis; it allows their screening in the fetal stage. The objective of this work is to report the discovery of this type of birth-time tumors.

Observation: We report the case of a 14-day-oldbaby, female, from a non-consanguineous marriage, presenting at birth a respiratory distress with hypoxia (arterial oxygen saturation: 85%) and cyanosis. The physical examination reveals a birth weight of 02 kg withnormal chest morphology, the cardiopulmonary auscultation reveals an abolition of cardiac sounds and vesicular murmurs. Chest X ray: huge cardiomegaly with widening of the anterior mediastinum, disappearance of the two pulmonary fields reduced to the buttocks of right and left costodiaphragmatic sacs. ECG: sinusal tachycardia.

Echocardiography: presence of a voluminous intrapericardial mass located on the right and in front of the cardiac mass. The thoracic CT scan confirms the presence of this intrapericardial tumor, of polycystic appearance attached to the base of the large vessels and compressing the heart. The infant was operated on urgently and the gesture consisted in the radical excision of the mass after median vertical sternotomy, the piece was sent for anatomopathological study. The postoperative course was simple. The pathological examination of the operative specimen returned to heart teratoma.

Conclusion: Cardiac tumors of the child remain rares, intrapericardialteratomas are often benign. The complete surgical removal of the tumor is curative and without recurrence.

ID: **408**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Oral**

HYDATID CYST OF LEFT VENTRICLE RUPTURED IN THE PULMONARY ARTERY. A CASE REPORT

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Cardiac localisation of the hydatic disease is rare (<3%) even in the endemic countries. It is an affection characterized by a long functional tolerance and a great clinical polymorphism. We report the case of a 44 year old young man without medical history presenting a respiratory distress with cyanosis following the sudden rupture of the right ventricular hydatic cyst in the pulmonary artery. Peroperative exploration found the rupture of the RV cyst in the pulmonary artery with rock water liquid, membrane and the blisters girls. The surgical treatment consisted on taking away the liquid, membrane and the blisters girls ablation, sterilization by SSH 30% and finally residual cavity padding. The immediate postoperative course was simple.

Conclusion: The surgery of the heart hydatic cyst is formel because of the lethal spontaneous

ID: **413**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Poster**

CARDIAC POLYKYSTOSIS: CASE REPORT

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Introduction:

Cardiac localization of hydatid disease is rare (<3%) even in endemic countries. Affection characterized by a long functional tolerance and a great clinical and para-clinical polymorphism. Severe cardiac hydatitosis due to the risk of rupture requiring urgent surgery. The diagnosis is based on serology and echocardiography.

Methods:

We report a 49-year-old woman, with a history of an unoperated hepatic hydatid cyst with polycystic heart disease. Preoperative: NYHA stage II dyspnea. Chest x-ray: ICT at 0.65. ECG: Negative T wave in D I, II, III, V4, V5, V6. Echocardiography: Multiple pericardial cysts surounding the heart, the largest in the left ventricul, multilobed and another compressing the left artium, another compressing the right atrium without signs of poor tolerance. Chest CT: Cardiopericardial polydatidosis. Per operative exploration: multiple cysts that are developed at the heart's expense, located at the level: roof of the left atrium; free wall of the right ventricul; of the interventricular septum and the left ventricul. Gesture: Puncture; aspiration of cysts; Removal of vesicles and sterilization of residual cavities with hypertonic physiologic solution.

Results: The post-operative folow up was simple.

Conclusion:

The simultaneous presence of several hydatid cysts in the heart is not uncommon but cardiac localization is rare; serious and can constitute a real surgical emergency, hence the importance of prevention.

ID: **164**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Poster**

CARDIAC HYDATID CYSTIC DISEASE: A CASE REPORT WITH MULTIORGAN INVOLVEMENT

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OBJECTIVE: Hydatid cystic disease (HCD), is a parasitic infection caused by larvae of Echinococcus granulosus, commonly affects liver and lung. Although cardiac HCD is an extremely rare disease which is seen in only 0.2-3% of patients with HCD, its early diagnosis and treatment is critically important. The aim of this study is to report the presentation, diagnosis and management of a cardiac HCD with multiorgan involvement.

CASE REPORT: A 44-year-old non-smoker male patient presented with chest pain. The patient had a history of previous surgical treatment for cerebral, renal and hepatic HCD, respectively. The cyst was diagnosed firstly on chest X-ray (Figure 1A). Transesophageal echocardiography revealed a cyst of 38X45 mm in the ventricular side of mitral valve posterior annular area (Figure 1B). Cardiac MRI confirmed the cystic lesion in that site (Figure 1C-D).

We decided to treat the patient surgically, followed by 400 mg of oral albendazole twice daily for 5 days. Standard cardiopulmonary bypass and antegrade cardioplegia with aortic cross-clamping was used. Hypertonic saline solution-soaked sponges were placed within the pericardial cavity. Through an incision away from coronary vasculature and without opening adjacent cardiac chambers, we aspirated the entire contents of the cyst, removed its germinative membrane, and irrigated the cavity with 20% hypertonic saline solution. Then, the cavity was obliterated with pledged mattress sutures (Figure 1E-H).

The patient recovered uneventfully. He was prescribed postoperatively oral albendazole of 12 weeks to prevent recurrence and discharged from hospital. Histopathology confirmed a hydatid cyst.

CONCLUSION: Cardiac HCD, is a very rare disease, should be treated surgically without delay. The surgical treatment combined with cystic removal including the germination membrane, and irrigating of the remaining cavity with hypertonic saline solution, is the main method of the management of disease. It is typically complemented by pre-/post-operative albendazole therapy. This way of the management is a safe and recommended approach for this rare and challenging problem. All patients should be investigated for systemic cysts with multiorgan involvement.

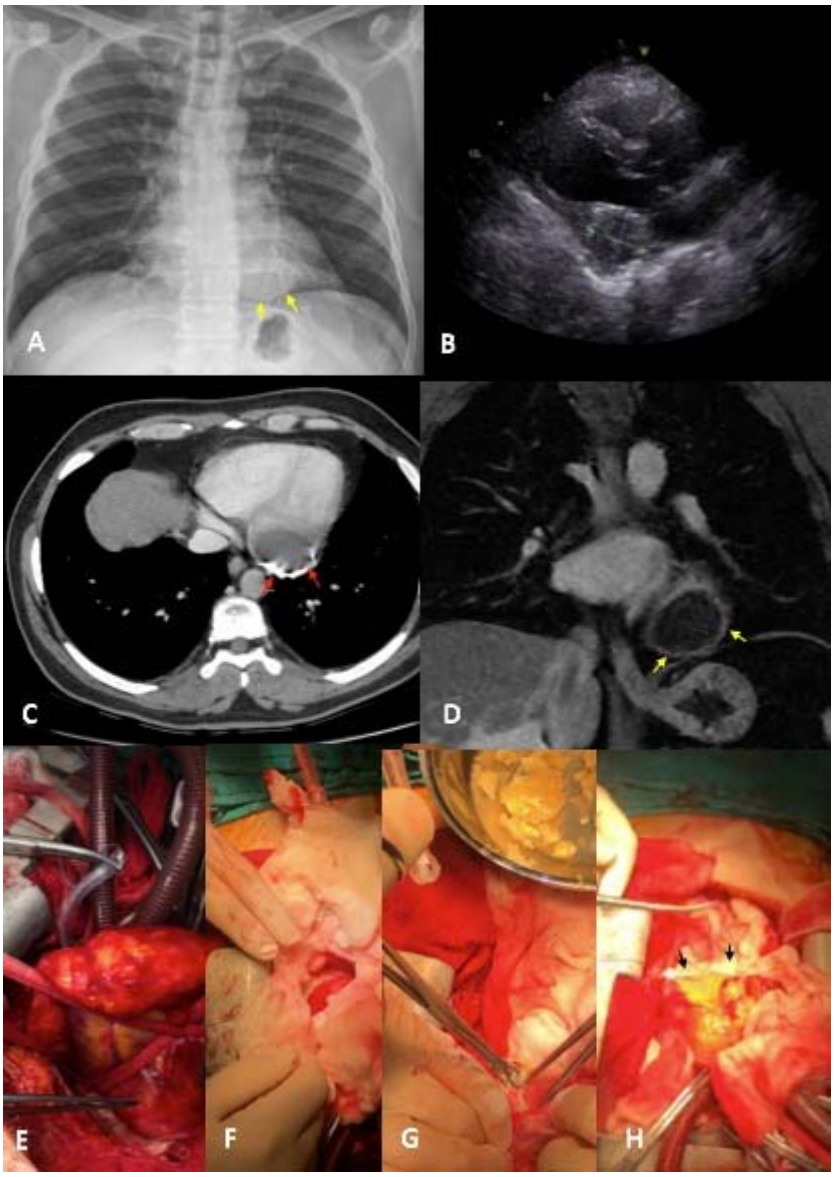

Figure 1. Images of chest X-ray (A), TEE (B) and MRI (C, D) showing the cyst (arrows). In the surgical field, the placement of hypertonic saline solution-soaked sponges into the pericardial space, removal of cystic content with germinative membrane, and obliteration with pledged mattress sutures (arrows) is showed (E-H).

Surgical Details in Coronary Artery Disease

ID: **220**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Poster**

GET READY FOR ANY SITUATION IN AORTIC CORONARY BYPASS SURGERY: END-TO-END ANASTOMOSIS OF THE SAPHENOUS VEIN TO THE RIGHT CORONARY ARTERY

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OBJECTIVE

There are many complications that may occur during aortic coronary bypass surgery and difficult situations requiring surgical experience. In these cases, the experience and quick decision making of the team increase the success of the operation.
We wanted to present an endarterectomy of the right coronary artery during surgery, stenting of the stented area and right coronary artery rupture after traction and surgical procedure.

Anastomoses are usually performed in the lateral side in aorta coronary bypass operations. But in our case; anastomosis was performed end to end.

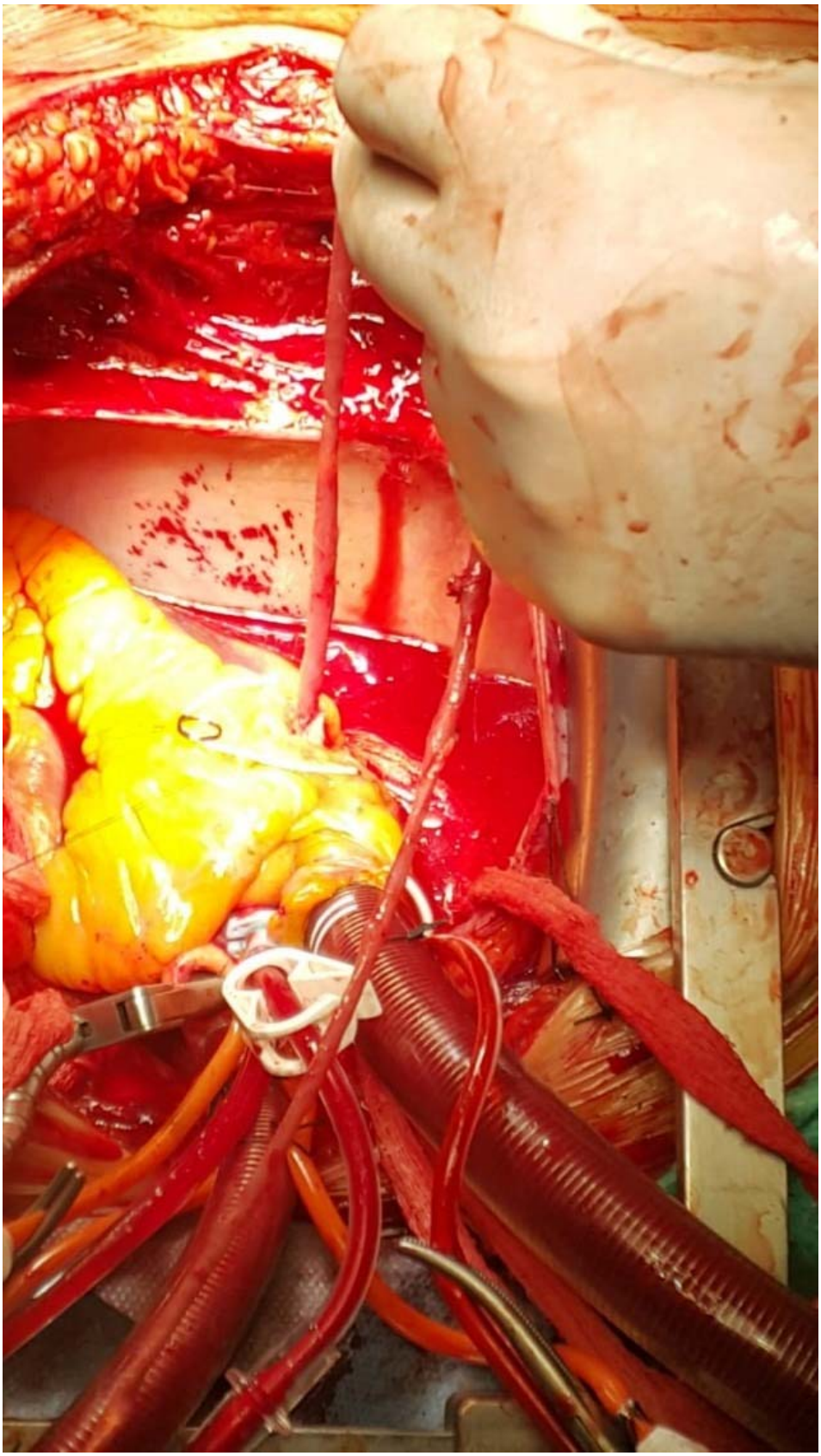
CASE

A 66-year-old female patient underwent bypass after coronary angiography because of 3-vessel disease. Bypass operation was performed with a heart lung machine. The right coronary artery was reached in a small area in the crux region. Other anatomical structure of the right coronary artery could not be observed due to excessive fat. Arteriotomy was performed to the right coronary artery. Endarterectomy was decided to be performed because of the irregular and not good vascularity. Extreme adhesion was observed during endarterectomy. Endarterectomy with right coronary artery and stent was removed during traction. Right coronary artery rupture was observed. Since the proximal section of the right coronary artery was irregular, a guide was sent through it. The right coronary mouth was closed with prolene because the guide didn't proceed. One clip was placed. The patient had known coronary angio, and since the right coronary proximal flow was known to be good, no new bypass was considered. After correcting the tip of the distal right coronary artery, anastomosis was performed end-to-end with saphenous vein (Image 1). There was no leakage from the proximal right coronary artery during the operation. We did quadruple bypass on pump. The patient was extubated on the same day. There was no significant drainage. He was discharged on the third postoperative day.

If the proximal right coronary artery was injured, the guide would advance and if the angios were unknown, a bypass would be required in the right coronary proxial segment.
This problem which disease of the distal part of the previous stent during aortic coronary bypass surgery, including excessive fibrosis and adhesion was overcome with the experienced and rapid decision of the surgical team, although it caused extra cardioplegia during the case.

CONCLUCIONS

Because of the problems that may be encountered during open heart surgery, the ability of the surgical team to make quick decisions and coolness is the key to success.



ID: **217**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Poster**

A RARE CASE OF AORTIC CORONARY BYPASS SURGERY: PLEURAL PLAQUE

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OBJECTIVE

In open heart surgery, aorta coronary bypass surgery without pleural opening is becoming more common. It is known that this method has many contributions on the morbidity of the patient.

Asbestos-bound fibrous plaques, which have no previous findings, are divided into two as malignant and benign. Benign forms are pleural plaque, diffuse pleural thickening and benign pleural effusion. At the time of intraoperative diagnosis, total excision is required in some cases.

We wanted to present the effect of the patient and his family on the comfort of life after the pleural plaque in the thorax wall which was accidentally opened during open heart surgery was sent to pathology.

A 66-year-old male patient underwent coronary artery bypass grafting for three-vessel disease after coronary angiography performed in a cardiology clinic for chest pain.

During the preparation of the internal mammarian artery, a rigid and yellowish white plaque seen from the accidentally opened pleura was consulted with intraoperative thoracic surgery. Plaque removed with cautery (3 * 2 * 0.5 cm) and subsequent plaques continued along the left thorax (Image 1).

On the chest x-ray, it was stated that only a certain part of the plaque was sent to the pathology because the costafrenic sinuses were open (Image 2). The pathology plaque was reported to be fibrous plaque. The patient was extubated on the day of operation. There was no significant drainage. He was followed up in the intensive care unit for one day. He was discharged on the 4th postoperative day without any problem.

It was learned that the patient was living in the asbestos region. The patient and his family were informed. Medical treatment was given by the thoracic surgery team with the necessary discourse. The living area of the patient and his family was changed and migration was provided. The patient was closely monitored due to the risk of mesothelioma.

It is known that pleural plaques reflect significant asbestos exposure and increase the risk of mesothelioma and bronchial carcinoma in these individuals (1).

CONCLUSIONS

Pathological examination of the intraoperative pleural plate should be performed and it should be remembered that total excision may be required. As a preventive medicine; it is clear that the patient and his family will have a positive effect on mortality and morbidity.

ID: **505**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Poster**

A RARE CONDITION IN CARDIAC SURGERY: CORONARY ARTERY ANEURYSM

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Coronary artery ectasia and aneurysm is a rare coronary artery disease and seen in 3-8% of patients undergoing coronary angiography, alone or in combination with stenotic lesions.

In this study, we aimed to present a patient with coronary artery aneurysm and planned coronary artery bypass to other vessels.

Case Report

A 72-year-old male patient was found to have left main coronary artery disease on chest pain after compressive chest pain.
Vascular disease was seen in the right coronary artery, which also appears ectasic but should be defined as aneurysm (Figure 1). His blood pressure was 110/60 mmhg. There was no diastolic hypertension.

Echocardiography showed ejection fraction of 30% and mitral regurgitation as second degree. It was decided to perform TEE. Central 1-2 degree leakage was observed in mitral valve. Carotid doppler ultrasonography was performed and carotid MRA was performed due to severe stenosis. 60-70% was reported as stenosis. Levosimendan infusion was given. It was decided to undergo aortocoronary bypass surgery before carotid endarterectomy. Operational risks were re-discussed with patients and their relatives. However, the patient and his relatives gave up the operation due to the risk of surgery.

Coronary artery ectasia is dilatation of an arterial segment to a diameter at least 1.5 times that of the adjacent normal coronary artery. Coronary artery aneurysm is dilatation of an arterial segment to a diameter at least 2 times that of the adjacent normal coronary artery. Coronary artery ectasia is attributed to atherosclerosis in 50% of cases, whereas 20% - 30% are considered to be congenital in origin.

Coronary dilatation is isolated ectasia or aneurysm, in association with connective tissue disorders such as scleroderma, in Ehlers–Danlos syndrome, different types of ANCA- related vasculitis and also in syphilitic aortitis and Kawasaki disease.

There is no correlation between ectasy at the coronary arteries level and extasy in other arteries of the peripheral vascular system, although they may co-exist in some cases.

For patients with coexisting obstructive lesions and symptoms or signs of significant ischaemia despite medical therapy, percutaneous and/or surgical coronary vascularisation can safely and effectively restore normal myocardial perfusion. Coronary artery bypass grafting has been used for the treatment of significant coronary artery disease co-existing with ectatic coronary segments.

Thrombosis is one of the most common complications in patients with coronary artery aneurysms. Embolism and coronary artery rupture may cause sudden death.

Conclusions

Good evaluation of these patients, informing their relatives and evaluating them with control cardiac computed tomography is important for preventive medicine.
Mortality and morbidity can be significantly reduced even with acetylsalicylic acid treatment, which will be initiated when ectasia is detected in the relatives of the patient.

In patients with coronary artery aneurysm or ectasia who do not benefit from medical treatment, aortic coronary bypass surgery can be performed safely.


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ID: **240**

Topic: **Cardiovascular Surgery » Risk Management in Cardiovascular Diseases**

Presentation Type: **Poster**

VERY RARE MALPOSITION OF A CENTRAL VENOUS CATHETER INTO THE LEFT INTERNAL MAMMARY VEIN IN A PATIENT WITH CORONARY ARTERY DISEASE

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Background

Central venous catheterization, an interventional technique which is commonly used to aid in diagnosis and treatment in hospitalized patients, may also lead to complications such as malposition and rupture.

Methods

We wanted to evaluate a very rare catheter malposition to left internal mammarian vein (LIMV) during preoperative preparation of coronary artery bypass graft surgery.

Results

Although this unexpected catheterization into the left internal mammary vein has been reported in the literature. This case seems to be the first report of malposition detected intraoperatively in a patient with coronary artery disease.

Conclusion

In conclusion malposition should be remembered during central venous catheter application when no imaging and monitoring methods are used. Even if it is performed by experienced persons under ultrasound guidance, it should be skeptical and need verification after process.

Keywords: central venous catheterization, catheter malposition, left internal mammarian vein

(Figure-1: Intraoperative detected catheter in LIMV.)

ID: **108**

Topic: **Cardiovascular Surgery » Risk Management in Cardiovascular Diseases**

Presentation Type: **Poster**

MEDIASTINAL TEXTILOME: CASE REPORT.

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Introduction: Foreign bodies post operating are scarce. In the majority of cases of abdominal location. 80% of those foreign bodies are essentially abdominal location textilomes. The aim of our work is to bring a new observation.

Methods: We rapport a case 66 year old adult .In the history of CABG since one month, allowed for exploration of the sternotomy wound flow .The chest x ray shows an opacity not systematized of the lower part of the mediastinum .Echocardiography that highlighted a mass pleural hyper echoic absorbing sronglyechoes and accompanied by a shadow rear cone 5 cm large axis surround by parenchymatous condensation evoking a textilomes. Chest CT scan revealed a mediastinal condensation. Fistulographie mediastinal: mediastinal fistula. It enjoys a removal of compression after dissection substernal and sent to bacteriology examination.

Results: The operating suites were simple.

Conclusion: The mediastinal textilome was scarce by its frequency, but remains a disease potentially serious clinical consequence and medico-legal.

ID: **338**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Poster**

THE SUCCESSFUL USE OF CATHETER-DIRECTED ULTRASOUND-ACCELERATED THROMBOLYSIS ON A PATIENT WITH MASSIVE PULMONARY EMBOLISM AFTER CORONARY ARTERY BYPASS SURGERY: A CASE REPORT

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OBJECTIVE: Pulmonary embolism (PE) carries a high risk of mortality and morbidity. PE is an uncommon event after cardiac surgery. It is associated with an unexpected hemodynamic instability and severe desaturation without other typical changes. Catheter directed thrombolysis is an effective treatment for patients who are not suitable for systemic thrombolytic treatment. In this case, we present the successful use of catheter directed thrombolysis with the EkoSonic System (EKOS) on a patient with massive pulmonary embolism after coronary artery bypass surgery.

METHODS: A 64-year-old patient who had unstable angina was referred to our hospital and underwent coronary artery bypass surgery. Cardiopulmonary bypass was achieved via the cannulation of ascending aorta and right atrium. The distal anastomoses were performed on LAD, diagonal branch and RCA posterior descending with saphenous vein grafts. The operation was completed uneventfully. The patient was taken to the intensive care unit (ICU). But his blood pressure (BP) sharply decreased and saturation of pulse oxygen (SpO2) fell to 88%. There were no abnormal findings in auscultation and intubation tube. He required vasopressor support. A bedside transthoracic echocardiogram was performed, showing an enlarged RA, RV and pulmonary hypertension (PAP 64 mmHg), EF 60%. Nitric oxide was administered via endotracheal tube Immediately Enoxaparin was commenced with a dose of 1 mg/kg twice a day due to suspicion for pulmonary embolus. He didn't have a clinical manifestations of deep venous thrombosis (DVT). Absence of DVT was confirmed by using bedside ultrasound. Computed tomography was performed and showed a massive pulmonary embolus. There was no change in the patient's haemodynamic parameters. After explaining the risks and benefits of catheter directed thrombolysis with the EkoSonic System to the patient's family, the patient was transferred to the catheter laboratory on postoperative day 5. First, EKOS catheters were placed in the right pulmonary artery and thrombolytic therapy was performed for a total of 12 hours with a tissue plasminogen activator (tPA) flow rate of 1 mg/h then the catheters were placed in the left pulmonary artery and the same process was repeated. Then the patient was transported to the ICU again.

RESULTS: After EKOS, the clinical findings and haemodynamic parameters of the patient significantly improved. Hemorrhagic complication was not observed. Therapeutic anticoagulation was restarted after EKOS. The patient was extubated 1 day after EKOS. The ICU stay was 8 days and the patient was discharged within 10 days after the procedure.

CONCLUSIONS: Massive PE is associated with increased morbidity and mortality. After cardiac surgery, PE should be considered if hemodynamic instability and decrease in spO2 persist after exclusion of other common causes. In appropriate patients, EKOS may be life-saving.

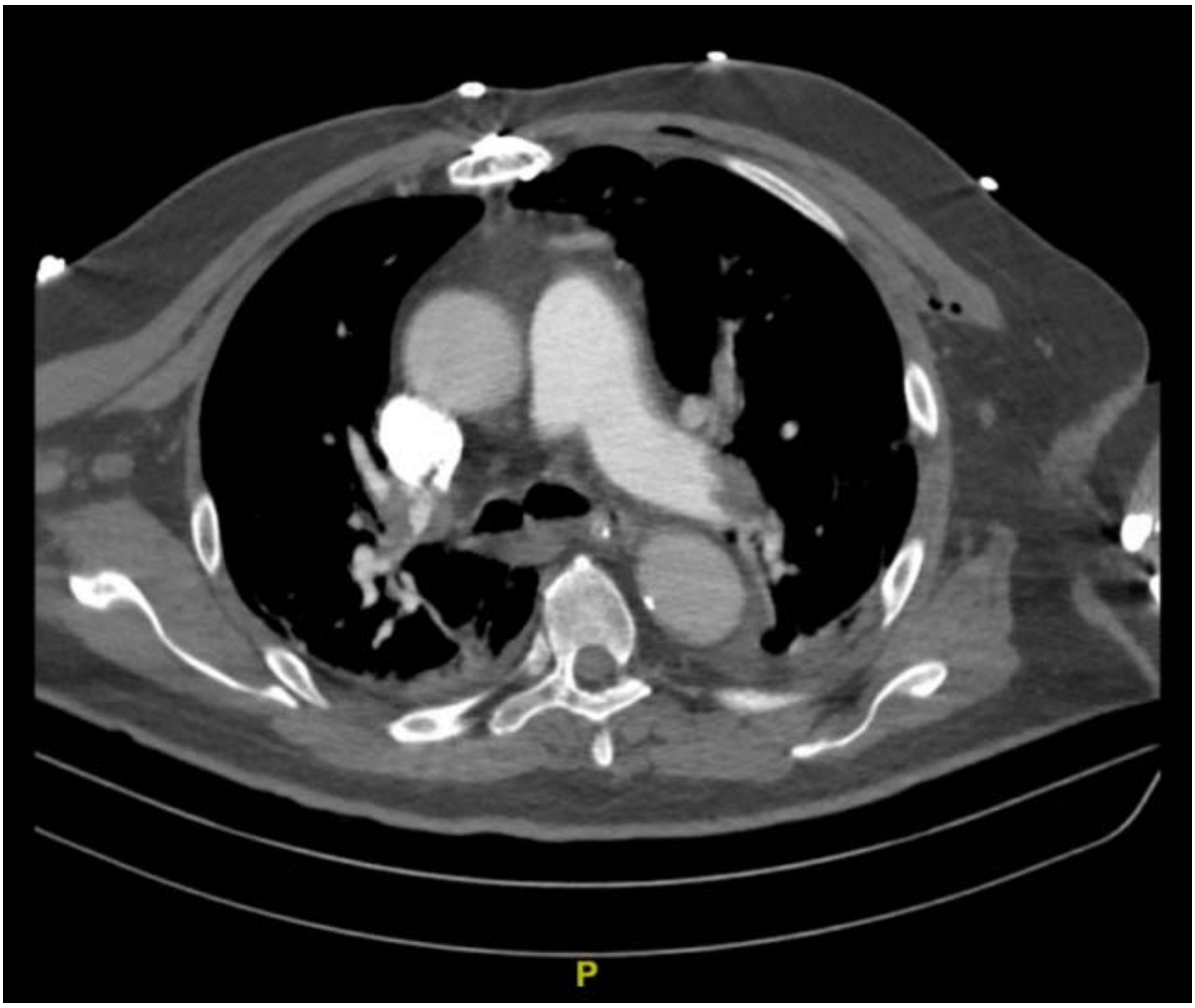

IMAGE: Contrast-enhanced CT showing the pulmonary embolus

ID: **491**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Poster**

SADDLE LEFT MAIN CORONARY ARTERY THROMBOSIS IN ASYMPTOMATIC PATIENT

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Background

Left main coronary artery thrombus is a rare event. Based on previous experiences, clinical presentation usually arises with ST elevation myocardial infarction (STEMI), non-ST elevation myocardial infarction (NSTEMI), unstable angina (USA), cardiogenic shock, or sudden cardiac death. The clinical manifestation is estimated to be low, but this is thought to be an underrepresentation given sudden LMCA thrombus may present with sudden cardiac death.

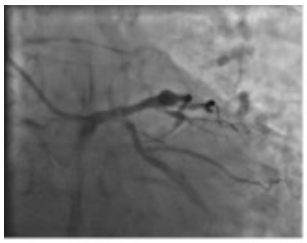
Case

Here we present a case, with no previous history of angina or cardiac symptoms diagnosed with saddle LMCA thrombus after coronary angiogram following suspected calcified coronary lesions on control CTA. A 55-year old man, with no known risk factors for atherosclerotic heart disease and history of angina or shortness of breath, undergone control Cardiac CT Angiogram due to family history of sudden cardiac death. On CT, it was reported that Agatson Calcium Score of coronary arteries, 830 for LAD; 936 RCA; 255 Cx as total of 2021, very high calcific burden specifically for LAD and RCA, supporting initial diagnosis of atherosclerotic cardiovascular disease (Figure 1). It was also noted, ectopic origins of proximal RCA and LAD, as well as first diagonal branch of LAD. Flow characteristics showed, 50-60% stenosis of ostial LAD, and mild stenosis on mid LAD and Diagonal branches. Most importantly, the patient underwent an exercise-induced ECG 1 week ago and had completely normal ECG findings, asymptomatic.
Based on this findings, coronary angiogram was conducted to further examine coronary artery morphologies. Saddle thrombus located on proximal LAD, partly blocking entrance of cirfumflex arteries (Figure2), confirming prior diagnosis reported by CT scan. Interventional Cardiologists at our institute referred him to our department, to seek surgical treatment as lesion characteristic wouldn't be suitable due to potential thrombus dislocation which might cause rapid deuteriation of cardiac function (MI, Cardiogenic shock etc.) during PCI for stent implantation.

After patient was discussed in conjoined Cardiovascular Surgery and Cardiology council which recommended CABG as treatment of choice, verbal and written consent was taken for operation.

Conclusion

Here, we present a case of a native coronary thrombus that developed in asymptomatic patient with no history of cardiac disease. This provides substantial prof that clinicians should be aware of this entity, as delay in treatment can be life threatening. Cathater directed manipulation might cause unwanted complications, thus surgical treatment in experienced hands should take into consideration in such cases.



ID: **509**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Poster**

SURGICAL STRATEGY AND TACTICS OF MYOCARDIAL REVASCULARIZATION ON A BEATING HEART IN PATIENTS WITH CORONARY ARTERY DISEASE

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Purpose of the study: Development and improvement of the surgical strategy and tactics of myocardial revascularization on a beating heart in patients with coronary heart disease and assessment of their effectiveness.

Materials and research methods: In Urgench branch of the Republican Specialized Scientific and Practical Medical Center for Cardiology from 1 to 10 January, 2020 20 coronary artery bypass grafting (CABG) operations on a beating heart (OPCABG - off pump coronary artery bypass grafting) were performed in patients with coronary artery disease, of which, in three cases, due to unstable hemodynamics and large heart sizes, CABG was performed on a beating heart on parallel perfusion (on pump coronary artery bypass grafting on beating heart). Material analysis: men 14, women 6, the age of patients ranged from 48 to 78 years and averaged 60.9 ± 1.62 years. Postinfarctioncardiosclerosis was observed in 9 patients. Of the concomitant pathology, 14 patients suffer from grade III arterial hypertension, 4 patients suffer from diabetes mellitus, and grade II-III obesity was observed in 16 patients. Monovascular lesion was noted in 3 patients, multiple lesions of the coronary arteries in 17 patients. In our practice, we performed the stabilization of the coronary arteries with the original stabilization device of the compression type of the company Genzyme (USA).

Results and discussion: Using the method of CABG on a beating heart after its mastering helped ensure 100% myocardial revascularization. The average number of grafts per patient was 2.84 ± 0.5, which is evidence of the possibility of performing a complete myocardial revascularization on a beating heart and corresponds to the number of most frequently bypassed arteries. Performing CABG on a beating heart made it possible to carry out early activation of patients, which resulted in a reduction in the terms of stay of patients in the intensive care unit up to 2 days and in general in the hospital up to 6.7 ± 2.1 days. The strategy of CABG on a beating heart involves a sequential reduction in the area of ischemia after each superimposed distal anastomosis. To achieve this goal, the following sequence is fundamentally important: first, isolate the internal thoracic artery and venous grafts, apply proximal anastomoses, unless the hemodynamic situation requires rapid anastomosis of the internal thoracic artery and the anterior descending artery (anterior interventricular branch), bypass collateralized coronary arteries, those arteries that “give away” the collateral are bypassed last. With equivalent lesions and the absence of collaterals, the anterior descending artery (anterior interventricular branch) should be bypassed first. If stabilization and occlusion of one of the affected coronary arteries leads to deterioration in hemodynamics, extracorporeal circulation must be connected.

Conclusions: CABG on a beating heart made it possible to ensure complete myocardial revascularization, reduce the number of complications associated with the use of a cardiopulmonary bypass and shorten the days of patients in hospital; get good early and nearest results.

ID: **738**

Topic: **Cardiovascular Surgery » Coronary Bypass Surgery**

Presentation Type: **Poster**

SUCCESSFUL CORONARY ARTERY BYPASS OPERATION IN A SARS-COV-2 INFECTED PATIENT

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OBJECTIVE: Coronavirus disease 2019 infection has recently spread worldwide and has been declared pandemic. Here, we present a 62-year-old female patient who had coronary artery bypass (CABG) surgery diagnosed as positive coronavirus disease 2019 (COVID-19) on postop day 1.

METHODS: A 62-year-old female patient was sent to our service for CABG. The patient was hospitalized and followed up in the service. The preparations were completed. The patient was scheduled for an early operation due to recurrent chest pain while hospitalized. After she developed a senkop and due to the normal thorax ct and blood results she was taken to an urgent operation without waiting swap result. On the postoperative early hours she was reoperated because of bleeding.And on postoperative day 1 her PCR result was positive for covid 19. The patient, who was intubated for 27 postoperative days due to low oxygen, was extubated and followed up in intensive care unit for 5 more days with high flow oxygen. On post op.32nd day she was taken to the service and her follow-up continues without clinical problem.

RESULTS: Although pulmonary complications are the most prominent in this disease, it is important for physicians to be aware of the asemptomatic patients with this disease that may contribute significantly to the mortality.

CONCLUSIONS: Even if the patients are asymptomatic, a swab should be taken unless the case is very urgent, as the postoperative period will be very difficult and long.

Unusual Experiences in Aortic Surgery

ID: **377**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Poster**

LATE OPEN SURGICAL CONVERSATION FOLLOWING ENDOVASCULAR ABDOMINAL ANEURYSM REPAIR: A CASE REPORT

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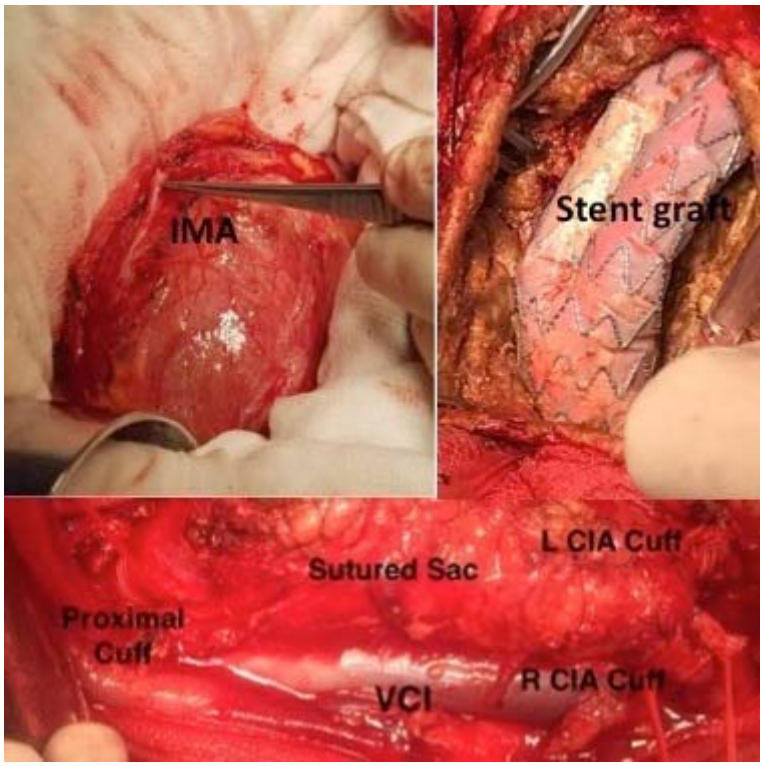
BACKGROUND: Late open surgical conversation following endovascular abdominal aortic aneurysm repair (EVAR) is a rare but very serious situation due to technical difficulties. We present a case of open surgical operation for abdominal aortic aneurysm (AAA) sac enlargement 2 years after EVAR.

METHODS: The patient was a 63 years old male, with a history of coronary artery bypass grafting, carotid stenting and EVAR for AAA. Serial computed tomography angiograms revealed enlargement of the aneurysm sac.

RESULTS: Angiography was performed. There weren't any Type I or III endoleaks, Type II endoleak originated from SMA couldn't be identified. The open surgical conversion was performed via median laparotomy and endoclamping with an aortic balloon through the right common femoral artery for proximal control was used. Distal control was done by simple clamping of the common iliac arteries at the level of the distal legs of the endograft. The sac was opened, all the debris and coagulum were evacuated, 2 large-bore lumbar arteries and suspicious-looking inferior mesenteric artery (IMA) were identified. All the orifices were suture ligated. Endoclamp and cross clamps were released and stent-graft was investigated for Type I and III endoleaks, none was seen. Sac was wrapped around and sutured over the graft. Proximal and distal necks were cuffed and sutured tightly with Dacron grafts as a prophylactic measure for potential Type I endoleak in the future. The patient had an uneventful postoperative period and discharged on the 6th day.

CONCLUSION: Complete removal of the endograft is neither possible nor necessary for all of the cases. Proximal hooks of suprarenal fixation of several stent-grafts were hard and may be hazardous to extract. Endoclamping is a safe alternative for proximal control instead of higher level clamping (proximal to the renal arteries) or clamping at the level of bare metal struts of the stent graft. Surgery should be targeted to solve the main problem without leaving any potential gaps.


IMA
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ID: **297**

Topic: **Cardiovascular Surgery » Abdominal Aortic Aneurism**

Presentation Type: **Poster**

VASCULAR SUTURE LINE WRAPPING FOR AORTOILIAC ANASTOMOSES FOLLOWING OPEN SURGICAL REPAIR OF INFRARENAL BEHÇET'S AORTOILIAC ANEURYSMS

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BACKGROUND: This study was conducted to evaluate our local experiences of adjunctive mechanical prosthetic wrapping for aortoiliac vascular anastomoses as a prophylactic measure following surgical repair of Behçet's aortoiliac aneurysms. The goal of prosthetic wrapping to reinforce the vascular anastomoses by mechanical protection to reduce the bleeding complications, and consequently pseudoaneurysm formation. This was aided by the administration of pre- and postoperative immunosuppressive therapy as an adjuvant treatment.

METHODS: A seven-year retrospective study was conducted between January 2006 and December 2012, retrieving data of patients with Behçet's aortoiliac aneurysms. All patients underwent open surgical repair using a heparin-bonded synthetic Dacron® graft. Data for all patients were retrieved and analyzed for diagnostic procedures, graft selection, as well as, different methods of surgical repair. Graft-related complications such as anastomotic pseudoaneurysms, occlusion, and thrombosis were also reported.

RESULTS: Sixteen patients were recruited in this study. There were 11 (69%) males and 5 (31%) females with the male to female ratio 2:1. The patients' age ranged between 25 and 47 years with the mean of 36.4 ± 7.3. All Behçet's aortic/aortoiliac aneurysms were repaired by the application of heparin-bonded Dacron® tube and bifurcated grafts. The anastomotic wrapping technique was performed for both the proximal and the distal vascular anastomoses. The technical success of aortoiliac aneurysm and wrapping techniques was achieved in 100% of patients. All patients were given pre- and postoperative systemic immunosuppressive therapy. No graft-related complications were reported except for only one anastomotic pseudoaneurysm that developed at one of the right iliac anastomoses that developed within 24 months after follow up.

CONCLUSIONS: Mechanical prosthetic wrapping for vascular anastomoses in patients with Behçet's aortic/aortoiliac aneurysms is a feasible, simple, and reliable technique with low morbidity and mortality. It was performed as a prophylactic measure to avoid the development of postoperative anastomotic pseudoaneurysms. It must be performed for all patients with Behçet's arterial aneurysms whenever possible. Furthermore, the supplemental administration of pre- and postoperative systemic immunosuppressive therapy should be considered as an important factor for the prophylaxis and prevention of anastomotic pseudoaneurysms and other graft-related complications.

ID: **361**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Poster**

AORTIC DISSECTION DURING PERCUTANEOUS CORONARY INTERVENTION AND LEAD INDUCED RIGHT VENTRICULAR PERFORATION: CASE REPORT

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OBJECTIVE

Acute aortic dissection during cardiac catheterization and lead-induced right ventricle perforation rate are a very rare complication. Simultaneous complications of these two complications are rare in one patient and we wanted to present this situation.

CASE

A 78 year-old female complaining of unrelieved chest pain for 5 hour was admitted to the Emergency Hospital. After definitive diagnosis, a percutaneous coronary angiography was implemented. Aortic dissection in the ascendan aorta
was found (Image 1). The patient entered an atrioventricular complete block during angiography and transient pacemaker implanted in the right ventricle at the outer center. Cardiologist sent the patient cardiovascular surgery to our hospital by urgently surgery. In the hospitalization, the patient blood pressure was 80 mmhg with inotropic support dopamine and pulse 60 / min with pace maker. Echocardiography showed pericardial fluid, aortic failure 1-2 degrees and dissection flap could not be seen clearly. Computed tomography was performed and dissection flap was observed in the ascending aorta. There was fluid in the pericardium. The patient had severe back pain. Patient and relatives were informed about the operation. Consent was obtained.
Percutaneous cannulation was performed from the right axillary artery and right femoral vein. This cannulation method was preferred for less traumatized and rapid intervention. Blood and hematoma were observed in the pericardium. When aortotomy was performed, dissection was observed between the left and right coronary arteries and the region of the aortic valve falling on the noncoronary cusp. Dissection was seen that it was formed with a smooth incision of 1.5-2 cm and that the aortic tissue was extremely thin. The dissected part of the ascending aorta was excised until non-coronary cuspis. Right and left coronary arteries were preserved. Distal graft was interposed when total circulatory arrest. Heart worked spontaneously. Venous hemorrhage was observed and right ventricle was injured due to pace maker lead and repaired with plegit sutures.

Acute aortic dissection during cardiac catheterization is a very rare complication. (overall incidence, 0.02%) and occurs more frequently in the emergency setting of acute myocardial infarction. (0.19%) than in an elective setting (0.01%).
Lead-induced right ventricle perforation rate is reported as 0.1-0.8% in the literature.
In patients with aortic dissection, almost half of the patients die before they reach the hospital. The risk of death in these patients increases by 2% every hour until they reach the hospital.

CONCLUSION

Although gentle touches are done during coronary interventions, complications may develop. How quickly these complications are intervened, the mortality rates will be lower.

ID: **372**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Poster**

ACUTE AORTIC DISSECTION IN A PATIENT APPLIED TO THE EMERGENCY DEPARTMENT WITH ISCHEMIC STROKE

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OBJECTIVE

Acute aorta dissection and ruptured aorta aneurism are prominent causes of death in cardiovascular diseases. This situation, which threatens life, was recently classified as acute aortic syndrome. Acute aortic syndromes are defined as an emergency in the clinic and they may be listed as aorta dissection, intramural hematoma without intimal rupture, penetrant atherosclerotic ulcer and ruptured or almost ruptured aorta aneurism. The frequency of developing neurological complications in aortic dissections is reported to be between 2 to 8%.

Stroke is more common in dissections involving the proximal aorta, but paraparesis is more common in distal aortic dissections due to circulatory impairment in the spinal arteries. In our study, we found it worth presenting a case of acute aorta dissection in the ascending aorta that arrived without chest and/or back pain and atypically with left hemiplegia and syncope and caused ischemic stroke.

CASE

The 47-year-old male patient was referred to our emergency service from an external center with diagnosis of acute ischemic stroke. The patient had experienced loss of strength on his left side and had syncope one hour before in the classroom. He had a history of hypertension. In the examination of the patient at the external center, his general status was moderate, the Glasgow Coma Scale score was 9-10, and the left side of the patient was hemiplegic. After his physical examination, the patient received computerized brain tomography and diffusion MR imaging with the pre-diagnosis of acute stroke. For the patient who had an appearance of acute diffusion restriction in the right parietal region in the diffusion MR imaging and had a chance of thrombolytic treatment, thrombolytic treatment was planned. However, the general status of the patient was worsened in this checkup examination, and his Glasgow Coma Scale score regressed down to 7. This blood pressure decreased down to 80/60mmHg. For the patient with a high score of NIH Stroke Scale, thrombolytic treatment was found not appropriate, and thus, not provided. In the electrocardiography of the patient, sinus tachycardia and troponin values were positive. Echocardiography is performed and aortic dissection is detected. Aorta dissection, which may progress with clinical signs of stroke, was considered for the patient, and as an advanced test, dynamic thorax CT angiography was taken. In the dynamic thorax CT angiography of the patient, aneurism in the ascending aorta and aortic dissection were observed.
The patient underwent emergency surgery and supracoronary hemiarc replacement was performed. Our patient was discharged after the operation and started physical therapy applications. The patient returned to his teaching position and joined active life.
In our case, the patient did not have chest and/or back pain. The arrival of the patient with left hemiplegia and syncope led us to acute ischemic stroke as a pre-diagnosis. As seen here, we may encounter aorta dissection with several different clinical issues that are impossible to consider at first.

CONCLUSION

Keeping dissection in mind is the most important factor in the diagnosis of acute aorta dissection. This is why appropriate examinations should be carried out by keeping the diagnosis of aorta dissection in mind in patients who visit emergency services with symptoms that are not expected for aorta dissection such as syncope, altered consciousness, hypotension, atypical abdominal pain and loss of strength in the extremities.

ID: **157**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Poster**

ACUTE AORTIC DISSECTION ON ANEURYSM OF THE ASCENDING AORTA IN A PATIENT MARFAN DISEASE: CASE REPORT

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Introduction: Marfan's syndrome is a rare genetic disease. It is characterized by the achievement of one or several organs may cause problems notably skeletal disorders (big size, scoliosis), ophthalmique (myopia), cardiac (aorta dilatation) .The prevalence of this syndrome is estimated at one person for 5000 births.

Methods: we report the observation of 36 year young woman with family history of Marfan (two brothers ,form major, mother: minor form) came to the emergency for chest pain who plays for a week with dissection of aorta and aortic insufficiency and left ventricular function correct in echocardiography. AngioCTthoracic: aortic dissection type A on expansion anevrysmale of sinus 69/67 mm. Chest x-ray; scoliosis .Clinically: we have a marfanoid aspect with signed kyphoscoliosis, anachnodactylie, adolichosteomelie, thumb and wrist myopia and dislocation of cristallin. Biology is correct. The decision of medico chirurgical staff is to challenge this patient given the importance of the chest deformities and altered general status.

Results: case exceeded and patient discharged to home.
Conclusion: The announcement of the diagnostic is an integral part of the throughcare process. Management is multidisciplinary and continues. The key elements of the monitoring are the aortic root, the mitral valve, the headset, and the complication musculosquelitiques.

Key words: Marfan disease, malformation s, dissection, aneurysm.

ID: **159**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Poster**

FALSE ANEURYSM OF THE AORTIC ARCH FISTILISE IN THE LEFT LUNG: CASE REPORT

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Introduction: Aneurysmal location in the aortic arch is outstanding, rarer than the ascending aorta. This is a serious condition because of the risk of rupture requiring an emergency surgery. The diagnosis is based on the CTA and MRA. This clinical case is an opportunity for us to recall the seriousness of this disease for the patients, and challenges encountered by the surgeons.

Methods: We report the case of 53 year old men, with a history of a 4 meter drop from a building two years ago. Hospitalized for exploration following the discovery of chest X-ray opacity of the upper lobe left lung as a result of hemoptysis average abundance. The suspect image. A .chest angio-CT was performed showing the false aneurysm of the aortic arch. ECG was normal. Laboratory tests showed anemia. The patient was operated on under extra corporeal circulation, established between the femoral artery and femoral vein with deep hypothermia and circulatory arrest. The surgical approach was a left thoracotomy in 4 left intercostal space. After installing a femoral-femoral CPB and detachment of the left lung intraoperative exploration shows a huge pseudoaneurysm of the aortic arch blocked by the upper lobe of the left lung fistulizing of pseudoaneurysm in the latter. The intervention had consisted after flattening of the pseudoaneurysm in compensation for the loss of aortic substance by a lateral Dacron patch under circulatory arrest and closure of the pulmonary breach.

Results: The immediate postoperative were unfavorable with a fatal refractory cardiogenic shock.

Conclusion: Advances in imagery make the angio scanner and the MRA the best exams for detecting false aneurysms of the aortic arch. The indication for surgery is formal in all cases of pseudoaneurysm of the aortic arch because the spontaneous evolution is fatal. In fact, the actual treatment is surgery.

Keywords: false aneurysm, aortic arch, hemoptysis, cardiopulmonary bypass, cardiac arrest.

ID: **190**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Poster**

TRAUMATIC ASCENDING AORTA INJURY DURING A REOPERATING CARDIAC SURGERY: CASE REPORT

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Introduction: Ascending aorta traumatic injuries during reoperation are infrequent. The diagnosis is based on operative exploration. The prognosis is poor.

Treatment is surgical. The principal objective of this work is to make young cardiac surgeons aware of the seriousness of this type of incident.

Method: We report the observation of a 35 years young man old, operated at 21 for subaortic stenosis, a few months ago he showed dyspnea on exertion with syncope. Echocardiography: a sub aortic stenosis with a circumferential membrane. Left ventricul: 54/32mm. After iterative sternotomy an aortic injury occurred during steel wires removal, expressed by a sinificative pulsatil bleeding. After emergency heparinization, closing of sternum, installation of femoro-femoral cardiopulmonary bypass. the per operative exploration after retrosternal dissection found a 1cm ascending aorta wound, controled by partial aortic clamping. The repair was performed by stitches reinforced with teflon-felt pledgets.

Results: Postoperative follow without complication incidents.

Conclusion: Intraoperative incidents are serious and exceptional, requiring rapid and effective surgical intervention.

ID: **207**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Poster**

A RARE CASE: TRAUMATIC AORTIC SACCULAR ANEURYSM

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OBJECTIVE

Aortic injuries may occur following major blunt chest traumas. Although majority of them are acute traumatic aortic rupture, rarely they can become chronic posttraumatic saccular aneurysm. Saccular aneurysm is a small, unstable aneurysm that develops on one side of the aorta. Saccular aneurysms cover only a portion of the aortic wall. Chronic posttraumatic aortic saccular aneurysm may develop after a 3-week period following blunt chest trauma.

Case: A 55-year-old male patient was admitted to our clinic with recurrent back pain. His history revealed that he had a traffic accident two years ago. On physical examination, blood pressure measured in four extremities was within normal limits and there were no pathological differences. There was no pathological change in her resting ECG. Routine biochemistry, blood, bleeding / clotting time were normal. Chest X-ray showed a larger than normal mediastinum. The patient underwent thoracic tomography and a 22x15mm saccular type aneurysm was observed in the proximal section of the descenden aorta from the pattern and with a 13 mm neck in the left lateral wall of the aorta (image 1). Aneurysmatic formation of the descending aorta 4 cm distal to the left subclavian artery was observed. TEVAR was performed because of high risk of rupture of saccular aneurysms.

CONCLUSIONS

Saccular aneurysms should be operated primarily because of the risk of rupture. Endovascular interventions are used as a rapid and effective treatment modality.

İmage 1 : Saccular aortic aneurysm

ID: **242**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Poster**

LIFE SAVING ENDOVASCULAR AORTIC REPAIR IN SPONTANEOUS RUPTURES: REPORT OF TWO EMERGENCY CASES

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Background

The general management of aortic ruptures include emergency surgical repair of medical treatment but advancement of covered stent grafts provided a third option in treatment of these patients. The advancements in this technology and increased experience of cardiovascular surgeons in this treatment technique, broadens the anatomical spectrum of this pathology that can be treated with endovascular interventions.

Methods

In the case of an aortic rupture, urgent evaluation of the patient and planning the patient specific treatment are crucial. However, anatomy of the pathology should be suitable for this kind of intervention.

Results

We represent a case of spontaneous rupture in the aneurysm of arcus aorta and a case of spontaneous rupture in the abdominal aortic aneurysm which were successfully treatment with endovascular interventions.

Conclusion

In conclusion, the endovascular treatment option is chosen in 'selected patients' in many recent studies. We believe that endovascular or hybrid procedures will be more common as the technology of these products advances.

Keywords: Endovascular aortic repair, spontaneous aortic rupture, life-saving treatment

Figure 1A. Sagittal CT angiography imageFigure 1B. Transverse CT angiography image. The rupture in the aorta wall (arrow) and hemothorax (circle)

Figure 2A. The hematoma caused by the rupture in the abdominal aortic aneurysm (circle) and the abdominal aorta (arrow). Figure 2B. The 3D image of the rupture in the infra-renal abdominal aortic aneurysm wall.

ID: **38**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Poster**

HYBRID PROCEDURE IN A CASE OF TYPE B AORTIC DISSECTION WITH A PREVIOUS BENTALL'S PROCEDURE

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INTRODUCTION: Aortic dissection (AD) is one of the most challenging vascular diseases. Conventional surgical techniques are associated with significant risks in terms of mortality and morbidity. This case report describes the management strategy of a type B Aortic dissection with a prior aortic root surgery.

CASE REPORT:

A 48 year old gentleman, a case of Marfan's syndrome, was diagnosed with aortic root aneurysm in 2006. He underwent modified Bentall's procedure then using a Dacron graft tailored in with 21mm St.Jude's mechanical valve. Patient was under regular follow-ups. 7 months ago, the follow-up CT aortogram showed mild Stanford Type B Aortic dissection in the DTA. He was medically managed then and reviewed after 5 months. The repeat CT Aortogram, showed increasing false lumen upto 27mm in diameter of DTA, arising just distal to the arch vessels extending upto the renal arteries (Fig 1).

The hybrid procedure was performed. A Left Carotid Subclavian bypass grafting was done using 8mm PTFE graft followed by Transcatheter endovascular stent graft (TEVAR) of 30x150mmValiant Thoracic stent graft (Fig 2), from distal portion of the arch to the level of D5-6 vertebrae on the same day. Patient was extubated on 1st POD and was discharged home by 4th POD.

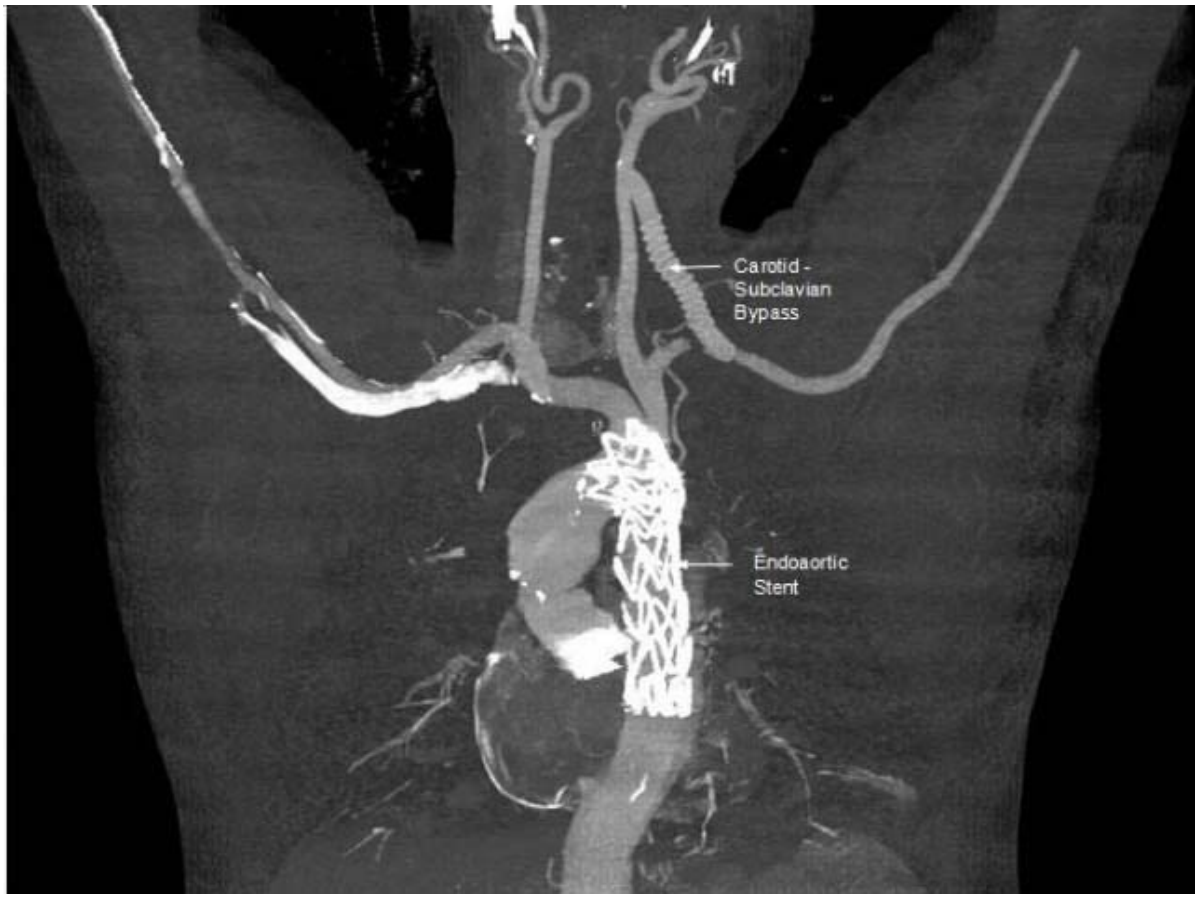
DISCUSSION:

The classic surgical approach to AD requires cardiopulmonary bypass and deep hypothermic circulatory arrest. Despite surgery, a residual dissection flap persists in 64 to 90 % of cases leading to distal malperfusion syndrome with an estimated mortality rate ranging from 6.6%–19%. With recent advancement, a much lesser invasive novel catheter based techniques were introduced. The thoracic endovascular aortic repair (TEVAR), devised with the use of nitinol based covered stent grafts that resulted in reduced operative time, length of stay, improved recovery and much lesser mortality rates, as low as 2.1%.

Though TEVAR has dramatically altered the treatment of thoracic aortic pathology, it is not free of limitations. The key limitation is the necessity of adequate, disease-free seal zones likewise in our patient. In order to prevent compromising on the Left subclavian artery ostia (increasing the risk of stroke, spinal cord and upper extremity ischemia) left carotid-subclavian bypass was done thus securing the blood flow in the arch vessels keeping the true lumen patent.

Thus, Hybrid procedure is a viable and relatively safe treatment strategy for patients with AD.


ACSD AORTA
TRUE LUMEN
THORACIC AORTA
FALS LUMEN
<A>
ABD AORTA


Carotid -
Subclavian
Bypass
Endoaortic
Stent

ID: **368**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Poster**

CASE REPORT: REPAIR OF VASCULAR RING AND THORACAL AORTIC ANEURYSM BY HYBRID OPERATION

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OBJECTIVES:

With the increasing use of endovascular aneurysm repair, combined use of TEVAR as an alternative to surgical aortic repair reduces mortality and morbidity for selected patients. In this article, we describe the application of TEVAR antegrade access through the ascending aorta in a patient who could not undergo femoral intervention after a selective arch bypass.

METHODS:

In the elderly patient who presented with dyspnea; The left subclavian artery was ringed and pressed into the trachea, and aortic aneurysm extending from the ascending aorta to the descending aorta was detected. Because of the comorbidities, innovative, carotid and subclavian arteries were bypassed by open surgery, and TEVAR was taken to the angiography unit. Retrograde vascular access was not achieved due to femoral dissection and angulation. Sternotomy was performed from the ascending aorta starting from the anastomoses and two grafts were placed as antegrade. On the third postoperative day, the patient died due to recurrent malignant arrhythmias and respiratory problems.

RESULT:

The vascular ring is a rare condition. As in our patient, a hybrid treatment option should be considered in patients with high comorbid risks associated with an arcus aorta aneurysm. Again, in cases where femoral intervention is not possible, antegrade TEVAR application from the ascending aorta may be possible.

ID: **114**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Poster**

AORTIC ARCH REPLACEMENT USING MODIFIED BRANCH GRAFT TECHNIQUE, IN A CASE OF CHRONIC PSEUDOANEURYSM OF AORTIC ARCH INVOLVING THE ARCH VESSELS – A CASE REPORT

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BACKGROUND:

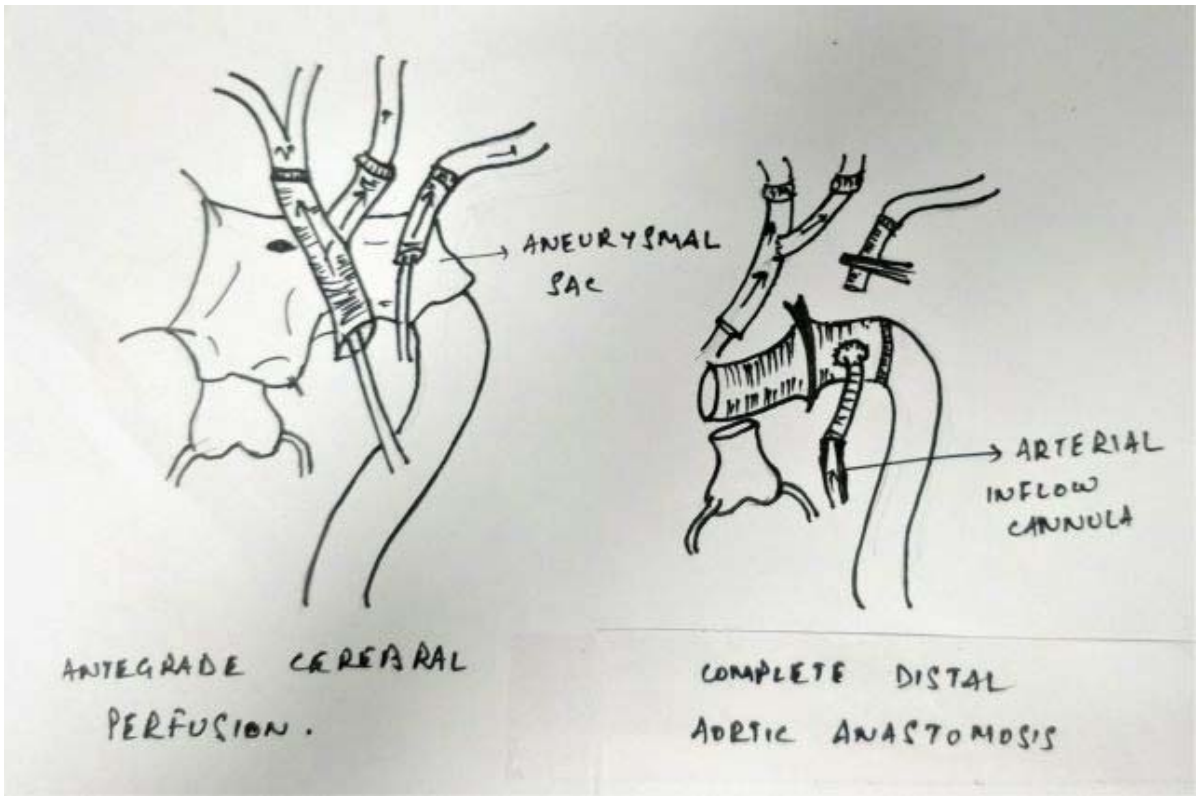
Over the past few decades, several techniques were devised to improve the surgical results of total arch replacement. This case report describes our modified branch graft technique we implemented in a case of aortic arch aneurysm extending into the arch vessels.

CASE REPORT:

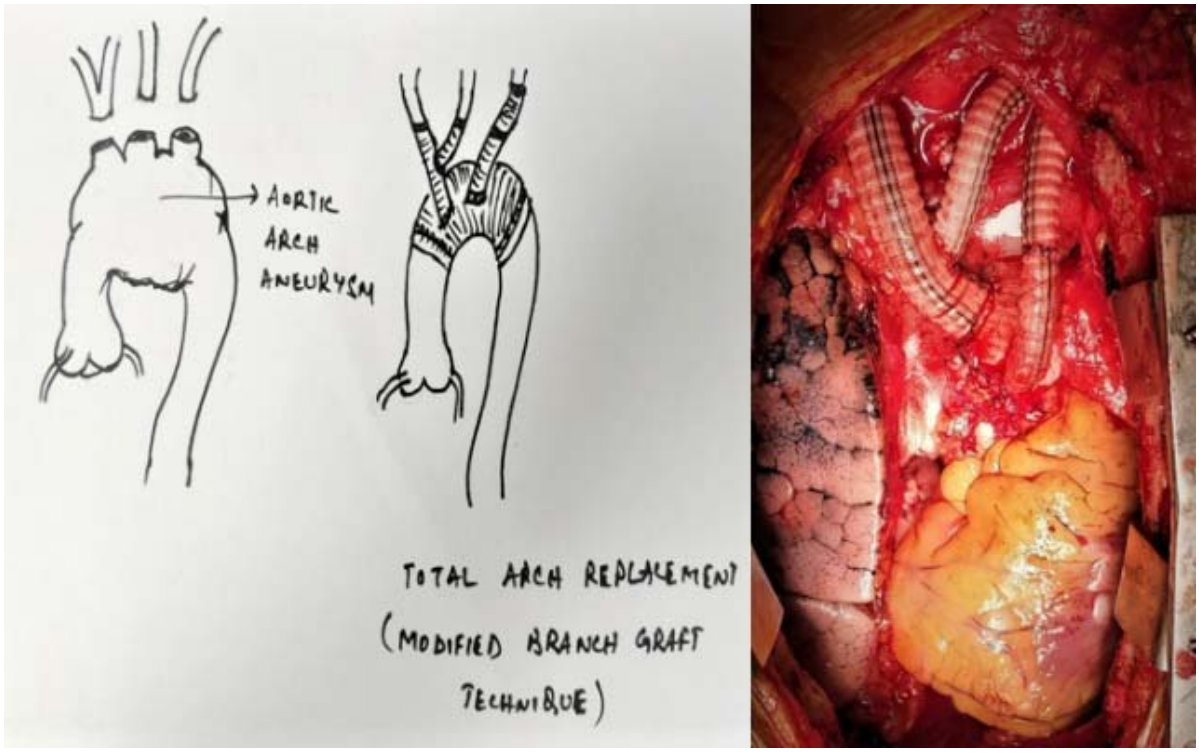
51 year old gentleman presented with complaints of hoarseness of voice since 6 months. CT Aortogram revealed a fusiform aortic aneurysm with eccentric thrombus involving the entire length of transverse aortic arch till 7cm distal to the origin of Left subclavian artery (LSA), along with fusiform ectasia of thoraco-abdominal aorta at hiatus (3.7cm), and occluded superior mesenteric artery with well-formed gastroepiploic collaterals. Patient was reviewed after 4months and an increase in arch aneurysmal segment by 0.3cm (6x6cm dilatation) was noticed (Figure 1).

Total arch replacement was planned.

The procedure was performed through median sternotomy with incision extending onto the left supraclavicular fossa, anterior to the sternocleidomastoid muscle. Left Subclavian artery (LSA) was dissected in the left supraclavicular fossa and an 8mm dacron graft was sutured. Procedure was performed under profound hypothermic circulatory arrest (HCA) with bilateral selective antegrade cerebral perfusion through a 'Y graft' inserted into right innominate artery and left common carotid artery. The aneurysmal sac along with the thrombus was excised. The aortic reconstruction was performed using 28mm gelatin-sealed woven polyester Dacron conduit and the Y graft was used onto the anterior portion of the aortic conduit, for the arch vessels. A separate side branching 8mm graft sutured to the left of the Y graft for the arterial inflow cannula and circulation was re-established (Figure 2)



. The total circulatory arrest and pump times were 60mins and 75mins respectively. The LSA graft was tunneled under and anastomosed end to end to the side branching graft. Thus, the reconstruction of transverse aortic arch and arch vessels, was completed (Figure 3).



DISCUSSION:

In cases of aortic arch aneurysms involving the arch vessels, surgical repair proved beneficial over transcatheter endovascular stenting. In this patient, we have implemented the branch graft technique over the conventional separate graft or en-bloc techniques inorder to avoid aortic manipulation thus reducing the embolic load to the brain and also to lessen the stress on the suture line of distal anastomosis of the aortic graft. A Y graft and a separate graft for arterial cannulation were used in restarting CPB after circulatory arrest. The anastomosis of

the vessels can be perfused sequentially as each anastomosis is done and the corresponding branch is opened, reducing the interval of HCA. Thus, reducing the associated cardiac and cerebral ischemia.

ID: **492**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Poster**

TREATMENT OF TRAUMATIC PSEUDONEURYSM IN ISTHMUS OF DESCENDING AORTA WITH GOTT SHUNT

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Introduction

Thoracic aortic pseudoaneurysms after blunt trauma rarely seen and incidence is %2-%5. The most commonly affected site is isthmus. Diagnosis could be missed at first admission because most patients had no sign on first examination. We will present a case, which is rarely seen isolated pseudoaneurysm of the aorta.

Case

A 27 years old male, who had a motor vehicle accident, the patient had multiple rib fractures, several non-vital wounds and hoarseness. After first interventions on emergency room patient had a CT angiography scan. On CT scan a pseudoaneurysm seen at isthmus area of aorta. There was no transection, but only a pseudoaneurysm of descending aorta in this patient (Figure 1). We performed an aortic graft interposition with left thoracotomy, used a 28 mm dacron graft (Figure 2). We had to use Gott shunt (Figure 3) after cross clamping and patient had a cerebro spinal fluid (CSF) catheterization. After the surgery patient followed at ICU for one day and sixth day of surgery patient discharged uneventfully and with good condition.


S

Conclusion

We did not use an extracorporeal membrane oxygenator (ECMO) to avoid complications in this case. We used a gott shunt for contuniuty of peripheral circulation. Together with, we used an intraoperative blood salvage system (cell-saver) for minimizing blood loss.
Open surgical interventions or endovascular techniques can be use at aortic pseudoaneurysms. We performed an open technique, because patient was young and pseudoaneurysm was close to aortic arch. It's important to early diagnose and right management on cases with aortic pseudoaneurysms.

ID: **740**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Poster**

PREGNANCY- RELATED AORTIC DISSECTION IN PATIENT WITHOUT MARFAN'S SYNDROME

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Objective: Pregnancy is a predisposing factor for acute aortic dissection. We report a patient in the 39th week of gestation with ascending aortic dissection

Case Report: A 31-year-old female patient, 39+2 gestational weeks pregnant, was referred to our clinic from an external center with the diagnosis of type 2 aortic dissection due to chest pain that started 3 days ago. She has no story of connective tissue disorders.

The patient was operated under emergency conditions. After a healthy male baby was delivered by cesarean, cardiopulmonary bypass was started after axillary cannulation and sternotomy. Supracoronary ascending aorta replacement and AVR was performed with a 23 no st jude valve RCA was bypassed with saphenous graft since the intimal tear also covered the right coronary. The patient was removed from the operation without any problem. The patient, who had refractory fibrillation attacks in the early postoperative hours in the intensive care unit, was re-operated. Although the saphenous graft was patent, it was observed that the right ventricle did not contract well. Echocardiography revealed non-contractive right ventricle. After re-fibrillation attacks and subsequent cardiac arrest, the patient was connected to the percutaneous ECMO via the right femoral artery and vein, accompanied by resuscitation. Upon the development of acute renal failure in the patient who awoke consciously on the first day, she was connected to a hemodiafiltration device. Kidney functions returned to normal. The patient, who successfully weaned from ECMO on the postop 7th day, is still in cardiovascular ICU and her follow-up continues on the postop 10th day

Conclusion: Although rare, bringing to mind this catastrophic complication of pregnancy may give a chance for surgical treatment that can save the lives of both the mother and the fetus.

ID: **811**

Topic: **Cardiovascular Surgery » Abdominal Aortic Aneurism**

Presentation Type: **Poster**

AORTOILIAC ANEURYSM WITH CONCURRENT ENTERIC AND VESICULAR FISTULISATION

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BACKGROUND

Iliac artery aneurysms (IAA) are associated frequently with abdominal aortic (AAA) and other degenerative large-vessel aneurysms. Risk factors include male gender, causcasian race, a history of smoking, and hypertension. The natural history of IAAs is continuous expansion and clinical manifestations may occur due to compression and erosion of surrounding structures. Aneurysms within the aortoiliac tree are the most common risk factor for aortoenteric fistula (AEF), a potentially life-threatening entity defined by an abnormal communication between the aortoiliac tree and gastrointestinal tract.

METHODS

A frail 80-year-old male presented to our emergency department with a three-day history of severe lower abdominal pain associated with per- rectal bleeding. He was a vague historian in the context of a known background of alcohol excessalcoholism, cirrhosis and recurrent falls resulting in traumatic subdural haematomas. His background included a history of peripheral artery and aneurysmal disease. Six years earlier he had undergone revascularisation of his right leg via a femoral – anterior tibial bypass, for treatment of a thrombosed popliteal aneurysm.

On examination, the patient was unwell. He was febrile (38.60C), tachycardic and tachypnoeic. He was normotensive without the requirement of vasopressors. His abdomen was distended and signs of peritonism were elicited in the suprapubic region. Per-rectal examination revealed dried blood at the anal verge and a benign prostate . No haemorrhoids or fissures were identified. He had palpable femoral pulses bilaterally, a palpable popliteal pulse on the left side, and a patent bypass graft on the right side. His pedal pulses were absent. Rose-coloured urine was noted draining from his urethral catheter. He was anaemic (haemoglobin 88 g/L) with an elevated white cell count (15.1 x 109). His serum creatinine was 85umol/L. Blood cultures were positive for Escherichia Coli.

RESULTS

A triple-phase computed tomography scan was performed of the abdomen and pelvis. This revealed a large peripherally calcified saccular aneurysm extending from the abdominal aorta (58 mm maximal diameter) to the right common iliac artery (81 mm maximal diameter) (Fig. 1). In relation to the iliac aneurysm, pockets of gas were found intraluminally, intramurally and extramurally (Fig. 1). Contrast was seen percolating from the aneurysm into the terminal ileum, in keeping with fistulisation (Fig. 1). There was was erosion of the aneurysm into the wall of the adjacent catheterised bladder, without conspicuous passage of contrast (Fig. 2), and associated right sided hydroureteronephrosis with enhancement of the urothelium.

The patient was reviewed by the attending vascular surgeon. Due to the patient's clinical status, advanced comorbidities and the complexity of his pathology, a decision for non-operative management and palliation was made. The patient passed away peacefully the next day.

CONCLUSION

Primary AEFs, arising de novo between the aorta and GIT, have an incidence of less than 1 percent. Fistulisation of the aortoiliac tree into the GIT and other organs concurrently is extremely rare. Clinical examination is unreliable in diagnosis. Triple-phase CT arteriography is the first-line imaging modality for evaluating suspected bleeding due to AEF. We present a rare case of a common iliac artery aneurysm with concurrent fistulisation into the colon and bladder.

ID: **812**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Poster**

TROUBLE IN PARADISE: A CASE OF CHRONIC AND ACUTE MESENTERIC ISCHAEMIA

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Chronic mesenteric ischaemia (CMI) is an uncommon pathology that is often diagnosed late due to its slow onset of symptoms. Acute mesenteric ischaemia (AMI) is also uncommon and carries a high mortality rate if not treated.

A 40-year-old female underwent successful aortoiliac endarterectomy and aorta-superior mesenteric artery (SMA) bypass in 2015 for CMI and bilateral lower limb claudication using Dacron graft. Whilst overseas she developed severe abdominal pain and underwent a stenting procedure of the Dacron jump-graft with a VBX stent-graft. Her symptoms did not resolve, however they improved sufficiently to facilitate return to Australia. Shortly afterwards, her condition deteriorated. Upon presentation to our institution, she was found to have a small bowel obstruction requiring a laparotomy and small bowel resection.

Four days post-laparotomy the new VBX was found to be occluded. She was anti-coagulated with a heparin infusion initially, followed by endovascular revascularisation. Attempts at recanalising flushed coeliac trunk and SMA occlusions were unsuccessful. A wire was navigated through the occluded VBX and taken through the end-to-side Dacron-to-SMA anastomosis. Retrograde recanalisation of the SMA was performed, breaking back into the aorta to establish a flossing-wire. A sheath was taken antegrade into proximal SMA via the flossing-wire, and a buddy-wire advanced beyond the Dacron-to-SMA anastomosis. A Viabahn stent-graft was deployed covering the Dacron-to-SMA anastomosis and the SMA origin stented with Omnilink. Brisk flow was seen through the SMA and mesentery, and AMI resolved post-operatively.

Mesenteric ischaemia is a condition caused by small intestinal hypoperfusion secondary to a reduction or cessation of arterial supply. Ischaemic injury and complications arise from insufficient delivery of O2 and nutrients required for cellular metabolism. We present a case of successfully treated CMI and endovascular management of AMI after occlusion of a bypass graft.

ID: **262**

Topic: **Cardiovascular Surgery » Adult Congenital Heart Disease**

Presentation Type: **Poster**

SUPRAVALVAR AORTIC STENOSIS IN WILLIAM SYNDROME - CASE REPORT

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Background

Williams syndrome is a congenital, multisystem disorder involving the cardiovascular, connective tissue, and central nervous systems. Williams Syndrome usually occurs due to deletion of chromosome 7q11.23, occurs in 1 in 10,000 live births. Familial cases involve deletion of 26 to 28 genes, including the ELN gene, which codes for the protein elastin.
Supravalvular aortic stenosis (SVAS) is an anomaly in which there is a narrowing at sinotubular junction. It may be localized to sinotubular junction or may affect the ascending aorta, arch and its branches.

Methods

We report a 14 year old boy who came to our department with chief complaints of dyspnoea on exertion and history of respiratory tract infections for 2 to 3 month. Patient was diagnosed to have Supra valvular stenosis with Williams's syndrome at the age of 5. Patient lost follow up. On examining he had ejection systolic murmur in the Aortic area. Echo showed supravalvular aortic stenosis with a gradient of 55 mmHg. Cath study reported the same. Patient was taken up surgery. Patch repair of supravalvular aortic stenosis with right pulmonary artery path augmentation was done.

Results:

Supravalvular Aortic stenosis is mainly due to deletion in chromosome 7q1123 which causes deficiency in production of precursor of elastin, tropoelastin leading to loss of elasticity of the vessel wall. The stress caused due to blood pressure, stimulates fibrosis and hypertrophy of the muscle cells and collagen formation in the middle layer.

Most of the patient are asymptomatic and are usually diagnosed during evaluation of heart murmur. These patients have systolic murmur which is more prominent at the upper right sternal border which usually radiates to suprasternal notch and to the neck. Due Coada's effect, blood pressure in the right arm is usually higher than that of left arm.
Untreated Supravalvular aortic stenosis may result in cardiac hypertrophy followed by cardiac failure. Balloon dilatation and stent placement can be tried but since the aortic valve and coronary orifices are in close proximity, surgery has become the main modality of treatment. There is no clear indication for the surgery but the presence of symptoms warrants surgery for the patients.

Conclusion:

Supravalvular aortic stenosis is one of the rare causes of LVOTO and is frequently associated with Williams's syndrome. Isolated supraaortic aortic stenosis is less frequent. Clinical evaluation and echocardiography is more important in treatment and improvement of outcomes.

ID: **369**

Topic: **Cardiovascular Surgery » Adult Congenital Heart Disease**

Presentation Type: **Poster**

THE ARTERIOVENOUS HEMANGIOMA OF THE RIGHT VENTRICLE: CASE REPORT AND LITERATURE REVIEW

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Abstract
Cardiac hemangiomas of the right ventricle are very rare and mostly asymptomatic benign tumors. The surgical excision is the first line treatment. We report a case of 69-year old woman with an asymptomatic arteriovenous hemangioma of the right ventricle. Compete surgical excision was performed with the use of cardiopulmonary bypass and the patient was discharged on postoperative day 6 with no relapse at the six months follow-up. The review of the literature showed that this procedure can be performed safely with excellent long term results.

Introduction
Hemangiomas of the heart are exceptionally rare benign tumors constituting 1- 2% of all cardiac tumors, which may occur in all cardiac layers: pericardium, myocardium or endocardium. Their location in the right ventricle is highly uncommon and usually without any symptoms. Cardiac hemangiomas are clinically classified into three subcategories: capillary, cavernous and arteriovenous type. (1) This report accounts for a case of arteriovenous cardiac hemangioma, an extremely rare subtype of this tumor.

Keywords: cardiac hemangioma, right ventricle, surgery

ID: **310**

Topic: **Cardiology » Interventions for peripheral arterial diseases**

Presentation Type: **Poster**

THE ASSOCIATION BETWEEN BLOOD CELL PARAMETERS AND CAROTID ARTERY STENTING

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Objectives: Carotid artery stenosis is the leading cause of stroke and is usually caused by atherosclerosis which is associated with systemic inflambition. Recent studies have emphasized several new combined or derived parameters related to blood cells that independently have an important role in the carotid artery stenosis. To date, no study has evaluated the effect of carotid artery stenting (CAS) on these blood cell parameters. In this study, we aimed to investigate the acute effects of carotid stenting on blood cell parameters concerned in inflammation.

Methods: Consecutive patients who underwent CAS were screened in our center. Demographic characteristics, co-morbid diseases and major vascular risk factors, laboratory and imaging results were obtained from medical records. All blood samples were collected 24 hours before and 24 hours after the CAS procedures.

Results: In total, 124 symptomatic and asymptomatic patients with ICA stenosis who underwent CAS were included. Baseline characteristics and procedural details of groups which are shown in Table. The mean age of the patients were 70.0±8.7years and 75% of the patients were male. 53% of the patients had symptomatic carotid stenosis and 48.5% of patients had stenosis in the right carotid artery, 41.9% patients had stenosis in the left carotid artery, and 9.6% patients had bilateral carotid stenosis. Post-procedural stroke and transient ischemic attack were seen in four and three symptomatic group patients, respectively. Eight patients developed hypotension requiring positive inotrope and no other complications were observed. Before and after the CAS, there were statistically significant increased between neutrophils ($p<0.0001$), monocytes ($p<0.01$), NLR ($p<0.0001$) and statistically significant decreased between lymphocyte ($p<0.0001$), platelets ($p<0.0001$), MPV ($p<0.0001$). However, no statistically significant difference was observed in PLR and RDW values. These values were not different between symptomatic and asymptomatic patient groups.

Conclusion: The current study demonstrates that carotid stenting has been shown to have significant effects on blood cell parameters and these are as sensitive marker of systemic inflammation. The effect of this on the inflammatory process needs to be investigated in larger randomized trials.

Parameters	All patients	Before CAS	After CAS
Age (years)	70.0±8.7		
Male (%)	75.0		
DM (%)	38.6		
HT (%)	85.6		
CABG (%)	30.3		
AF (%)	3.0		
Serum glucose (mg/dl)	131.9±51.4		
Creatinine (mg/dL)	1.79±0.94		
Total cholesterol (mg/dL)	189.2±45.2		
Triglycerides (mg/dL)	206.1±168.0		
HDL-C (mg/dL)	39.0±11.9		
LDL-C (mg/dL)	112.4±36.7		

Stenotic carotid artery (%) - Right - Left - Bilateral	48.5 41.9 9.6		
Embolic protection device (%) - Proximal blockage (MoMa) - Distal filter	33.1 66.9		
Stenosis, %, mean (SD)	61.5±37.4		
Stenting (%) - Mean stent length (mm) - Predilatation - Postdilatation	37.3±4.4 69.7 67.4		
Neutrophil (1000/mL)	5.06±1.82	5.60±1.71	
Lymphocyte (1000/mL)	2.12±0.69	1.92±0.74	
Monocyte (1000/mL)	0.62±0.22	0.67±0.27	
Hb (g/dL)	13.5±1.5	11.8±1.8	
Plt (1000/mL)	248.4±69.9	229.2±63.0	
Mean platelet volume (fL)	10.6±1.1	10.4±1.1	
Red blood cell distribution width (fL)	14.2±3.4	13.9±1.5	
Neutrophil/lymphocyte ratio	2.58±1.11	3.33±1.79	
Platelet/lymphocyte ratio	127.2±52.2	133.8±57.6	

ID: **337**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Poster**

SURGICAL TREATMENT OF TACHYCARDIA DUE TO A RARE PATHOLOGY: BLOOD CYST RESECTION FROM MITRAL VALVE IN A 3 YEAR OLD CHILD

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Introduction

Blood cysts of the heart are rare benign tumors, usually involving the cardiac valves. They regress spontaneously in most of the affected patients by the age of 6 months. Most often, blood cysts within the heart occur on valves or supporting structures of the valve.
We present a patient with blood cyst attached to the sub-valvular apparatus of the anterior mitral leaflet, which was in-cidentally discovered during echocardiography performed for the evaluation of tachycardia.

Case Report

A three year old girl was admitted to hospital with severe tachycardia and dyspnea. A 2 cm sized round mass in left ventri-cle and atrium was seen on echocardiography.
Transesophageal echocardiogram confirmed the exis-tence of a mobile, round, cystic and pedunculated mass (18 × 15 mm) with hyperechogenic walls and hypoechogenic con-tent attached to chordal structures of the anterior mitral leaflet and tip of anterolateral papillary muscle.
A cardiac magnetic resonance imaging revealed an 18 × 15 mm sized lobulated mass attached to the chordae tendinae between the anterior leaflet of the mitral valve and anterolater-al papillary muscle.
During surgery, the cyst was seen attached to chordal structures of anterior mitral leaflet and tip of the anterolater-al papillary muscle. The cystic mass was round to oval shaped, measured 1.5 cm in diameter, white in color. The cystic mass was successfully resected, peroperative transesophageal echocardiogram confirmed mild mitral regurgitation.
Microscopically, the unilocular cyst wall was composed of a dense layer of connective tissue with internal flat lining cells. The results were consistent with endo-thelial cells lining the blood cyst.
The patient had an uneventful recovery from operation. The patient has had no symptoms or recur-rent intracardiac masses for 6 months since the excision.

Discussion

Intracardiac blood cysts are usually asymptomatic, small and congenital. They are mainly seen during autopsy in fetus-es and infants under age of 6 months.
Blood cysts are rarely reported, so there is no consensus or guidelines for optimal management of asymptomatic cas-es. According to some reports, depending on which area of the heart is affected, blood cysts may result in a variety of clinical phenomena, including embolism, valvular dysfunc-tion and heart block. Therefore surgical resection should be considered in patients with symptoms or valvular dysfunction and resection is also suggested to rule out malignancy.

ID: **84**

Topic: **Cardiovascular Surgery » Adult Congenital Heart Disease**

Presentation Type: **Poster**

A RARE CASE OF CONGENITAL PULMONARY STENOSIS WITH SECUNDUM ATRIAL SEPTAL DEFECT AND TRICUSPID STENOSIS; SURGICAL APPROACH

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BACKGROUND: Atrial septal defect and severe tricuspid stenosis associated with severe pulmonary stenosis are rare. Since treatment of only one of the existing lesions may result in insufficient hemodynamic improvement, the possibility of simultaneous intervention to multiple lesions by surgical procedure should be prioritized, but definitive diagnosis of combined valvular stenosis and septal defects should be made before surgical repair. We present a 24-year-old patient who was treated surgically with a diagnosis of secundum ASD and tricuspid stenosis accompanying congenital pulmonary stenosis.

CASE REPORT: 24-year-old female patient. The patient had no known chronic disease and had complaints of rapid fatigue and exertional dyspnea. ECG; sinus rhythm, T wave negativity is present in v1-3.Physical examination also no ral, no rhonchi, S1 + S2 + rhythmic, 3/6 systolic murmur on pulmonary focus was present. Echocardiography revealed LV flattened and D-shaped, RVOT hypertrophic, PV max 7.1 m / sec, severe pulmonary stenosis, pulmonary gradient 244/91 mmHg, severe tricuspid stenosis, 2 degree TR, dilatation of RA, and severe hypertrophic RV. The patient was evaluated in the congenital council. Thorax CT angiography decision was taken. In CT; The pulmonary valves are thick, hypertrophic of the RV free wall and interventricular septum, flattened IVS. Pulmonary conus and posterior stenotic dilatation of left main pulmonary artery were detected. There were signs of thickening and stenosis in the tricuspid valve. Pulmonary valve surgery was recommended and the patient was operated. Secundum ASD detected in the operation was closed. Pulmonary artery was excised vertically up to RVOT. The muscle bands in the RVOT were excised. Number 25 aortic bioprosthesis was continuously sutured to the pulmonary region with prolene. The upper part was expanded with a dacron patch and the pulmonary artery and RVOT were expanded. After the tricuspid valve was evaluated with intraop TEE, commissirotomy was performed. In the biopsy of the pulmonary valve sent during the surgical procedure show that heart valve tissue which have showing myxoid changes, valve calcification and pulmonary hyaline degeneration were detected. The patient was taken to the post-operative intensive care unit and discharged on the 6th day after the procedure. In the 2nd year control echocardiography, RV wall thicknesses were found to reach normal levels, Pv max 1.52 m / sec and pulmonary max gradient was 9.25 mmHg. The patient was completely asymptomatic at 2 years postoperatively and was able to perform daily activities easily.

DISCUSSION: With advances in cardiac surgery, cases with combined cardiac anomalies can be successfully corrected. The diagnosis of combined pulmonary stenosis, tricuspid stenosis and ASD is evidenced by the consistency between clinical features and the results of specific tests such as TTE, catheterization and computed tomography. In this case, surgery is great importance in order to eliminate multiple obstacles in the same operation. Percutaneous pulmonary balloon valvuloplasty was not appropriate in our patient because there was accompanying severe TS and secundum ASD.

Figure 1: Cardiac four-chamber image on CT

Figure 2: Pulmonary artery appearance on CT

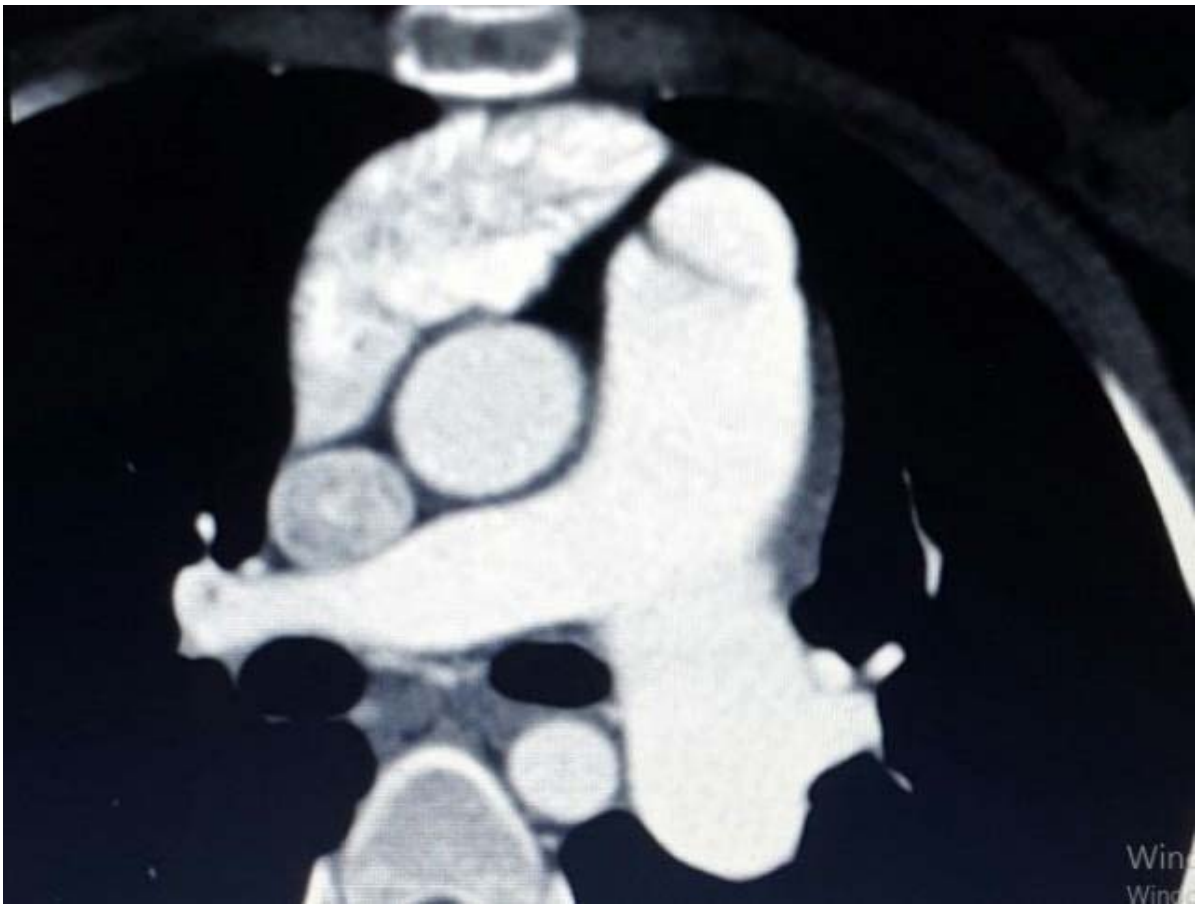


Figure 3: Gradient measurement from pulmonary artery with cw on echocardiography

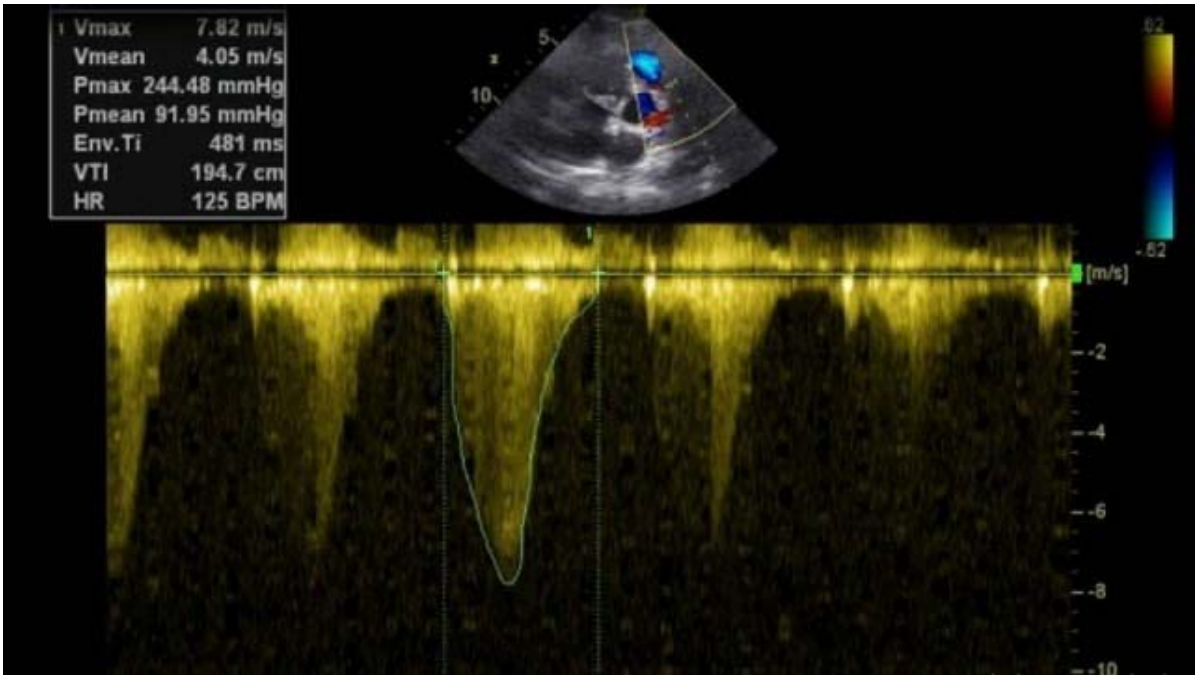


Figure 4: Right ventricular view on echocardiography

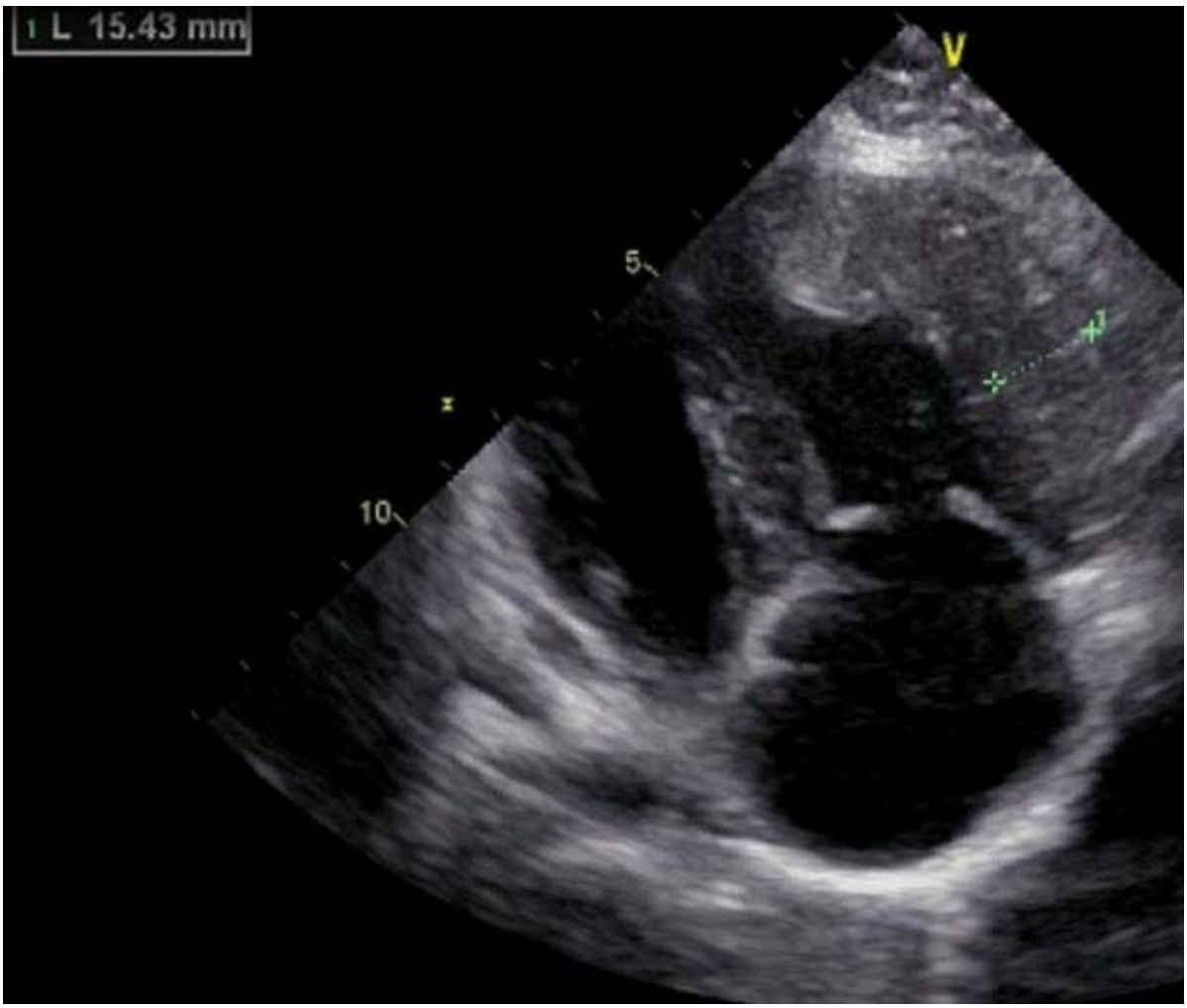


Figure 5: 2nd year control echocardiography

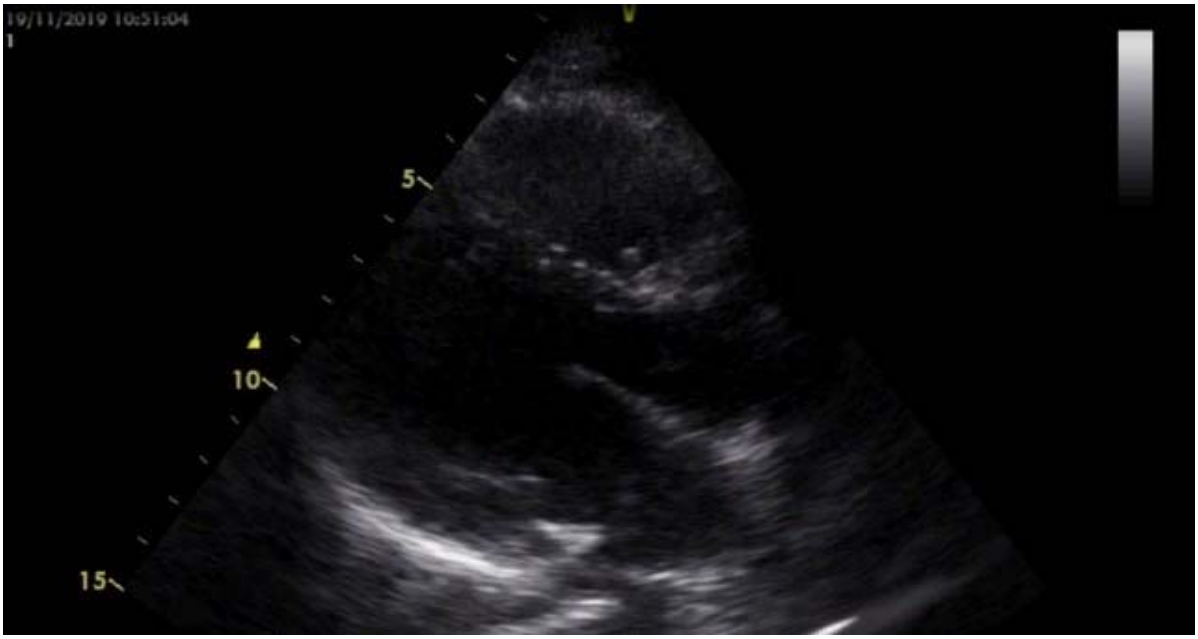
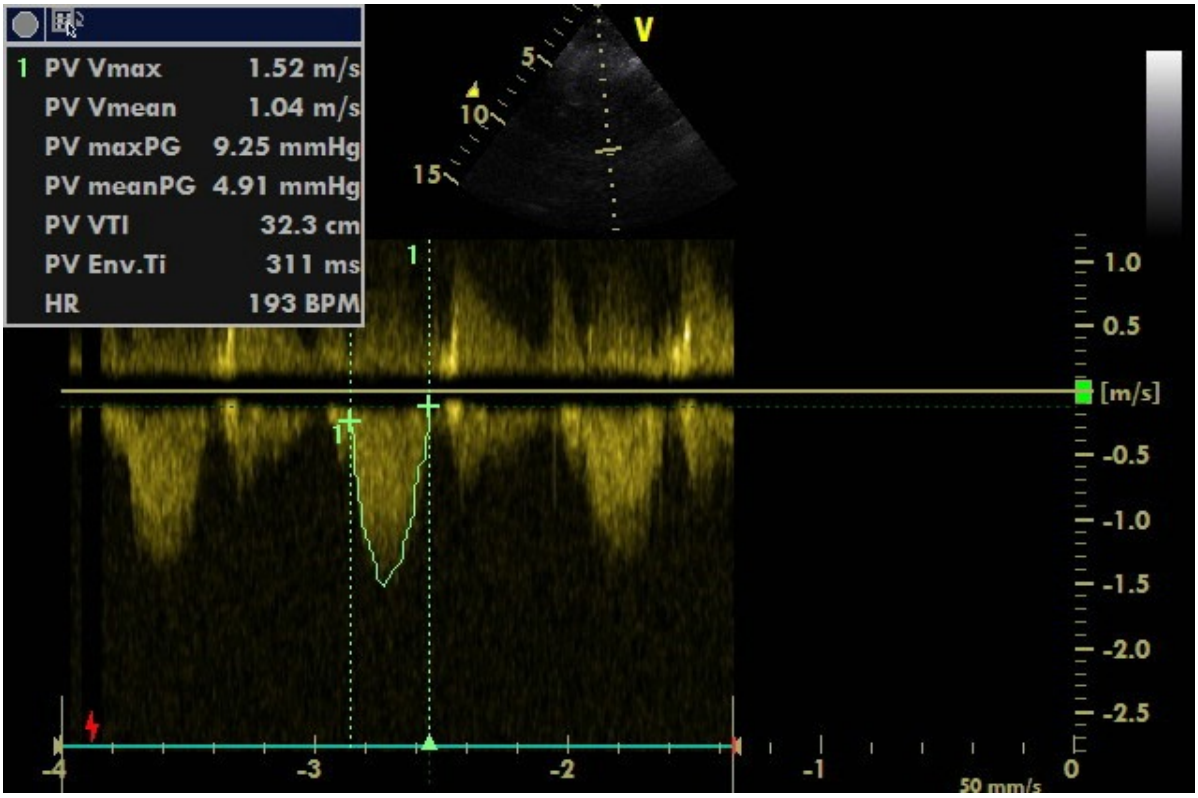


Figure 6: 2nd year control of pulmonary gradient



ID: **303**

Topic: **Cardiovascular Surgery » Adult Congenital Heart Disease**

Presentation Type: **Poster**

SUPRA-VALVULAR AORTIC STENOSIS

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Introduction: Congenital aortic stenosis are ejectional obstacles of the left ventricle; represent 5-6% of all congenital heart diseases, 10% of which are supra-valvular stenosis. The stenosis should be lifted before irreversible lesions appear in the left ventricular function. Since the first case operated successfully in 1956, various techniques have been developed to remove the aortic valve stenosis.
The aim of our study is to report the short- and medium-term result of a case of operated supravalvular aortic stenosis.

Material and methods: 17-year-old, patient, born form a consanguineous marriage. His pathology was discovered 3 years before his accidental admission by an objectified heart murmur during a school medicine visit; followed then directed to our hospital as soon as the surgical treatment was required. Clinical examination: the patient had palpitations and lipothymia as functional signs; chest x-ray: CTI:0.45; ECG:SRR, signs of left ventricular hypertrophy.
The diagnosis was performed by cardiac doppler ultrasound which revealed a tight supra-valvular aortic stenosis and moderate valve (LV gradient / max aorta 86mmhg and an average of 50mmhg), moderate left ventricular hypertrophy, LV: 45/26, EF 70%, RF 42 %, Bicuspidia type I, with moderately dilated ascending aorta. Chest CT: moderate dilation of the post stenotic ascending aorta.

Results:
The patient was operated under cardio-pulmonary bypass, operative exploration show an hypo development of the left coronary sinus, non stenosing bicuspid aortic valve, with one raphe (type I of Sévers) tested by a size 20 hegar candle, abnormal implantation of the pillar of the anterior mitral valve. The operative procedure consisted in an enlargement of the non-coronary sinus and the right coronary sinus by a Dacron patch according to the Doty technique. Aortic clamping was 92 min, total CPB was130 min. Ventilation 7hours, stay in ICU was 48h, postoperative stay was 09 days. The average gradient at the outlet was 20 mmHg. The patient was checked one year later, a good clinical and ultrasound evolution.

Conclusion:
The supravalvular stenosis diagnosis is echocardiographic, a CT or MRI is often necessary to assess the extent of the stenosis. to avoid complications surgical intervention is necessary as soon as the average gradient exceeds 40 mmhg. Several surgical techniques have been developed which vary depending on the site and the extent of the stenosis.

ID: **526**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Poster**

CLOSURE OF SINUS VENOSUS DEFECT TYPE OF ATRIAL SEPTAL DEFECT WITH BOVINE PERICARDIAL PATCH

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OBJECTIVE

Atrial septal defects (ASD) are common congenital heart defects. However, a proportion of patients with ASDs, may have their condition complicated by pulmonary hypertension (PH), with a subsequent significant impact on management, morbidity and mortality. We report and evaluate a case in which bovine pericardial patch was used for sinus venosus defect (SVD) type of atrial septal defect (ASD) closure, patent foramen ovale repairing and tricuspid valve annuloplasty.

METHODS

In this case, we repaired a sinus venosus defect type of ASD of a 44-years-old woman who also had right atrial enlargement due to the defect. She has pulmonary arterial hypertension (55 mmHg). After establishing standard bicaval cannulation and total cardiopulmonary bypass, we opened the right atrium with an oblique incision in a superior position to a standard incision. After examining the SVD type of ASD we detected patent foramen ovale(PFO). We closed SVD type of the ASD with bovine pericardial patch and repaired PFO primary with prolen suture. We performed tricuspid valve annuloplasty. After decannulation at intraoperative measurements using catheter from pulmonary artery (PA), PA pressure was 18/8 mmHg, mean was 14mmHg.

RESULTS

During an echocardiographic examination, neither a residual shunt nor perigraft thrombosis was seen on the interatrial septum and also there was no PFO or tricuspid valve insufficiency. The patient was discharged with complete recovery.

CONCLUSIONS

The presence of PH, influences the suitability for defect closure. Pericardial patch is an ideal material for ASD closure, especially in patients having a large right atrium. A complete coaptation was achieved with a close match with the atrial septum.

ID: **402**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Poster**

SINGLE AURICLE ASSOCIATED WITH A SUPERIOR LEFT VENA CAVA, AN ABNORMALITY OF THE SYSTEMIC VENOUS RETURN: A CASE REPORT

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Introduction: The single auricle is a rare congenital heart disease. Treatment is surgery. Prognosis is good after surgery. The goal of this work is to describe a case of single auricle.

Case report: We report the case of a young woman of 17 year old, from a nonconsanguineous marriage without pathological history, complaining a few months before from dyspnea of progressive worsening. Physical examination found laterosternal breath of 5/6. Pulmonary X-rays found a high pulmonary vascularization and a CTI of 0.60. Heart ultrasonography: Single auricle, grade II tricuspid insufficiency; EF: 45 %, LV: 49/32 mm, RV: 29mm, SAPP: 63 mm hg. Peroperative exploration: Vena cava leftsuperior throwing itself in a dilated coronary sinus with abnormal topography and single auricle by complete absence of the interatrial septum. The patient benefitted from an exclusion of the superior left
vena cava during the closing of the inter auricular communication by a pericardial autologus patch under cardiopulmonary bypass. The immediate postoperative course was favorable.

Conclusion: The single auricle is a rare variety of interauricular communication, characterized by the absence of the inter-auricular septum. It can be insulated or associated with other congenital heart diseases.

Keywords: Single auricle; inter-auricular communication; superior left vena cava; surgery.

ID: **396**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Poster**

CLEFT MITRAL VALVE ASSOCIATED TO AN OSTIUM SECONDUM ATRIAL SEPTAL DEFECT AND A PERSISTANT LEFT SUPERIOR VENA CAVA: CASE REPORT

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Introduction: The left superior vena cava represent the most frequent congenital venous anomaly of the thoracic systemic venous return. It is a rare anomaly, now estimated at around 0.3-0.5% of healthy individuals and 3-10% of patients with congenital heart disease. It results from the abnormal persistence of an embryological vesse in the coronary sinus during fetal life. The purpose of this work is to show persistant left superior vena cava associated with other congenital heart diseases.

Methods: We report the observation of a 07 year old girl from a non-consanguineous marriage with mitral insufficiency grade ll - lll associated to an atrium septal defect ostium secondium with a persistent superior vena cava drained in the coronary sinus . Preoperative: Dyspnoea stage ll of NYHA. Physical examination: systolodiastolic left laterosternal murmur. Pulmonary radiography: Cardiomegaly with CTI: 0.60 Echocardiography: atrial septal defect ostium secondum, Qp / Qs: 3.6, coronary sinus dilation, tricuspid insufficiency grade ll, LV: 39 / 26mm, RV: 31mm, EF: 60%, RF: 27%, Pulmonary pressures: 67 mmHg. aortotricava cardiopumonary bypass. Per operative exploration: Presence of a persistent superior left vena cava upper left, anstomosed in dilated coronary sinus, atrial septal defect ostium secondium 04 /03cm, cleft mitral valve 01cm length responsible for a mitral inssuficency, the two left pulmonary veins flowing into the left atrium through a single venous trunk. Surgical treatment: closing of the mitral slit by separate sutures, closing of the atrium septal defect by autologous pericardial patch.

Results: the post-operative was simple. CPB: 67mn, aortic clamping: 44mn, assistance: 10mn.

Conclusion: It is a congenital anomaly of the systemic venous system. This anomaly is often accidentally discovered during central venous catheterization via the left subclavian or the left internal jugular vein. Isolated, it is generally asymptomatic, but it can cause difficulties in central venous access, implantation of the pacemaker and cardiothoracic surgery. It can be associated with a cumulative incidence of congenital heart diseases, arrhythmias and conduction disorders.

ID: **294**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Poster**

TOTAL ANOMALOUS SUPRA-CARDIAC PULMONARY VENOUS RETURN WITH VERTICAL COLLECTING VEIN: CLINICAL CASE

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Objectives: The total abnormal pulmonary venous return is a rare malformation encountered in 2% of all congenital heart diseases. The supra-cardiac form is the most frequent anatomical form (50%). The clinical presentation is non-specific. The predominance is male. The diagnosis is based on the cardiac ultrasound.

This is a descriptive retrospective study concerning the analysis of a patient file, operated for TAPVR covering a period of 05 years from the beginning of 2007 to 2012 of a 14 year old child. Since birth, he had persistent cyanosis with exertional dyspnea. Clinical examination: digital hippocratism, lips cyanosis, apex systolic murmur 4/6, absence of weight repercussions. Chest x-ray: cardiomegaly with dilated right atrium overhang and convex left middle arch ECG: SRR, right bundle branch block, Right ventricular hypertrophia. Echocardiography: large sinus vénosus inter auricular communication, LV: 40/24, RV: 37, EF: 71%, arterial pulmonary pressures: 39 mm hg. Cardiac catheterization confirmed the diabnostic. RBC: polycythemia. Intra-operative exploration: very dilated innominate vein, dilated superior vena cava and right atrium, small left atrium and ostium secondum auricular communication 20/20 mm with a common vertical collector of 4 pulmonary veins touching in innominate vein. under cardiopulmonary bypass, confection of the broad anastomosis between the left atrium roof and the collector, on 2 cm with ligature of the collector near its termination and closing of the atrium communication.

Results: The immediate postoperative follow-up was marked by the disappearance of hypoxemia and hypercapnia, extubation around the 48th hour, decrease of pulmonary pressure.

Conclusion: The incidence of this malformation is low. Prenatal diagnosis is possible. Treatment is surgical and the prognosis depends on age, diagnostic delay, blocked form, cardiac dysfunction, residual stenosis and residual Pulmonary hypertension.

ID: **800**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Oral**

BIDIRECTIONAL CAVOPULMONARY ANASTOMOSIS WITHOUT CARDIOPULMONARY BYPASS

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Bidirectional Cavapulmonary Anastomosis Without Cardiopulmonary Bypass

Objective
Bidirectional cavapulmonary anastomosis (BDCPA) procedure is widely done for; in single ventricular cyanotic congenital heart diseases, as an intermediate stage before Fontan, to reduce right ventricular volume load in Ebstein patients, for 1-1.5 ventricular repair in hypoplastic right ventricle patients, to train the left ventricle with pulmonary banding in patients with delayed large artery transposition. In this study, we wanted to present 72 cases with superior vena cava - right atrium shunt without using cardiopulmonary bypass (CPB).

Methods
BDCPA without CPB was performed on 72 cases between November 2016 and January 2020. In some cases, pulmonary taping was performed in addition to BDCPA. The criteria for not using CPB were; being older than 3 months, having non-restrictive atrial septal defect, having no advanced atrioventricular valve insufficiency, having no other intracardiac disorder requiring correction, having preoperative mean pulmonary artery pressure below 18 mmhg, having McGoon index of 1.5 and above, pulmonary vascular resistance being less than 2 units/m2. 45 of the 72 cases were male and 27 were female. The ages of the cases were between 3 months and 12 years. Preoperative mean oxygen saturations were 64 ± 8.7 and pulmonary artery pressures were 12 ± 4.9 mmHg. Patients' weights at the time of surgery were between 4-28 kg. Decompression of the superior vena cava was achieved with the superior vena cava - right atrial shunt using right angle metal venous cannulas suitable for the weight of the patients.

Results
No perioperative mortality was observed in the patients. Mean vena cava superior clamping time was 20.2 ± 3.6 minutes and vena cava pressure during clamping was 27.9 ± 4.5 mmHg. Transcerebral pressure gradients were kept 30 mmHg and above. There were no post-operative neurological complications or dysrhythmia. The duration of stay in the intensive care unit was between 3-12 days. The most common postoperative complication was identified as right diaphragm paralysis, and diaphragm plication was performed in 6 cases. Functional bidirectional cavapulmonary anastomosis was observed in the pre-discharge control echocardiography.

Conclusions
In conclusion, BDCPA procedure performed with various shunts without using CPB in suitable patients is a safe, effective, simple and inexpensive method. With this method, it is possible to avoid the negative effects of cardiopulmonary bypass.

ID: **225**

Topic: **Cardiovascular Surgery » Congenital Heart Disease**

Presentation Type: **Poster**

MITRAL PARACHUTE VALVE IN 12-YEAR-OLD CHILD: A CASE REPORT

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Introduction: Parachute mitral valve (PMV) is a rare congenital defect of the mitral valve. seen in infants and young children. In most cases, PMV is associated with other congenital abnormalities of the heart, in particular obstructive lesions of the mitral influx and ejection of the left ventricle from the channels and coarctation of the aorta and is called Shone complex. PMV can also occur as an isolated lesion or in association with other congenital heart defects. Little is known about PMV in adults as an isolated abnormality or in association with other congenital heart abnormalities. The purpose of this work is to report a congenital case of parachute mitral valve.

Methods: We report the observation of a 12 year old girl, presenting a double congenital mitroaortic valvulopathy diagnosed at the age of 02 years, following a dyspnoea and an incessant cough, given the deterioration of her state she was referred to our hospital for surgical management. Physical examination: Weight-delay delay. Pulmonary radiography: TCI 0.55. ECG: SRR. Echocardiography: Parachute mitral valve with LA-LV gradient: 25 mm hg, tight aortic stricture with medium aorta gradient - left ventricle at 58 mm hg associated with grade II aortic insufficiency on thickened aortic sigmoid, aortic ring 12 mm, LV : 24/16 mm, RV: 26 mm, FE: 65%, FR: 35%, PAPS: 69 mm hg. Chest CT: Cardiomegaly associated with dilation of the pulmonary artery. per operative exploration: Absence of patent ductus arteriosus, a single mitral papillary muscle with symphyses of the mitral commissures and retraction of chordaes, the aortic valve has not been explored. The gesture: Mitral valve replacement after failure of a bilateral mitral commissurotomy.

Results: The postoperative was marked by a cardiogenic shock refractory to mechanical and pharmacological support.

Conclusion: Congenital malformations of the mitral valve can be encountered isolated or in association with other congenital heart diseases. As embryology shows, each stage of the mitral valve complex can be reached. This explains the fact that these lesions can sometimes associate with each other. A perfect preoperative evaluation being crucial, a good knowledge of the normal anatomy and malformations is required in order to be able to guide the surgeon specifically in his gesture.

ID: **739**

Topic: **Cardiovascular Surgery » Surgical treatment of AF**

Presentation Type: **Poster**

SIMULTANEOUS SURGICAL MANAGEMENT OF PATIENT WITH SEVERE RIGHT DIAPHRAGM PARESIS AND ATRIAL FIBRILLATION RECURRENCE AFTER CATHETER CRYOABLATION PULMONARY VEINS: A CASE REPORT

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Objective

Catheter cryoablation is effective method for the treatment of patient with drug-refractory paroxysmal atrial fibrillation, resulting in an excellent safety profile and good clinical results. One of the rare complications of this procedure is phrenic nerve injury.

Materials and methods

CASE REPORT: 53 years-old male patient was admitted to our center for persistent atrial fibrillation. He had undergone cryoballoon ablation for atrial fibrillation 6 months ago, which was subsequently complicated by paresis of the right diaphragm with severe respiratory failure, 4 score MRC breathlessness. Chest CT showed relaxation of right diaphragm and right lower lobe atelectasis. ECG – atrial fibrillation. Simultaneous thoracoscopic plication right diaphragm and total thoracoscopic Maze procedure was perfomed.

Results

Operative time was 240 minutes. The patient had a short hospital stay with quick recovery and good outcome at 12 months follow-up after the surgery – without paroxysm atrial fibrillation and respiratory failure. Chest CT (12 months after procedure) showed recovery of diaphragmatic function.

Conclusions

Videoassisted thoracoscopic technology is a safe and effective method in the management of patients with consequences of the phrenic nerve injury and atrial fibrillation recurrence after catheter cryoablation pulmonary veins.

ID: **591**

Topic: **Cardiovascular Surgery » Peripheral Arterial Disease**

Presentation Type: **Poster**

GANGLIONEUROMA IN THE NECK REGION OF A 4 -YEAR- OLD GIRL

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OBJECTIVE

Ganglioneuroma is a rare, benign, non-invasive tumor emerging from the sympathetic system. Of these tumors, only 8% occur in the neck. In this report, we present a case of a 4-year-old girl with a 1-year history of enlarging left neck mass.

METHODS

Her only complaint was swelling in the neck. Physical and radiological examinations revealed a mass of approximately 6x5 cm in the left neck triangle, adjacent to the level of common carotid artery and internal carotid artery and centered in the right carotid space. A transcervical approach was used to excise the tumor emerging from the sympathetic ganglia. The patient developed temporary Horner's syndrome postoperatively. In a few weeks, she was completely asymptomatic.
RESULTS

Histological examination was compatible with ganglioneuroma.

CONCLUSIONS

Surgical excision is the only definite treatment of cervical ganglioneuroma and is also the only way to confirm the diagnosis. Injury during surgery may result in significant morbidity.

ID: **592**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Poster**

PERIPHERAL ARTERIAL DISEASE IS A RISK FACTOR FOR DIABETIC FOOT WOUNDS

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Diabetes mellitus that may cause acute and chronic complications is a metabolic disease characterized by elevated blood glucose. According to WHO, about 422 million people worldwide have diabetes, particularly in low-and middle-income countries. The most important and most common chronic complication of diabetes mellitus is diabetic foot. Diabetic foot is a multifactorial problem which is caused by the addition of neuropathy and infection to peripheral vascular disease and threatens the extremity and is the most common cause of foot amputation in the world. Diabetic foot complications cause extremity loss every 30 seconds in the world. Diabetic foot infection is an important and difficult to treat medical disease in patients with diabetes; it is also the most hospital-staying complication of diabetes. Peripheral arterial disease and neuropathy are the two major complications of diabetes mellitus, they are the most important risk factors for diabetic foot. Peripheral artery disease occurs in approximately 50 % of diabetic patients with diabetic foot wounds. Peripheral artery disease is an important risk factor for delaying of wound healing and lower limb amputations. The most common site of involvement in diabetic and nondiabetic peripheral artery patients is the distal femoral artery (Hunter canal, adductor canal). In diabetics, the trifurcation arteries, especially distal to the popliteal artery, are significantly more involved than non-diabetic patients. The diabetic foot wounds are concerned to great percentage of the diabetics so peripheral artery disease is always keep in mind for these patient group. Unfortunately, there is no the detailed statistical examinations of the diabetic foot or peripheral artery disease in Turkey. There is a requirement of epidemiological studies for this public health problem.

ID: **597**

Topic: **Cardiovascular Surgery » Various Veins**

Presentation Type: **Poster**

TREATMENT OF A VENOUS ULCER AFFECTING WHOLE LEG IN A 42 YEAR OLD MALE

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OBJECTIVE

Treatment of venous ulcers secondary to chronic deep vein thrombosis is sometimes very difficult because of their tendency to recur. We present a case of venous ulcer affecting whole leg distal to the knee.

METHODS

The 42-year old-male patient was admitted to the hospital with a huge venos ulcer distal to knee, affecting whole leg. E. coli was detected in the culture taken from the ulcer region. Intravenous antibiotic therapy according to antibiogram was started as well as low molecular weight heparin in treatment doses of deep vein thrombosis and Diosmin+hesperidin in doses of acute hemorrhoid exacerbations. Daily dressings with local rifampicin, leg elevation and diet were applied. Hospitalization lasted for two weeks.

RESULTS

The venous ulcer was treated completely at the the end of four weeks of treatment, two weeks of hospitalization and two weeks of home therapy and still no recurrence of the venous ulcer was seen for 2 years.

CONCLUSIONS

Venous ulcers secondary to chronic deep vein thrombosis can be treated completely with no recurrence with suitable medical therapy and necessary precautions.


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ID: **585**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Poster**

PSEUDOANEURYSM OF THE PROFUNDA FEMORIS ARTERY FOLLOWING PENETRATING TRAUMA TREATED BY ENDOVASCULAR COIL EMBOLIZATION

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Introduction:

Pseudoaneurysms typically present late and signs of persistent hip pain, thigh swelling, presence of a pulsatile mass, and even unexplained anemia all may suggest the diagnosis. Profunda femoris artery (PFA) pseudoaneurysm after penetrating trauma without is a rare occurrence. PFA pseudoaneurysm requires high index of suspicion and is often difficult to diagnose clinically because of its location. We present a case of PFA pseudoaneurysm following penetrating trauma.

Case Presentation:

The patient was referred to our clinic due to penetrating injury of the thigh. CT angiography confirmed pseudoaneurysm of the branch of the PFA. The patient was successfully treated with coil embolization of the bleeding vessel.

Conclusion:

This case demonstrates both the nonspecific presentation of arterial pseudoaneurysms and the high index of suspicion that is required for vascular injury in cases of penetrating injury.

ID: **587**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Poster**

IS COMPUTED TOMOGRAPHY ANGIOGRAPHY IS ALWAYS EFFECTIVE IN PERIPHERAL ARTERIAL DISEASE AS AN IMAGING METHOD?

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OBJECTIVE

Computed tomography angiography was misleading in three cases with peripheral vascular disease we encountered and it would be more accurate to evaluate the results together with other imaging methods.

METHODS

Case1: A 35-year-old alcoholic male patient was admitted to the emergency department with a stab injury in the anteriomedial part of the right thigh proximally. There was no active bleeding and no hematoma formation at the site of injury .The pulses were normal, venous circulation was normal. Computed tomography angiography revealed no vascular injury. Elastic bandage and compression was applied and the patient was followed up in the emergency department with no fall in the hemoglobin level. Then the patient was discharged with recommendations. 48 hours after the injury he presented to the emergency department with severe pain and swelling in the thigh. A 5x10 cm mass was detected by palpation in the injury site. Giant pseudoaneurysm secondary to injury was detected in computed tomography angiography and the patient was operated.

Case 2:

A 65 -year-old female patient with Diabetes Mellitus presented with claudication of the right leg with weak femoral pulse. Computed tomography angiography was normal. Since computed tomography angiography was incompatible with the physical examination findings, coronary angiography and conventional peripheral angiography was carried out which reveals occlusion of the right external iliac artery. İliofemoral bypass was applied.
Case 3: 56-year-old male patient was admitted to the emergency room with a firearm injury of the left thigh. The entrance of the injury was anteriomedial 1/3 middle part of the thigh and the exit of the injury was posteriolateral distal part of the thigh. There was no bleeding at the beginning, only hematoma formation was present. Pulses were normal. Computed tomography angiography revealed no vascular injury. The patient was followed up in the emergency room. The hemoglobin level decreased and hematoma enlarged and the patient was taken to the operation room. A partial injury in the superficial femoral artery and complete superficial femoral vein injury were detected in the hunter region. Superficial femoral artery was repaired and saphenous vein interposition was applied to the superficial femoral vein.

RESULTS

Computed tomography angiography (CTA) was misleading in our three patients, one case of chronic vascular disease and two cases of penetrating injury. It is noteworthy that classical CTA, which failed to show venous injuries, could not likewise show arterial injuries. Bleeding, which is probably controlled by pressure and hypotension at the time of admission, starts active bleeding again after fluid loading.

CONCLUSIONS

Therefore, as in our emergency department, in centers that do not have doppler ultrasonography other than working hours, emergency injuries should be approached more carefully, if necessary, hospitalization should be done for long-term follow-up and control doppler ultrasonography and CTA should be performed.

ID: **565**

Topic: **Cardiovascular Surgery » Thoracic and Thoracoabdominal Aortic Dissections and Aneurisms**

Presentation Type: **Poster**

AN ALTERNATIVE SURGICAL APPROACH FOR PATIENT WITH CONCURRENT AORTIC VALVE DISEASE AND AORTIC ROOT ANEURYSM

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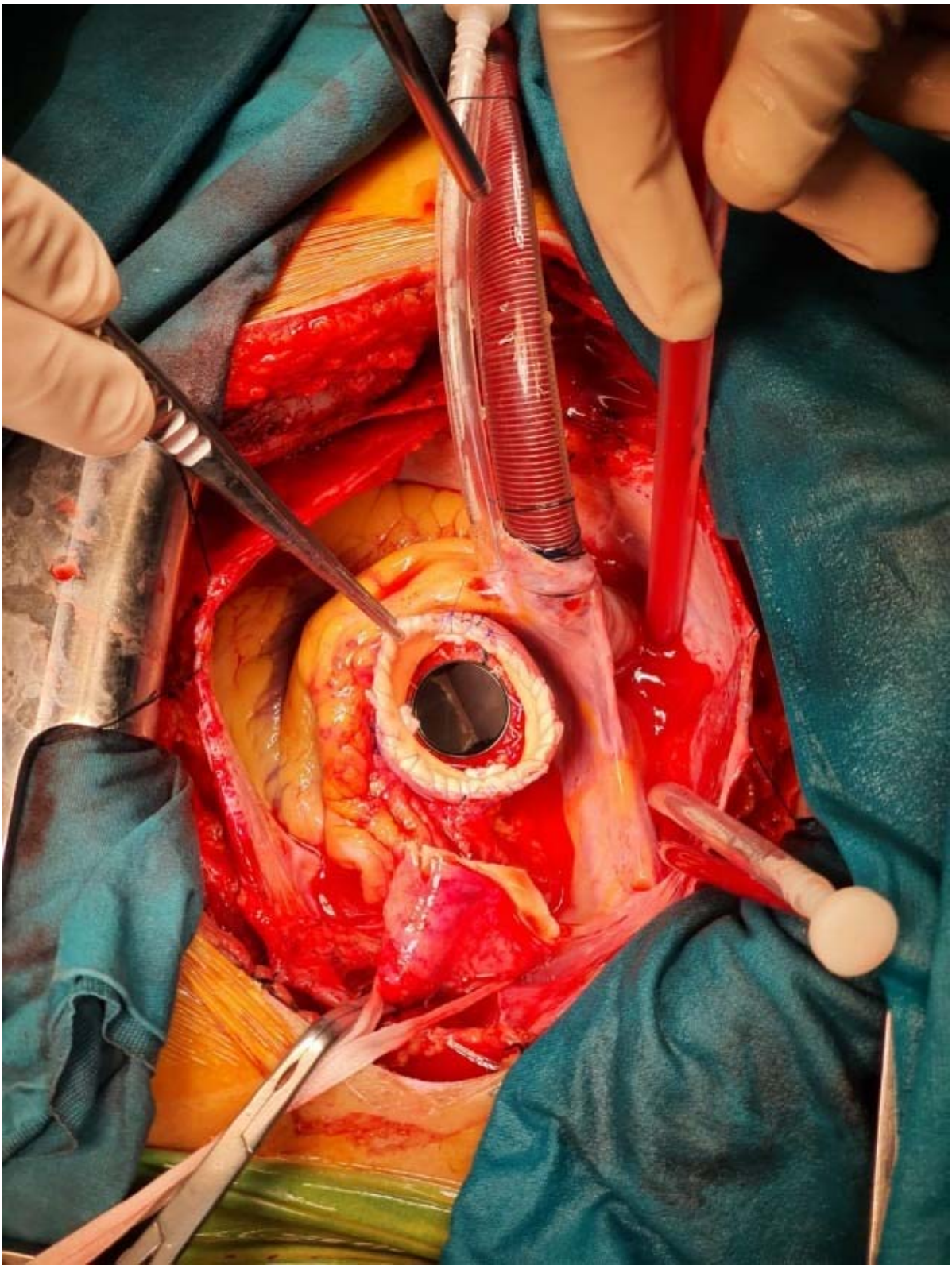
Introduction:
Florida sleeve procedure is an aortic root sparing technique with long term good clinical results which is used as an alternative to Yacoub and David procedures. Florida sleeve procedure has advantages of decreased risk of surgical bleeding, less hospital stay, less 30 days mortality rates, better 5 and 10 years survival rates, less reoperation rate in 8 years, less aortic insufficiency in comparison. Herein, we present a successful surgical procedure with florida sleeve and aortic valve replacement of a 50 year-old male patient due to aortic annular aneurysm and aortic insufficiency

Material-method:
50 year-old male patient with a history of hypertension was admitted to the emergency room with complaints of hypertension, chest pain, syncope and exhaustion. Transthoracic echocardiography revealed normal left ventricular ejection fraction (65%), increased ascending aortic diameter (50 mm), increased diameter of sinuses of Valsalva (45 mm), bicuspid aortic valve and 30 aortic insufficiency. Florida sleeve procedure for sinus valsalva aneurysm operation was planned to the patient.

Results:
Aortic valve was not suitable for repair in introoperative evaluation. Therefore, aortic valve replacement and florida sleeve procedure were performed successfully. The patient had an uneventful postoperative period and was discharged on sixth day after operation.

Conclusion:
Bentall procedure has been a widely used technique for concurrent aortic valve diseases and aortic root aneurysm for many years. Aortic valve replacement combined with florida sleeve procedure can be performed with low complication risk in concurrent aortic valve diseases and aortic root aneurysm such as our patient.



ID: **69**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Poster**

AXILLARY ARTERY AND AXILLARY VEIN REPAIR WITH AUTOLOGOUS SAPHENOUS VEIN INTERPOSITION AFTER A SHARP OBJECT INJURY: A CASE REPORT

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Introduction: Arterial and venous revascularization and nerve repair following a complex injury of the upper extremity are of vital importance to prevent the loss of the extremity and any sequelae. Failure to allow arterial circulation may lead to ischemia of the extremity, while failure to allow venous circulation may result in edema in the extremity and compartment syndrome, which would further damage the arterial circulation and lead to the loss of the extremity. In our study, we report a case of arterial and venous revascularization with autologous saphenous vein interposition in the vascular trauma of the right upper extremity secondary to a sharp object injury.

Method: A male patient was brought to the emergency room due to a sharp object (chainsaw) injury starting from the right armpit with active bleeding from the injury site and approximate size of 15x7 cm on the medial area, where 3 cm of lateral skin and subcutaneous tissue remained intact. As the patient's physical examination showed muscle tendon and nerve cuts and active vascular bleeding, the patient was referred to emergency surgery.

Findings: The exploration of the patient showed complete rupture and lacerations in the right axillary artery and axillary vein. The artery and vein were clamped from the proximal and distal ends, and the lacerated areas were excised. The saphenous vein was removed from the right leg and divided into two, and both the axillary artery and the axillary vein were revascularized with this saphenous vein graft. The nerve muscle and tendon cuts were repaired by the plastic surgery team as required. Low-dose heparin and oral anticoagulants were administered in the postoperative period. The post-operative follow-ups were event-free and he was discharged from the hospital on the sixth postoperative day. The arterial and venous structures of the upper extremity were properly monitored in the early postoperative period and the first month postoperative Doppler examinations were recorded. No pathologies were detected in the follow-ups in terms of vascular surgery. In the third month of his follow-up, the patient was receiving physical therapy and showed no additional problems other than a slight limitation of fine motor movements of the right hand.

Result: The major vascular and venous injury of the extremity by sharp object injuries is a condition that is difficult and complicated to treat in terms of the loss of the extremity and any sequelae risks. In our case, the repair of the axillary artery and axillary vein injuries was performed with autologous saphenous interposition and appropriate medical treatment was provided, which resulted in no vascular surgery complications. The rate of vascular surgical complications may be reduced through early hemostasis, appropriate surgical technique and medical treatment in major vascular injuries.

ID: **447**

Topic: **Cardiovascular Surgery » Endovascular Surgery**

Presentation Type: **Poster**

CORRECTION OF SUBCLAVIAN ARTERY BLEEDING AFTER PERCUTANEOUS İNTERVENTION WITH COVERED STENT AND PERCUTANEOUS DRAINAGE

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Objective: Permanent hemodialysis catheter is an invasive procedure that is seen as easy in practice but rarely causes serious complications. Endovascular treatment may be a good alternative to surgical treatment for both diagnosis and treatment when severe hemorrhage occurs due to atypical bleeding foci after the procedure.

Case: A 69-year-old female patient with end-stage renal failure for approximately nine years and undergoing hemodialysis for 8 years was admitted to our clinic for elective vascular access. After thrombosis of both upper extremity veins and central veins, a permanent catheter was planned. When the right jugular vein was thrombosed, subclavian vein puncture was performed and subcutaneous tunnel was formed from the right pectoral region and the catheter was fixed. 45 minutes after the procedure, the patient had pain in the catheter area and a significant increase in diameter extending from the right lateral wall of the chest to the inferior. The patient underwent CT angiography. The CT showed a heterogeneous hematoma with a thickness of 114 mm at the thickest site and significant extravasation in the medial region of the hematoma. DSA was planned instead of surgical exploration due to the present comorbid diseases of the patient and emergency treatment was performed. Angiograms of the patient showed an appearance consistent with active extravasation in the clavicular branch of the thoracoacromial artery originating from the right subclavian artery. In the same session, the subclavian artery originating from the thoracoacromial artery branch was passed through the wire and an expanding stent (Lifestream, Bard) with a 6x37 mm balloon was placed and instent PTA was performed with an 8x40 mm balloon (Mustang, BSC). Extravasation was not observed in the control angiogram. Eight 75 mg clopidogrel peroral and 5000 IU heparin were administered during the procedure. Six hours after the procedure, the 8 x 6 cm hematoma in the pectoral region was evacuated with a 16 gauge Nipro catheter under ultrasound guidance and a sandbag compression was performed. During this period, 3 units of Erythrocyte Suspension was replaced and the patient was discharged on postoperative day 2.

Conclusion: Hemorrhages may be caused by branches extending to postero-inferior, especially after subcalvian artery puncture. In these cases, endovascular treatment may be a good alternative since surgical exploration and the focus of hemorrhage are anatomically difficult to reveal. We can avoid situations such as morbidity and long hospitalization due to surgical intervention.

ID: **448**

Topic: **Cardiovascular Surgery » Peripheral Arterial Disease**

Presentation Type: **Poster**

SURGICAL REPAIR OF EARLY ARTERIOVENOUS FISTULA AND PSEUDOANEURYSM AFTER STAB INJURY

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Objective: Arteriovenous fistula (AVF) and pseudoaneurysm formation after penetrating trauma with incisor - piercing is seen with pulsatile mass, murmur, edema of the extremity, ischemia and pain. The absence of active bleeding after penetrating trauma and hemodynamic stability do not always rule out vascular pathology. It should be kept in mind that AVF and pseudoaneurysm may occur due to partial vessel injury.

Case: A 21 - year - old male patient with no known concomitant disease presented to the emergency department with a knife injury from the medial - adductor region of the right leg femoral region. However, no active bleeding, hematoma and circulatory disorders were observed in the region and doppler ultrasonography (DUSG) report was normal. Ten days later, when the patient came to the emergency room for dressing, a thrill and pulsatile mass was felt in the stabbing area and our clinic was consulted. Doppler ultrasonography revealed a 4 mm slit in the medial wall of the superficial femoral artery (SFA) and filling the aneurysm sac. An arteriovenous fistula causing arterialized flow in the femoral vein was observed in the posterolateral wall of the defect projection. The patient was operated. A 6 cm incision was made to the knife entry area. Neuromuscular structures were excluded and aneurysm sac was reached. Superficial femoral artery (SFA) was rotated and clamped from the proximal and distal part of the sac. Aneurysm sac opened. The defective region on the SFA was seen through the sac. The entire aneurysm sac was excised. A fistula mouth causing venous filling was seen in SFA. Since the repair would cause arterial stenosis, the 2 cm area of SFA was completely excised and the femoral vein was reached and 3 cm saphenous vein was patched from the same incision. AVF was repaired by patch plasty to femoral vein. The ends of the SFA released from the surrounding branches were prepared for anastamosis and re-anastamosed end-to-end. The patient was discharged on the postoperative 2nd day.

Conclusion: Traumatic A-V fistula and aneurysm occur as an early result of penetrating trauma. Care should be taken for the development of pseudoaneurysm and AVF in patients whose follow-up decision is taken after penetrating trauma. End-to-end anastomosis seems to be a more appropriate approach than repair graft interposition.

ID: **387**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Poster**

HEMATOMA AND ABSCESS IN PSOAS MUSCLE AFTER PULLING MOTION APPLIED TO THE FOOT

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OBJECTIVE

The psoas muscle starts from the tranvers protrusions and intervertebral discs of the 12th chest and all lumbar vertebrae, descends downward from both sides of the spine, passes under the inguinal ligament and joins the fibers of the iliac muscle and trochanter minora in the femur ends. Makes the thigh flexion movement.
In the patient who was held in the prison because of right foot pain, his friends had stretching by holding his leg and waist; We aimed to present the hematoma and abscess in iliopsoas and psoas muscles.

CASE

A 27-year-old male patient had pain in his right foot and was pulled to his leg. Afterwards, the patient's pain in the right lower back and hip gradually increased and he was admitted to the orthopedic outpatient clinic many times. Physical examination revealed sensitivity from the right costovertebral region to the right inguinal region. His blood tests revealed leukocytosis and CRP was elevated. sacral MRI was ordered by orthopedics. Then abdominal CT was ordered. The patient's entire abdominal CT report: along the right psoas muscle. There is an increase in the attenuation of the iliopsoas muscle extending to the 8 cm in the thickest part and the inflammation in the adjacent mesentery.
The patient had low hemogram that were given full blood and fresh frozen plasma. Antibiotic treatment was started. The patient's hemogram decreased and the continuity of arterial and venous structures in the iliac region was evaluated by DSA. However, no major vascular injury was observed.
The patient was scheduled for surgery. Incision was made from the femoral region of the patient who had collections in the femoral region. Separation of muscle structure in inguinal region and no nerve rupture was observed. Patient did not intervene by orthopedics.
Injury of the inguinal ligament was also observed. The aspirator was gently advanced to the abdomen under the ligament. Approximately 3 liters of blood and hematoma were aspirated. Hematoma was abscessed and sent to culture. Daily hemogram control was performed. The patient was discharged after antibiotic treatment was completed. The patient was included in the physical therapy exercise program. Six months later, the patient started walking with a cane.

RESULT

Iliopsoas abscess is a rare and life-threatening condition and a rare form of retroperitoneal infections. Non-specific symptoms of the disease make early diagnosis difficult. Delay in treatment increases morbidity and mortality. Psoas abscesses are classified as primary and secondary. Primary psoas abscess occurs at a rate of 30% and is usually caused by hematogenous or lymphatic spread of bacteria from a hidden focus.70% of Psoas abscesses are secondary abscesses and result from local spread from infected tissues. Psoas abscess is usually paraspinal localized and sometimes spreads through the fascia to the hip and thigh.
Since iliopsoas abscess may progress towards the femoral diaphysis, CT should be performed to see the retroperitoneal region in people with thigh abscess.
In our case, we think that muscular hemorrhage due to leg stretching is hematoma and abscessed in hematoma.

CONCLUSIONS

The patient's complaints of increasing pain should always be taken into consideration and further examination and treatment should not be avoided. Hematomas should be closely monitored, should be evacuated as it may cause mortality and morbidity when it tends to abscess.

ID: **327**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Poster**

SURGICAL TREATMENT OF HIGH FLOW RATE CONGENITAL ARTERIOVENOUS MALFORMATION IN UPPER EXTREMITY

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OBJECTIVE

Arteriovenous malformations (AVM) are rare congenital anomalies. It occurs when there is a direct connection between the artery and vein without a capillary structure. If left untreated, it can cause symptoms leading to heart failure.

METHODS

A 10-year-old male patient had complaints of palpitation and shortness of breath that started three months ago. Physical examination revealed hand-pulsed and thrill findings in the left arm antecubital region. In the detailed examination of the patient, it was learned that there was no blood collection or any other invasive procedure. He had a history of atopic dermatitis. High flow rate venous flow was detected by Doppler ultrasound and MR angiography was performed and showed high-flow AVM between the proximal left radial artery and the deep vein. Informed consent was obtained from the patient and parents, and a signed informed consent form was obtained. Under sedation and local anesthesia, a two-cm incision was made through the antecubital region. Brachial artery and radial artery were returned from the bifurcation area. There was almost no neck connection between proximal radial artery and deep vein. The lesion was not suitable for ligation or division because of the absence of a neck. The deep vein was opened longitudinally, and it was found through its connection with the artery. The mouth of the lesion opening to the deep vein was closed primarily with 7/0 prolene without narrowing the radial artery. The vein was then primary sutured with 7/0 prolene. Postoperative thrill and pulsation disappeared.

RESULTS

Congenital vascular anomalies are classified into two groups as hemangiomas and vascular malformations. Hemangiomas are characterized by benign neoplastic proliferation of vascular endothelial cells and increased mast cells. In vascular malformations, there is no cellular hyperplasia and progressive ectasia occurs in the vessels.

Vascular malformations are seemed for about 7% of all benign tumors. Pain, ischemic findings and atrophy of the extremities may develop in the arterial system distal to the shunt due to decreased blood flow. Symptoms of heart failure may occur in large high-flow shunts.

CONCLUSIONS

Surgical treatment is advantageous in cases with multiple connections that cannot be evaluated clearly by imaging methods. When deciding on endovascular or surgical treatment; we believe that a good profit and loss calculation should be made by considering the patient's age, comorbid conditions, whether the lesion is located in mobile localities such as joint area and the difficulty of surgical transportation and the most appropriate treatment method should be preferred to the patient.

ID: **188**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Poster**

SURGICAL TREATMENT OF GIANT ANEURYSM IN THE FEMORAL ARTERY AND SUPPLY OF OBSTRUCTED LOWER EXTREMITY: A CASE REPORT

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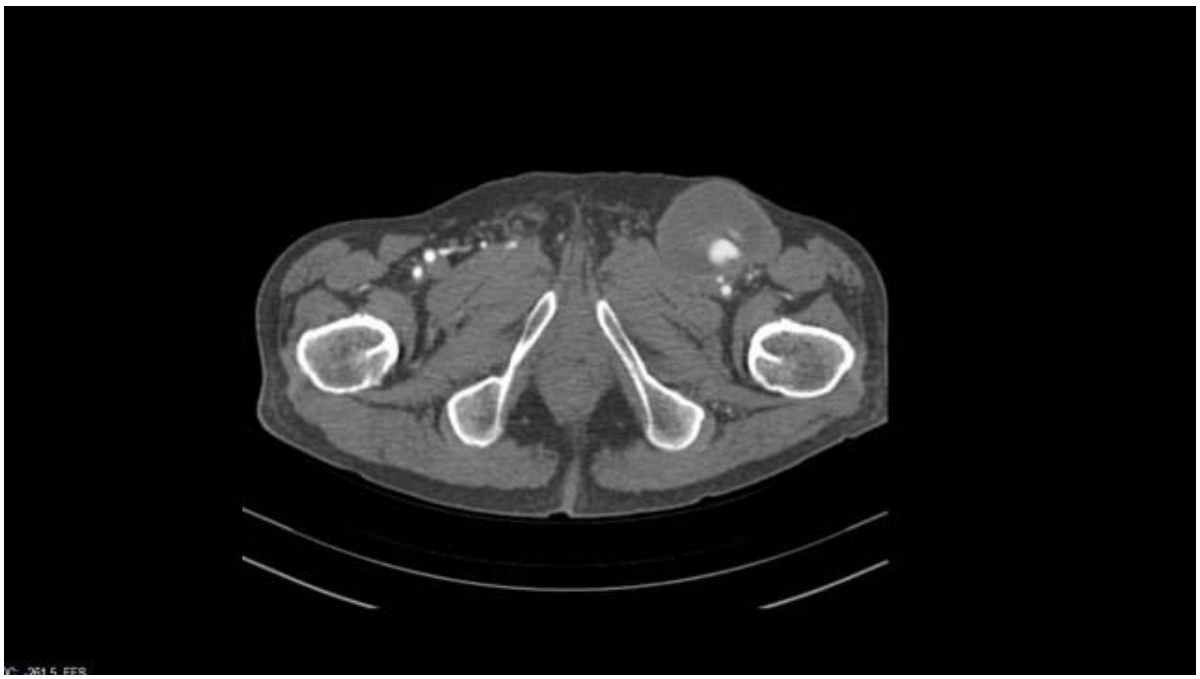
OBJECTIVE

True aneurysms of the femoral artery are very rare and are usually accompanied by other peripheral aneurysms, particularly aorta-iliac and popliteal aneurysms. Pseudoaneurysms usually occur due to iatrogenic causes or in Behçet's disease.

In our case, the patient underwent bypass with aortic bifemoral dacron graft 14 years ago. Physical examination revealed a pulsatile mass in the left femoral region. A 69-year-old male patient with a giant aneurysm (5 * 5.5 cm) on the femoral artery (image 1) and a total distal occlusion of the left superficial femoral artery was evaluated.



The patient presented with swelling and pain in the left groin, and a femoro-femoral bypass operation was performed with PTFE graft. Anastomosis of the lateral branch graft originating from the giant femoral aneurysm and arteria profunda femoralis was performed (image 2). Distal bypass was not performed because the patient's walking distance was over 200 meters. The patient was discharged on the 6th day after the operation, and the walking distance was better than the preoperative period.

Indications for intervention in femoral aneurysms; the diameter of the aneurysm is greater than 4 cm.
In our case, the presence of a rapidly growing pulsatile mass in the groin with severe pain was accepted as indicators of rupture. Open femoral bypass was preferred because the main femoral region was not suitable for endovascular procedures. Because the salvary artery of the leg is located in the artery profunda femroralis and one or two collateral vascular vessels are observed. Ringed PTFE graft was used because it was mobile and folded.

CONCLUSIONS

Femoral aneurysms are easily diagnosed pathologies with prominent clinical findings. However, as in our case, sudden aneurysms that develop suddenly can cause fatal bleeding. From the moment the diagnosis is made, rapid and appropriate intervention will be life saving. The effect of reimplantation of the branches from the aneurysm sac during surgery on the patient's walking distance and leg ischemia should not be forgotten.

ID: **223**

Topic: **Cardiovascular Surgery » Risk Management in Cardiovascular Diseases**

Presentation Type: **Poster**

INFECTIOUS ENDOCARDITIS COMPLICATED BY ISCHEMIC STROKE: A CASE REPORT

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Introduction: Infectious endocarditis is a serious pathology. It is an infectious endocardial disease responsible for heart failure and embolism, especially cerebral embolism. Symptomatic ischemic stroke is reported in 10 to 35% of infectious endocarditis and is the most common neurological complication. Half of the neurological complications of infectious endocarditis are ischemic strokes linked to vegetations embolisation. The aim of this work is to show the gravity of this affection.

Methods: We report the observation of a18 years man old, with no history, admitted in emergency room for a mitral infective endocarditis in cardiac decompensation complicated by multiple strokes. Physical examination: apexian systolic murmur. Pulmonary radiography: bilateral lung opacities and CTI 0,50. WBC: hyperleukocytosis. Blood culture: Staphylococcus aureus. Echocardiography: 24 mm vegetation on the posterior mitral valve. computed tomography: multiple ischemic stroke. She received a double antibiotic therapy. per operative exploration: a mitral vegetation, perforation 10/10 mm on altered mitral valve. Gesture: Mitral mechanical valve replacement 29 after a mitral plasty failure, under Cardio pulmonary bypass.

Results: post-op follow-up; without complication.

Conclusion: The decision to perform cardiac surgery for endocarditis, the choice of the right timing for this surgery, decision-making difficulty. These decisions require close monitoring of the patient, daily and regular clinical examination such as CT and echocardiography, transthoracic and transoesophageal. These decisions were made in close collaboration between the cardiologist, the surgeon and the microbiologist.

Topic: **Cardiovascular Surgery » Peripheral Arterial Disease**

Presentation Type: **Poster**

TOTAL SECTION OF HUMERAL ARTERY BY AN IRON BAR DURING A SCAFFOLDING FALL: CASE REPORT

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Introduction: The open vascular traumas are relatively frequent. They can engage functional and vital member's prognosis. They are always associated with lesions of the soft parts or neighboring organs. Clinical presentation is variable. The aim of this work is to show the importance of surgically exploring the humeral artery as well as the humeral junction in case of penetrating traumas of the elbow with abolition of the pulses. Methods: We report the case of a 21 years old mason, victim of a penetrating trauma of the left elbow by an iron bar following a fall of a scaffolding, presenting an abolition of the left radial pulse without bony lesions during the physical examination, with well colored hand and left forearm and no sensory-motor disorders. Per operative exploration after the ablation of the iron bar found a loss of 3 cm of humeral arterial substance with retracted and thrombosed ends, without any associated nervous or venous lesions. Surgical gesture consisted in the restoration of humeral arterial continuity by the homolateral basilica vein after preparation of the humeral arterial ends.

Results: The immediate postoperative evolution was simple with reappearance of the homolateral radial pulse. Conclusion: The open vascular traumas can appear either by a hemorrhage or by an ischemia. The exploration of the humeral artery must be systematic after open luxation of the elbow. The presence of vessel lesions must be suspected and explored when opening the vascular axis. Treatment is adapted to the vascular lesion and possibly to the associated lesions, it is surgical, either conventional or endovascular. The emergency of its implementation is function of the intensity of the hemorrhagic shock or the ischemic repercussions of downstream. The Walkmann syndrome of even can in post operational.

ID: **353**

Topic: **Cardiovascular Surgery » Peripheral Arterial Disease**

Presentation Type: **Poster**

A DIFFICULT SITUATION IN THE DIABETIC FOOT WOUND IN A PATIENT WITH CHRONIC PERIPHERAL ARTERIAL DISEASE DUE TO DIABETES: COMPARTMENT SYNDROME

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OBJECTIVE

In patients with ischemia due to peripheral vascular disease, ischemic injury is not the result of trauma, whereas diabetic foot wounds are almost always caused by trauma. Most diabetic foot infections begin as a result of an unrecognized injury to the neuropathic foot and colonization of a wound on the skin caused by trauma with bacteria. The treatment of diabetic foot wound is quite difficult in a patient with chronic peripheral arterial disease due to diabetes. During this treatment, the doctor and the patient's patience is very important.

METHODS

In our clinic, the follow-up and treatment of patients with diabetic foot primarily cannot be performed for some reasons.
Patients with ischemic wounds with peripheral arterial disease are followed-up and treated. In these patients, because of being a source of infection for patients undergoing open heart surgery, the procedures are performed quickly as soon as possible and the patients are generally taken to the isolated room.

Ischemia facilitates infection of the wound in diabetic patients. therefore, revascularization accelerates wound healing. In patients who cannot be revascularized, iloprost infusion is thought to be beneficial because of neovascularization. A multidisciplinary approach is essential and greatly improves treatment success. Patient's blood sugar must be controlled, low molecular weight heparin, acetyl salicylic acid and anti-inflammatory treatment should be started. Pentoxifylline and iloprost infusion therapies are useful as they increase neovascularization for the healing of ischemic wound. There are publications showing the benefit of hyperbaric oxygen therapy in wound healing. Empirical antibiotic therapy should be changed according to the pathogen that will be produced by culture. Regardless of antibiotic treatment, very good drainage, debridement and appropriate wound care are essential for successful treatment.

However, despite the treatment modalities applied, foot wounds of diabetic patients may progress and develop compartment syndrome (İmage 1).

RESULTS

The foot anatomy has rigid compartments and there are relationships between these compartments.; There are 4 compartments as medial plantar, central plantar, lateral plantar and deep interosseous. They are the most accepted in the clinic. The number of these compartments is reported to be between 4-10 in different publications. Inflammatory response due to infection causes the pressure in these compartments to rise above capillary pressure, resulting in ischemic tissue necrosis. Because of the high pressure within these compartments, infection spreads through the tendons to the lower pressure proximal regions. When drainage and debridement is performed, not only the dead and poor tissues are cleaned, but the pressure inside the infected compartments is reduced, thus preventing the infection from spreading proximally.

CONCLUSIONS

In compartment syndrome, revascularization should be performed first and blood sugar should be controlled. All dead and necrotic tissues should be debrided aggressively, the purulent material should be drained and the infected compartments opened wide. Proper antibiotic treatment according to the pathogen microbial agent is also important. Vacuum-assisted closure therapy after debridement will be useful for patients with culture negative. hyperbaric oxygen therapy can be administered more than once a day under severe hypoxia and infection conditions.

ID: **125**

Topic: **Cardiovascular Surgery » Peripheral Arterial Disease**

Presentation Type: **Poster**

POPLITEAL ARTERY ANEURYSM REPAIR VIA END TO END SMALL SAPHENOUS VEIN BYPASS:

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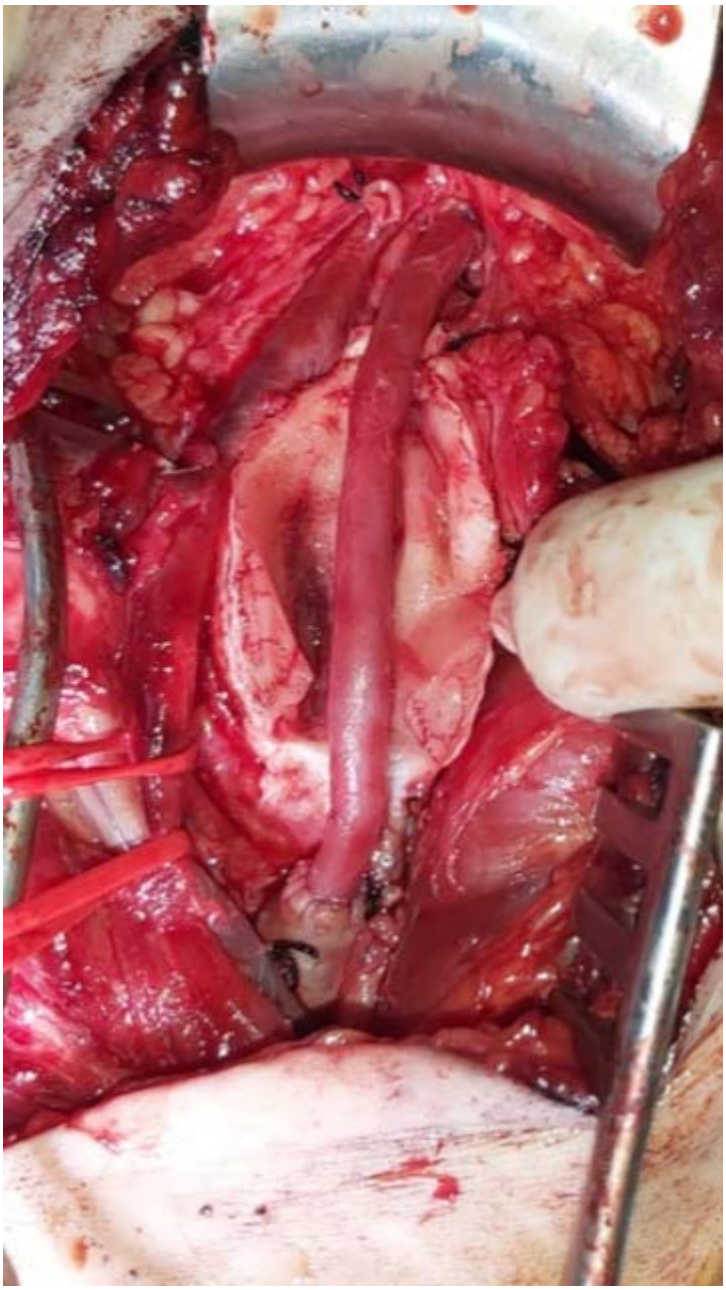
The normal diameter of the popliteal artery is around 0.7 to 1.1 cm. The popliteal artery aneurysm defined as the focal dilation of the artery, more than 50 percent relative to the vessel's normal diameter. The incidence is around 1%. The etiology is multifactorial and likely a complex interplay of inflammatory, immunologic, and potentially mechanical and genetic factors. Aneurysm of the popliteal artery can occur in isolation, or association with other large vessel aneurysms. The risk of aortic aneurysm accompanying the popliteal artery aneurysm is around 40-50%. The risk factors for popliteal artery aneurysm are smoking, hypertension, male sex, advancing age. Some patients may be asymptomatic. The diagnosis is made as a result of screening tests (incidental finding on a radiologic study that is performed for another reason like knee pain). Approximately 30-40% of patients are asymptomatic. Symptomatic patients may have thromboembolism, localized mass effect, or rupture. Noninvasive imaging for diagnosis can be accomplished with duplex ultrasound, computed tomographic (CT) angiography, or magnetic resonance (MR) angiography.

The clinical presentation, size of the popliteal artery aneurysm, the presence of other aneurysms, and patient factors affect the treatment strategy. Surgical repair, endovascular repair, or conservative treatment are the choices of management. Symptomatic patients with acute limb ischemia, regardless of size, should be repaired. A patent aneurysm that is greater than 2 cm in size should be repaired Asymptomatic, higher-risk patients with small popliteal aneurysms (lesser than 2 cm) can be treated conservatively. Long-term patency rates are higher when autogenous vein rather than prosthetic graft is used for lower extremity surgical bypass below the knee.

Here we are presenting a case of “popliteal artery aneurysm” that was surgically handled. A 45-year-old male patient was admitted with symptoms of pain and pulsatile mass around popliteal fossa. He has a history of acute lower extremity ischemia and he was operated 3 months ago. CT showed a popliteal artery aneurysm. The diameter was 3 cm. He was a heavy smoker and he has a history of hyperlipidemia, hypertension, and diabetes mellitus. The surgical team recommended elective surgical repair of the popliteal artery aneurysm. Popliteal lazy S incision was made, the small saphenous vein was harvested and an end to end native bypass was performed. The post-operative period was uneventful. The patient is discharged in good condition after three days following surgery.

Figure: Operative view of popliteal artery aneurysm and popliteal artery small saphenous vein end to end bypass.



ID: **118**

Topic: **Cardiovascular Surgery » Peripheral Artery Disease and Treatment**

Presentation Type: **Poster**

AXILLARY PULLOUT SYNDROME AFTER AXILLARY FEMORAL BYPASS SURGERY IN A PATIENT WITH LERISHE SYNDROME

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OBJECTIVE A 57-year-old patient was admitted to the outpatient clinic with complaints of lower extremity pain and claudication at rest. He had no history of diabetes or coronary heart disease. The patient had a history of inguneal hernia operation and no other specific data were reported. There was aortic occlusion of leris syndrome type.[Figures 1-4]. Lerische syndrome is a disease characterized by thrombotic occlusion of the disatal artery of the renal arteries. The classical signs of the syndrome are pain associated with exercise in the lower extremity claudication, inability to palpate femoral pulse and impotence in male cases

METHODS Axillary femoral bypass (AFB) was preferred in this patient because the anatomic adhesions secondary to previous abdominal operation made aortabifemoral surgery impossible. A transverse infraclavicular incision was made and the clavipectoral fascia was opened. Among the main fibers of the pectoralis, the subclavian artery; vascular structures and brachial plexus were observed. The right sybclavian axillary artery was evacuated. An 8 millimeter PTFE graft was applied from the proximal pectoralis to the arteria axillaris. After graft implantation into subcutaneous tissue; distal anastomosis was performed to the proximal superficial femoral arteries. There was minimal tenderness in the right upper extremity postoperatively, but general follow-up was normal and the patient was discharged on the fourth day. Three weeks after discharge, the patient was admitted to our hospital again with acute swelling and pain in the right infraclavicular region. Instant thorax tomography was performed. In history; the patient said that the pain aggravated by sudden movements. Physical examination revealed a large and pulsatile mass in the infraclavicular region [Figure 1-4].The patient's blood pressure was 108/55 mmHg, right femoral pulse was absent and there was no severe ischemia, motor or sensory loss. The patient was immediately operated. After bleeding control with clavipectoral incision; a torn axillar artery and a fragmented PTFE graft was observed [figure 1-4]. Damaged arterial vessel area of 2 cm diameter was repaired with patch graft. The axillofemoral graft was thrombocytosed and separated. There was no complication in postoperative follow-up. Microbiological culture tests taken from the anostomosis were negative and the patient was discharged 1 week after the operation. One month after discharge; After the wound healing period, a new operation was planned.

RESULTS Proximal anastomosis complications of AFB are infections, thrombosis, brachial plexus injury, pseudoaneurysms and suture line localization in 10% of cases, which leads to failure of the anastomosis. Medial graft localization is recommended in proximal anastomosis to prevent these complications .In the literature, previous axillary pullout syndrome(APS) cases are thought to be related to increased tension. Similarly, there was increased tension between subclavian arteries and grafts, especially in sudden shoulder movements in our case. To perform medial localized grafts in proximal anastomosis operations is very important to decrease anastomostic mobility and stress.

CONCLUSION APS is a rare complication after AFB operation. In AFB operations; anastomoses should be performed between the axillary artery and the graft on the medial side of the pectoralis minor muscle as much as possible and we believe that this approach is helpful in preventing rupture.

Resim 1:

Resim 2:

Resim 3:

Resim 4:

ID: **807**

Topic: **Cardiovascular Surgery » Peripheral Arterial Disease**

Presentation Type: **Poster**

DIAGNOSIS AND MANAGEMENT OF FEMORAL ARTERIOVENOUS FISTULA AFTER TEMPORARY FEMORAL VEIN HEMODIALYSIS CATHETERIZATION – CASE REPORT

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Diagnosis and Management Of Femoral Arteriovenous Fistula After Temporary Femoral Vein Hemodialysis Catheterization – Case Report

Objective: We aimed to share our clinical experience throughout the challenging diagnosis and management processes of an arteriovenous fistula developed as a complication of inappositely performed temporary femoral vein hemodialysis catheterization.

Methods: 73 years old male patient had been suffering from acute renal failure in another healthcare institution due to intensive antibiotherapy to treat sepsis. A temporary femoral vein hemodialysis catheter was introduced via the right femoral vein and the patient was started to receive renal replacement therapy for a while. After the termination of renal replacement therapy, the catheter was removed from the groin. After the removal, the patient was developed swelling and bruises at the right groin. Consequent ultrasonography and duplex ultrasound scans were performed. At first, the patient was diagnosed with a hematoma and then the diagnosis was altered to pseudoaneurysm. The duplex ultrasonography scan report was describing all of the findings to address pseudoaneurysm. The patient underwent pseudoaneurysm surgery at the same institution and then discharged after a brief period. 2 months later, the patient was admitted to our clinic with an enlarging right groin mass and bruises. We performed a computerized tomographic angiography. The imaging showed arterial extravasation and a related hematoma. Further digital subtraction angiography was planned to detail the arterial leakage and determine the most suitable treatment method. The angiography showed both extravasation and early venous opacification suggesting arteriovenous fistula.

Results: The right femoral site was explored through the previous incision. The massive amount of awaiting hematoma was found to be pressing onto the surrounding muscles and caused them to deteriorate. The hematoma was evacuated as possible. The right femoral artery was found and explored to its bifurcation. An elastic tape was placed around the right deep femoral artery and pulled gently for further exploration. The branch, crossing the femoral vein below, was found. The orientation of the branch was compatible with the imaging evidence. We ligate the branch with suture fixation. There was no ongoing bleeding after the ligation so we terminate the surgery. We discharged the patient after standard wound care and medical therapies were completed.

Conclusion: Differential diagnosis should be performed with care at patients with local complications after femoral site puncture procedures. Inaccurate diagnosis may lead to prolonged suffering and mistreatment of patients which results in legal problems especially in patients with iatrogenic pathologies.

Peripheral Vein Diseases: Usually Forgotten

ID: **229**

Topic: **Cardiovascular Surgery » Various Veins**

Presentation Type: **Poster**

RARE MALPOSITION OF CENTRAL VENOUS CATHETER INTO RIGHT SUPERIOR INTERCOSTAL VIEN INTRODUCED VIA RIGHT SUBCLAVIAN VEIN

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Abstract:

Central venous catheterization is a routine procedure in modern medical practice, although it is a simple procedure many complications have been reported during or after the procedure. Here we report unusual case in which central vein catheter was inserted through the right subclavian vein and then it looped back to the right superior intercostal vein. The catheter ultimately resulted vessel penetration due to guide wire and subsequent hemo-hydrothorax and respiratory distress. Afterwards management is also discussed.

İntroduction:

Central venous catheters (CVCs) are commonly used to gain vascular Access for various clinical indications. These include administering drugs, renal replacement therapy, total parenteral nutrition, poor peripheral venous access, cardiac catheterization, and transvenous cardiac pacing.[1] Malposition of central venous catheter (CVC) is a common complication.[2] however the misplacement of CVC into right superior intrathoracic vein is extremely rare into the literature.

Here we report a case of malposition of CVC tip into right superior intrathoracic vein following right subclavian vein cannulation.

Case report:

A 30 years old man was presented to the emergency due to abdominal gun shot which resulted transverse colon injury. The patient was confused grossly dehydrated, Pulse-110 bpm, BP-130/70mmHg, cold peripheries. Although peripheral veins were accessible and two intervenous catheters were inserted, Central venous cannulation was considered to achieve optimal rehydration and to have easy Access for anesthesia drugs. Under aseptic precautions, the right subclavian vein was successfully cannulated with central vein catheter by infraclavicular approach without imaging guidance. Cannulation was conducted without difficulty and venous blood was easily aspirated.

Rehydration therapy was started immediately after cannulation. After hours patient was transferred to the operation theater. İnduction dose of propofol as well as muscle relaxant rocuronium was given to the patient through the catheter, But surprisingly there was no response to highest doses of propofol as well as rocuronium. After administration of the drugs through peripheral veins normal response was achieved. That increased suspicion on the positioning of the catheter. Post operatively, chest X-ray was performed to ascertain the position of the catheter. İt was seen an abnormal root in which the catheter passed from right subclavian vein and then looped back to the right superior intrathoracic vein, and then catheter ultimately resulted vessel penetration and subsequent massive hemo-hydrothorax.

Catheter was immediately removed from the patient. Chest tube was inserted and 2litres of mixed fluid of Normal Saline, Propofol, and blood was drained. After 24 hours of followup, patient undergone complete recovery and chest x-ray became clear.

Figure1: Chest X-Ray showing malposition of central venous catheter into right superior intrathoracic vein and massive right hemohydrothorax.

Figure1: Chest X-Ray after 24 hours of thoracic intubation showing normal clear chest.

ID: **330**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Poster**

INTRAVENOUS SPLIT OF PERIPHERAL CANNULAS: CASE REPORTS

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OBJECTIVE

Intravenous catheters are used for various purposes in both inpatients and outpatients in hospitals. Complications related to the use of these cannulas can be seen. Common complications of peripheral intravenous cannulation include infection, phlebitis, thrombosis, bleeding, hematoma etc.
We aimed to present two cases of intravenous cannula split within the vessel associated with peripheral intravenous cannulation.

CASES

Both of the patients were female. One had just given birth and was to the puerpera. Both patients were referred to our clinic by referral from the external center. It was learned from the history that one patient had intricate split of the left arm cephalic vein in the left arm basilic vein and the other patient. After the ultrasound marking of both patients in the operating room, approximately 2 cm of skin incision was made according to the distal location of the intraket. 5000 units of heparin were administered to the patients. Intravenous removal of the intraket was performed after venotomy (Image 1).

One of the patients underwent embolectomy with embolectomy catheter and the other localized thrombus was removed without the need for additional procedure. It was learned from the anamnesis that the patient underwent embolectomy and that the patient had been at the 4th hour after the split of the intraket. Low molecular weight heparin was given to the patient after discharge. She was recommended to use for 10 days. The other patient received acetylsalicylic acid. Both patients were called to policlinic control 10 days later. Checked with ultrasound. No thrombus was detected in the cephalic and basilic veins.

CONCLUCIONS
The guide needle during peripheral intravenous cannulation by introducing the catheter into the cannula without removing the catheter completely. The plastic portion of the catheter may be cut off by the sharp surface of the guide needle and it can remain in the vein.

Apart from the known routine complications of intravascular cannula placement, it may rarely break. If this is noticed, precautions should be taken to prevent the splitted cannula from passing into the central venous circulation. It should be quickly removed and surgically removed before moving to the central circulation.

ID: **406**

Topic: **Cardiovascular Surgery » Research**

Presentation Type: **Poster**

MIGRATION OF A CHEMOTHERAPY CATHETER IN THE RIGHT AURICLE: A CASE REPORT

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Introduction: Very rare, possible complications if the catheter was weakened during the installation, normally the technique of Seldinger with dilators makes it possible to avoid too much maltreating the catheter itself, classically favored by the syndrome of the costoclavicular grip but especially as soon as there is a loop on the catheter especially at the fixed point of venous entry. The goal of this work is to bring back a case of complication of the plantable room of chemotherapy.

Methods: We report the case of a 33 year old woman with the history of left mastectomy associated with radiotherapy and an auxiliary chemotherapy by plantable room, who presented with pain of the right shoulder without cardiac symptomatology. ECG: With no abnormality. Pulmonary radiography showed the catheter into the right atrium. The echocardiography does not have objectified the catheter into cardiac cavities. The chest angio CT showed a free catheter into intracardiac cavity, of the device of chemotherapy rolled up in the right auricle and gaining the trunk of the pulmonary artery.

Results: The patient was put under narrow cardiologic monitoring.

Conclusion: The rupture of the catheter with migration and embolisation is a rare complication, which requires a narrow and regular monitoring.
Keywords: Plantable probe, chemotherapy, migration.

ID: **458**

Topic: **Cardiovascular Surgery » Various Veins**

Presentation Type: **Poster**

SUCCESSFUL ARTERIOVENOUS FISTULA REVISION IN A CHILD WITH JOUBERT SYNDROME

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Objective: Joubert Syndrome is a very rare syndrome diagnosed in neonatal period. This syndrome presents with pulmonary (tachypnea and apnea episodes), neurological (jumping eye movements, ataxia, psychomotor retardation and cerebellar vermis defects). In this case report, we present a pediatric patient with chronic dialysis after renal tubular acidosis who underwent brachiocephalic arteriovenous fistula (AVF) for venous hypertension and surgical treatment.

Case: An 11-year-old male patient was followed-up for Joubert syndrome who had undergone routine hemodialysis for 4 years and was admitted to the pediatrics clinic with electrolyte imbalance and acidosis. Her right jugular venous fullness, prominent tissue edema in the right pectoral and supraclavicular region, and edema more prominent in the right half of the face were observed in the examination, and brachiocephalic AV fistula which was actively used in the right upper extremity was examined by ultrasonography. AVF flow rate was measured as 1830 mL / min and the diameter of the draining cephalic vein was 32 mm. More than this patient was planned to undergo AVF resection and operated under general anesthesia. Anastamosis was explored over the brachial artery. The cephalic vein was liberated along the aneurysmal line. The patient was heparinized at 100 IU / kg dose and temporarily stopped by clamping the fistula. The cephalic vein was dissected from the anastomosis and the anastamosis was closed with 6.0 prolene. Subsequently, a 4 mm pediatric intubation tube was inserted into the cephalic vein and the aneurysmatic cephalic vein was used as a guide for aneurysmoraphy 4 plication. Subsequently, a new anastamosis was created with the end-side technique of 4 mm in length from 1 cm above the old anastomosis. AVF flow rate decreased to 310 mL / min. Venous hypertension-related findings improved almost within 10 days. The patient continued dialysis from the already developed AVF. The patient was discharged with full recovery.

Conclusion: Catheter placement for syndromic pediatric patients for hemodialysis is difficult both technically and in terms of its use. As a result of the technique applied in the patient we presented, the patient continued to undergo dialysis from the revised AVF in the postoperative period without the need for a temporary dialysis catheter. This has provided a significant clinical benefit.

ID: **435**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Poster**

IMPORTANCE OF CROSS-CLAMP DURATION AND PROSTHETIC VALVE SELECTION IN CARDIAC COMBINED SURGERY

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OBJECTIVE

Today, open heart operations are performed with lower mortality and morbidity rates with advanced surgical techniques and advanced technology materials.

As in many operations, the operative time and cross-clamping time should be carefully examined in patients with concomitant valve surgery with CABG.

The choice of prosthetic valves to be used is very important. Suturless-aortic valve replacement, which has been successfully applied in many centers in recent years, has a direct effect on cross clamp time when concurrent CABG is performed and directly increases surgical success. In this presentation, we aimed to give an idea about the cross-clamp time and results in combined surgery with Perceval (LivaNova Corp. Canada) Suturless Aortic Valve Replacement + CABGx2 operation {with three-month follow-up results} successfully applied in our clinic for the first time.

METHODS

A 75-years-old male patient had applied with symptomatic severe aortic stenosis + coronary artery disease (very critical proximal LAD&RCA stenosis). There was normal sinus rhythm. EF: 60%, LV diameters were normal. AVA:0.9 cm^2. Aortic gradient was 80/58 (max / mean) with 4.6 m/s jet velocity. There was no thoracic aortic aneurysm. By Euroscore-II, risk of "in-hospital mortality" was 8%. With median sternotomy, operation performed with CPB- ascending aortic arterial+unicaval /two-stage venous cannulation into the right atrium + venting through right superior pulmonary vein + intermittent administered antegrade+steady retrograde cardioplegia. Starting with CPB, after finishing RCA and LAD distal anastomoses with great saphenous vein grafts, transvers aortotomia located 3,5 cm. above aortic annulus and 1 cm above sinotubular junction was performed; and then, three leaflets were completely removed and natively calcified aortic cusps & annulus completely debrided. Next using three guiding sutures, the Perceval sutureless valve was parachuted down and it was deployed (Figure-1). Balloon valvuloplasty was performed. Aortotomia closed after checking annulus and coronary ostiums. During cross-clamping, proximal LAD and RCA anastomoses were done.

RESULTS

As shown in Table-1 below, implanting well-functioned sutureless-aortic valve less than 20 minutes (total clamping time is 61 min) of aortic cross-clamping may have an excellent positive impacts on postoperative outcomes of high-risk hepta/octagenarian patients undergoing CABG+AVR procedures.

CONCLUSIONS

Shortening cross-clamping time in concurrent procedures is very important. In addition, it's convenient for minimally-invasive procedures. With development of minimally invasive & total endoscopic techniques and illumination of longer follow-up results, suturless-AVR will be the focus of interest in concurrent cardiac surgery.

Figure-1

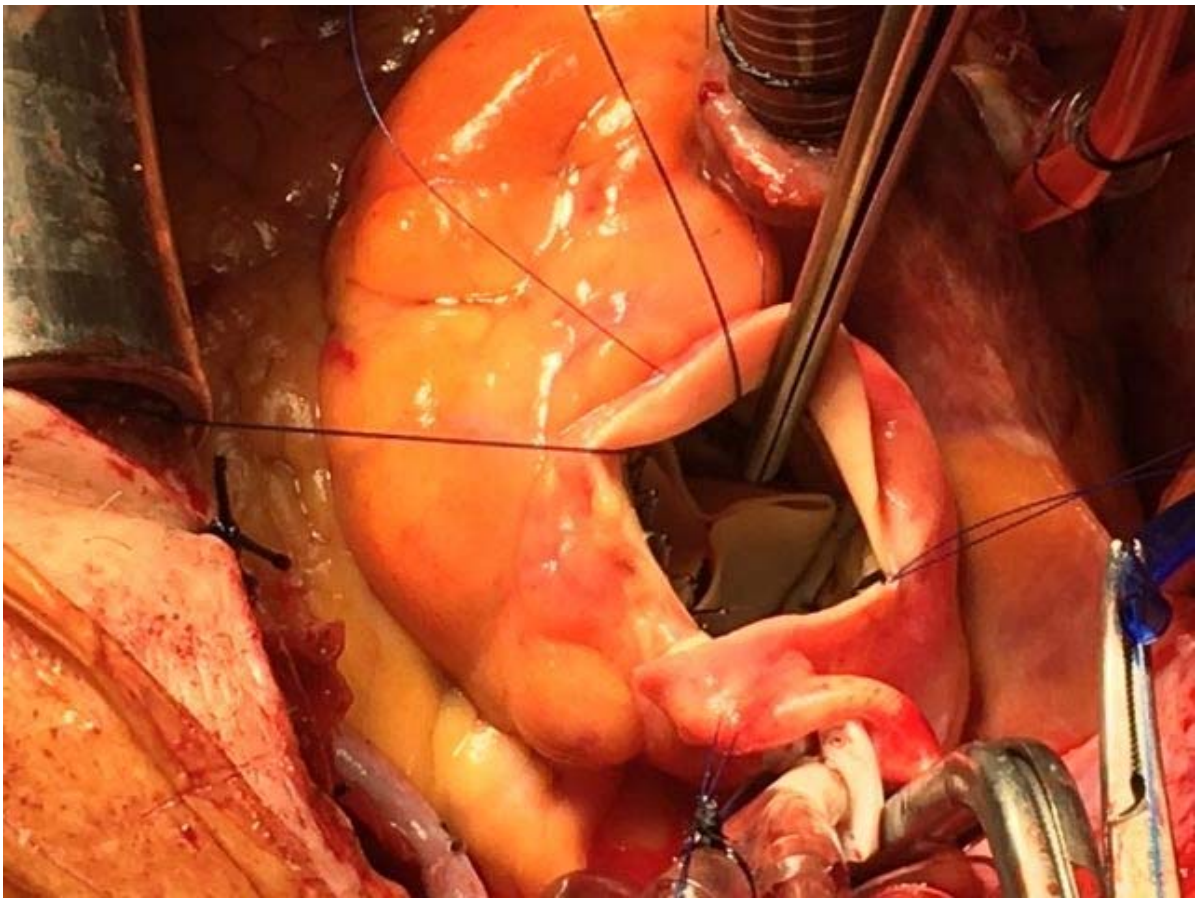

Table-1 : Preoperative characteristics, perioperative & postoperative outcomes

PREOPERATIVE CHARACTERISTICS	*VALUES*
Age	75
Sex	Male
Weight kg	65
Height cm	166
Body Mass Index (BMI) kg/m²	23,5
Body Surface Area (BSA) m²	1,72
NYHA classification	Class-III
Euroscore-II	8 %
Ejection fraction	60 %
LV-end diastolic diameter (EDD), mm	42
LV-end sistolic diameter (ESD), mm	24
Interventricular septum (IVS), mm	12
Left atrial size, mm	42
Aortic insufficiency	None
Aortic valv Area (AVA), cm²	0,9
Aortic gradient (max/mean) mmHg	80/58
Jet velocity, m/s	4,6
Aortic root diameter, mm	29
Length of ascending aorta, mm	96
Ascending aortic diameter, mm	33
Recent pneumonia and COPD	Yes

PERIOPERATIVE & POSTOPERATIVE OUTCOMES	*VALUES*
CPB time, min	90
X-clamp time, min	61
Blood transfusion	None
Perceval Size	L size
CABG quantity	2
ICU stay, day	1
ICU orotracheal intubation time, min	170
Drainage- total day- ml	100
Arrhythmias	None
Inotropic support	None
Temporary pacemaker requirement	None
Aortic insufficiency	None
Cerebral complication	None
Respiratory complication	None
Renal insufficiency	None
Hospital stay, day	5
POSTOPERATİVE transthoracic (tt) ECHOCARDIOGRAPHY (ECO)	Normal, functional Aortic prosthesis, No leak, Physiological normal gradient
1st-2nd-3rd month tt-ECO	Normal, functional Aortic prosthesis, No leak, Physiological normal gradient

ID: **403**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Poster**

INFECTIOUS AORTIC ENDOCARDITIS AFTER CORONAROGRAPHY, COMPLICATED WITH A MYCOTIC CEREBRAL ANEURISM RUPTURE: A CASE REPORT

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Introduction: The embolic complications of infective endocarditis are serious and may engage vital prognosis. Among these embolic complications, cerebral complications are to be considered; their prevalence varies between 10 and 65 % according to the studies and the used imaging technique of. Their spectrum is broad. The echocardiographic observation of a mobile vegetation of more than 15 mm, whose size varies during the follow-up or with gilded staphilococcus must make fear an increased embolic risk. The goal of this work is to show that a coronarography can complicate with a endocarditis and that the latter can complicated with a rupture of a cerebral mycotic aneurism.

Case report: We report the case of a 47 years old adult known for coronary syndrome, having to benefit from a coronarography, he presented a few days after with fever (40°c) which was attached to an endocarditis, considering the context, the patient presented two days after his admission for a cerebral bruise, secondary to the rupture of a cerebral mycotic aneurism, intrapreoperative. Pulmonary radiography: CTI: 0.58 and bilateral flocculent opacities.
ECG: Sinusal tachycardia. Echocardiography: Massive aortic insufficiency, aortic vegetation: 13 mm. LV not dilated, EF: 60%, SAPP: 55 mm Hg. Transoesophageal echocardiography confirmed the aortic insufficiency and the presence of vegetation and objectified an abscess of the mitro-aortic trigonal. Positive hemoculture with staphylococcus aureus and disturbed renal assessment. Cerebral MRI: cerebral bruise. Abdominal CT: multiple abscesses with splenic and
hepatic necrosis. Peroperative exploration: Large vegetation on the non-coronary cusp and presence of an annular abscess deterged at the non-coronary annular. The surgical procedure consisted of an aortic resection of cusps and the vegetations sent to bacteriology, repair of the aortic ring and aortic valvular replacement by a mechanical prosthesis. The immediate postoperative course was simple.

Conclusion: The cerebral embolic demonstrations of the infective endocarditis are associated with a discrete comparatively high death rate. A fast diagnosis and the introduction of a suitable antibiotherapy are of a major importance to limit the risk of neurological embolic complications.

Keywords: Aortic endocarditis, vegetation, cardiopulmonary bypass.

ID: **192**

Topic: **Cardiovascular Surgery » Diagnosis and Treatment of Valvular Hearth Disease**

Presentation Type: **Poster**

BRUCELLA TRICUSPID ENDOCARDITIS: CASE REPORT

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Introduction: Brucella tricuspid endocaditis is very rare. The diagnostic is made by serology and echocardiography (TTE). This report case is an opportunity for us to make a reminder of this little-known entity among cardiologists and heart surgeon.

Methods: We report the case of 15 years old children who present dyspnea and persistent fever . The physical exam found asystolic murmur, chest X-ray showed cardiomégaly, TTE demonstrated vegetations in chordate, papillary muscle, infundibulum and left pulmonary artery with tricuspid insufficiency III, pulmonary angiography: proximal emboli of left pulmonary artery, positives blood culture: Brucella melitensis and serology positive. Excision of tricuspid and pulmonary vegetations and tricuspid repair under cardiopulmonary bypass.

Results: Aorta clamping: 72mn, duration of CPB: 90mn.The immediate postoperative course were simple.

Conclusion: Brucella endocarditis is an uncommon, but serious complication of brucellosis. The tricuspid valve is rarely affected cardiac valve. Due to characteristics of the infection, medical therapy alone is not sufficient in treating the disease and best results are obtained with surgery combination. We describe a case of Brucella endocarditis involving the tricuspid valve suspected in front of the clinical data and the results of serology, confirmed by the culture of the native valves. In association with the medical treatment, management valve surgery lead to a favorable medium-term evolution.

ID: **610**

Topic: **Cardiovascular Surgery » Heart Valve Repair**

Presentation Type: **Poster**

AORTIC VALVE REPAIR VERSUS REPLACEMENT IN LAUBRY AND PEZZI SYNDROME

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Introduction: The Laubry and Pezzi syndrome is a rare congenital heart disease associating ventricular septal defect to aortic regurgitation. In our study we propose to analyze the epidemiological, anatomic, clinical and paraclinical features as well as the evolution of this pathology in Algeria.

Methods: This is a retrospective study on 10 patients with a Laubry and Pezzi syndrome operated at our institution over 09 years.

Results: The middle age of discovery of the disease is twenty years with extreme ranging from 6 to 43 years. There was a male predominance (65% boys). Almost all patients are symptomatic. Echocardiography is the essential examination to establish the diagnosis. It was perimembranous in 80% of cases associated with prolapse and leaks aortic degrees. The average age at surgery was 20 years. VSD was closed in100% of patients and associated with conservative valve repair in 6 others. Four patients underwent aortic valve replacement using mechanical prosthesis. The immediate evolution was good in the majority of cases. The mean long-term is 3 years. For the patients who underwent closure of VSD without valvular gesture, 03 have saw their AR disappear, 02 have increased their AR become moderate requiring further surgery on the aortic valve and the remaining 01 retained their grade 1 AR in the long-term follow-up.

Conclusion: The diagnosis and the regular and frequent monitoring of high VSD including infundibular and périmembranous one must be systematic. In fact, the onset of AR during the evolution of a VSD is a turning progression of the disease since its occurrence ecompromises the long-term prognosis and modifies the therapeutic indications.

Keywords: Ventricular septal defects, aortic insuffiency, surgery, cardiopulmonary bypass.