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ABSTRACT BOOK

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Oral Presentation Session

Congenital Heart Defects: Techniques and Outcomes After Repair

Date: 04.11.2023 Time: 08:00 – 09:00 Hall: 7

ID: 249

Topic:

Cardiovascular Surgery > Congenital heart disease

Presentation Type:

Oral Presentation

The "Pathfinder-CHD Registry": A prospective, comprehensive database on patients with Heart Failure due to Congenital Heart Disease

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Heart failure is a significant burden among the multiple complications that adults with congenital heart disease (CHD) may encounter. There is an increasing need to address the long-term implications of heart failure in affected patients, as the **diagnosis and treatment** of heart failure in CHD are particularly challenging due to the complexity of the various underlying congenital cardiac anomalies and the residual cardiac defects. Moreover, management strategies for CHD often differ from those for acquired heart disease. Therefore, the development of a comprehensive database is crucial to enhance the understanding and improve the care of adults with heart failure due to CHD.

The prospective Pathfinder-CHD Registry is tailored to capturing and analyzing data on heart failure in ACHD, encompassing all **key aspects** of heart failure management, including demographic details, medical history, laboratory results, electrocardiographic and other cardiac imaging findings, as well as information on medical, surgical or interventional treatment, and clinical outcomes.

As data privacy and security are paramount considerations in this endeavor, robust measures are implemented to ensure that patient confidentiality is upheld, with adherence to relevant ethical guidelines and data protection regulations.

In conclusion, the Pathfinder-CHD Registry is designed to improve the care, management, and outcomes of these complex diseases, and to enable longitudinal studies to examine prevalence, disease progression, risk factors, and the effectiveness of various treatment strategies. By identifying patterns and trends within the ACHD population, this database can support the development of evidence-based strategies, tailored therapeutic approaches, and prognostic models to improve the care and outcomes of adults with CHD and heart failure.

The ultimate goal of this registry is to serve as a platform for collaborative research, fostering multidisciplinary efforts and facilitating the evaluation of new, targeted therapies, interventions, and guidelines specifically designed for managing this growing population of adults with heart failure due to CHD.

ID: 172

Topic:

Cardiovascular Surgery > Congenital heart surgery

Presentation Type:

Oral Presentation

Repair of Congenital Heart Defects Through Axillary/Vertical Thoracotomy

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Objective: Repair of congenital heart defects via median sternotomy has been the gold standard approach for years. However, scar tissue on the anterior chest wall can be a source of anxiety especially in growing children. Approaches such as partial sternotomy, anterolateral thoracotomy and posterior thoracotomy were performed to provide cosmetic advantage. In our study, we aimed to present our results of congenital heart defect repair through axillary/vertical thoracotomy.

Methods: Patients who underwent congenital heart defect repair via axillary thoracotomy between May 2018 and January 2023 were included. The medical records of the patients were reviewed retrospectively.

Results: Forty-one patients were included in the study. Twenty-eight (68.3%) of the patients were female. The mean age and weight of the patients were 57.6 ± 37.2 months, 17.6 ± 9.3 kg. Youngest patient was three months old and weighed 4.2 kg. Twenty-six atrial septal defect (ASD) repair, 13 ventricular septal defect (VSD) repair were performed. Only one partial atrioventricular septal defect and one VSD + Infundibular Stenosis repair were performed. The median intensive care duration was 1 day (1-10), and the median postoperative hospital stay was 3 days (2-16). One patient was reintubated at the 14th postoperative hour due to aspiration. Only this patient's hospital stay was prolonged. Seventeen (41.5%) patients were extubated in the operating room, and none of them were reintubated.

Conclusions: We think that the axillary/vertical thoracotomy approach is safe and can be performed in the repair of specific congenital heart defects. The incision is on the midaxillary line, and scar tissue remains under the arm. Scar tissue will not affect breast development in growing girls due to its distance from the breast tissue. We believe that axillary thoracotomy can be safely applied even in infants under five kilograms.

Keywords: Congenital Heart DefectASDVSD

ID: 226

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

Repair Of Pulmonary Vein Obstruction After Tapvr Operation And AVR- 3. Operation

Hazer Erçan Bozyer* [1] ,Veysel Çeliktepe[1] , Yağmur Damla Akçura[1] , Hüseyin Bardak[1] , Tülay Demircan[1] , Mustafa Kır[1] , Görkem Gökkaya[2] , Öztekin Oto[2]

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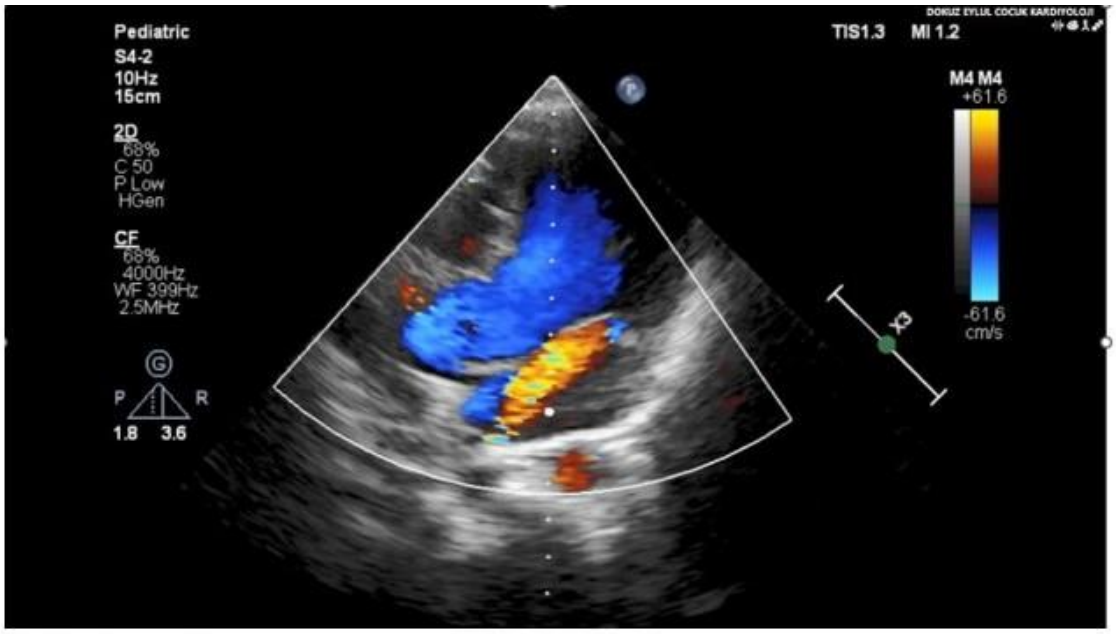
Introduction: The major complication and the main reason of reoperation following surgery of total anomalous pulmonary venous return (TAPVR) repair, is the occurrence of pulmonary venous obstruction. The pathology of pulmonary venous obstruction followed by surgery of TAPVR is a fibrous intimal hyperplasia associated with some medial hypertrophy. The conventional surgical therapies have been complicated by a high rate of re-stenosis. We would like to share our experience with a patient who was followed up in our clinic and developed restenosis and severe aortic regurgitation after removal of pulmonary vein obstruction after TAPVR repair.

Case: A 9-year-old male patient had TAPVR repair surgery at an external center when he was 23 days old. Due to the development of pulmonary vein stenosis after TAPVR repair, he operated again in our center when he was 4,5 months old. During the clinical follow-up of our patient, severe aortic regurgitation and severe pulmonary vein stenosis developed over time. In doppler echocardiographic imaging, the peak pressure gradient obstructed left PV was 70-80 mmHg and right PV was 30 mmHg. Pulmonary vein stenosis repair and aortic valve replacement (AVR) were performed in the same operation. After operation echocardiographic imaging, the peak pressure gradient left PV was 7-8 mmHg , right PV was 5-6 mmHg and mild regurgitation of mechanical aortic valve was detected.

Discussion: The total anomalous pulmonary venous connection is a rare congenital heart disease. The development of pulmonary venous obstruction is one of the major risk factors for poor outcomes after surgical repair.



Picture 1: The echocardiographic image of preoperative pulmonary vein stenosis

Picture 2: The echocardiographic image of postoperative pulmonary vein

Keywords: Pulmonary vein obstructionTotal anomalous pulmonary venous return (TAPVR) repair

References:

1. 1. Lacour-Gayet F. Surgery for pulmonary venous obstruction after repair of total anomalous pulmonary venous return. Semin Thorac Cardiovasc Surg Pediatr Card Surg Annu. 2006;45-50. doi:10.1053/j.pcsu.2006.02.010

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ID: 175

Topic:

Cardiovascular Surgery > Congenital heart surgery

Presentation Type:

Oral Presentation

Transcatheter Re-Closure Of Secundum Atrial Septal Defect Due To The Occluder Erosion

Emre Özdemir[1]

[1]*İzmir Katip Çelebi University, Ataturk Research and Training Hospital, Department of Cardiology*

Introduction: Transcatheter closure of secundum atrial septal defect (ASD) has become an alternative to open heart surgery. Best known complications is device embolization but one of the the complication that must be under attention is device related cardiac erosion. We will present a patient with atrial septal erosion, while aortic erosion is the more frightening.

Case: 20-year-old woman suffering from palpitations for a period of time. Echocardiography were performed and a secumdum type ASD detected. The patient hospitalized for transcatheter closure due to the detection of slightly dilated and secundum ASD. 11 mm secundum ASD which was measured as 10 mm by sizing during the procedure and it was closed with 12 no Amplatzer ASD occluder device. No residue was observed in perop TEE after closure. In the first-third months of follow-up, residual shunt was not observed but the first year control of the patient, she started to suffer from a new onset dispne and reccurence in palpitation, there was an increase detected in SPAP after the last follow-up echocardiograhy and a shunt observed on the atrial septum near by the old occluder device. On 3D TEE this defect had as 6 mm diameter. With peroperatuar 3D TEE, 7 no Amplatzer device implanted as overlapping to old device. It was observed that the shunt was closed. On 1 year follow-up period there was no complication or any other shunt.

Discussion: Secundum atrial septal defects (ASDs) account for approximately 6%-10% of congenital heart defects in children and 30% of such defects in adults. Although transcatheter ASD closure reduces the need for surgery(1). But there are alsosome complications , one of the situations where surgery is needed, especially emboli and erosions. Although the more frightening of erosions is aortic root erosion, insufficient rim and large device selection are predisposing factors. Erosion is potentially lethal complication amd firstly presented at 2004 by Amin et al. with 28 patients(2). Reported erosions occurred at the dome of the left or right atrium near the aortic root. ut these cases there were pericardial effusion associated with erosion as extravasation of blood on the heart cavities. On these cases Amin et al. suggested that oversized occluders may increase the risk of erosion, to prevent choising over-sized occluder, the defect should not be overstretched during balloon sizing. As different in the literature, in our patient, the erosion occurred due to a leak on the atrial septum between the left and rigtht atria, which is not adjacent to the aorta, probably due to choosing the in-appropriate size device as under-size while to avoide of overstretching during balloon sizing of the ASD. So as choosing a large device, on the contrary, choosing a small device can also cause leakages and erosions in the septum. Although there no enough literary recommendations in a situation as in our case, a repeat percutaneous procedure with a suitable second device may be possible as an alternative to surgery.

Conclusion: However, it should be kept in mind that the old device may embolize during this procedure, the stabilization of the device should be evaluated well imaging methods, and the

procedure decision should be taken together with the cardiology and cardiac surgery concil. So it can be possible to percutaneous treat an erosion that occurs on near by the device, in patients with appropriate anatomy, the transcatheter method may avoid the patient from surgery

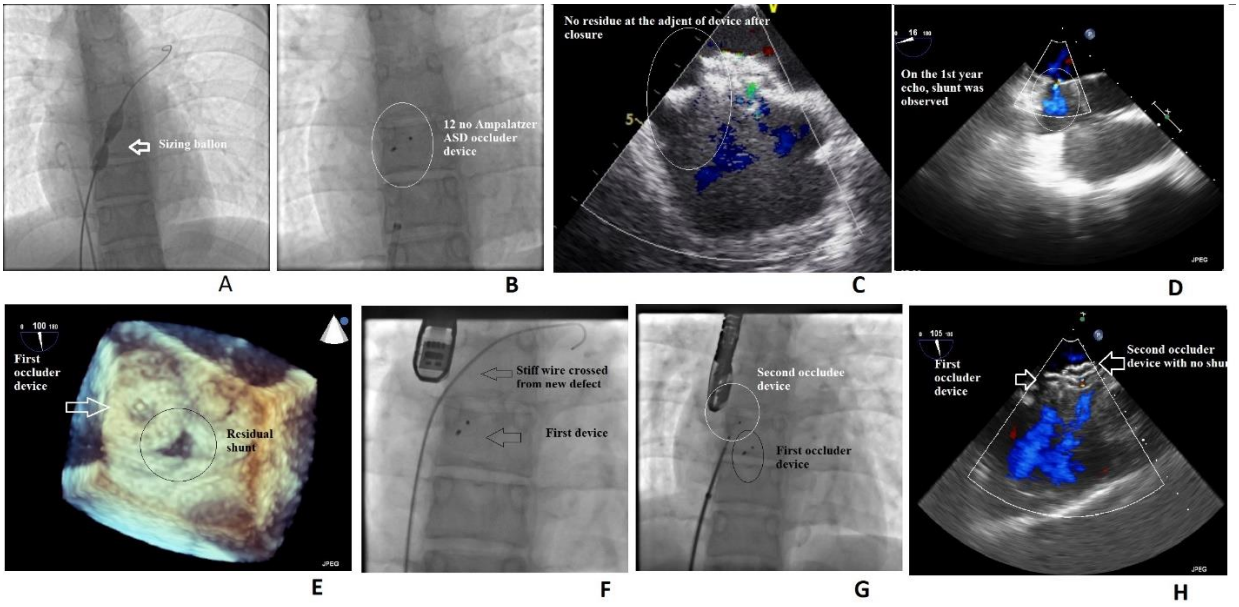

Figure 1 - The secundum ASD was closed with transcatheter procedure succefully(A-B). While there was no residuel shunt in the TEE performed during the operation in the first procedure(C), a shunt due to possible erosion in the near by the old device on 1st year follow-up(D-E).With 3D TEE and scopy guidance, residual shunt detected and the shunt was closed by a second transcatheter approach with an appropriate new device(F-G). The residuel shunt was closed without any need to surgical procedure(H).

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2. Amin, Zahid, et al. "Erosion of Amplatzer septal occluder device after closure of secundum atrial septal defects: review of registry of complications and recommendations to minimize future risk." Catheterization and Cardiovascular Interventions 63.4 (2004): 496-502.

Oral Presentation Session

Surgical Solutions in Complex Congenital Defects

Date: 04.11.2023 Time: 09:15 – 10:15 Hall: 7

ID: 103

Topic:

Cardiovascular Surgery > Congenital heart surgery

Presentation Type:

Oral Presentation

Timing of Surgery in Infant Patients with Tetralogy of Fallot

Assoc. Prof. Nihat Cine* **,** Assoc. Prof. Nilufer Cetiner Cine , MD Abdullah Arif Yilmaz , MD Fatih Tomrukcu , MD Fariz Jafarov , Prof. Eylem Tuncer , MD Fatih Alparslan Genc , MD Gulperi Yagar Keskin , Prof. Ayse Yildirim , Assoc. Prof. Omer Savluk

Koşuyolu High Specialization Education and Research Hospital, Istanbul, Turkey

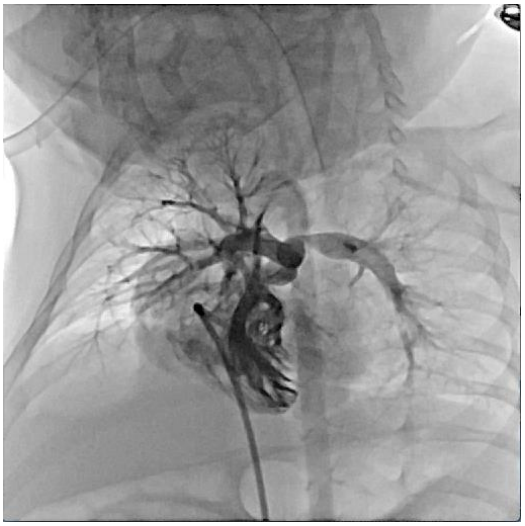
Objective:

Tetralogy of Fallot (TOF) is the most common pathology among syanotic congenital heart diseases. With the development of experience and technology used in congenital heart surgery, the timing of corrective surgery is undergone earlier [1]. This timing is still controversial [2]. Early surgical correction provides protection of the right ventricle function and elimination of systemic hypoxia. In addition, thrombosis and pulmonary artery (PA) distortion caused by the shunt in palliation are avoided [2]. The most important advantage is the early development of the PA and it's branches. In our study, we aimed to evaluate the timing of one-stage correction surgery and morbidity and mortality in TOF patients in the infant group.

Method:

Patients were evaluatedretrospectively. Patients who were diagnosed with TOF and underwent surgical correction under the age of one year were included in our study. Patients treated with palliation were excluded from the study. In one-stage correction surgery, after cardiopulmonary bypass was initiated, right ventricular outflow tract (RVOT) and pulmonary artery reconstruction was achieved and the VSD was closed. In chosen cases depend on the pulmonary annulus size, neo-pulmonary valves were made by a 0.1mm polytetrafluoroethylene (PTFE) patch.

In necessary, stenosis was also corrected in PA branches. At the end of the operation, the right ventricle (RV) / left ventricle (LV) ratio was directly measured. Postoperatively, patients were evaluated with echocardiography.



Results:

Between 2016-2023, there are 79 patients younger than 1 year old who were diagnosed with TOF and underwent correction surgery in our clinic. The mean age of these cases was 8.1±2.4 months. 15 of the patients (19%) were 6 months or younger, and 6 (7%) patients were less than 4 months old. The average of weight is 7.8±1.4kg. Mean of McGoon was 1.9±0.2. The mean of pulmonary annulus diameter was 7.3±1.4mm. DelNido cardioplegia was preferred in 52 (65%) of the patients. Valve-sparing surgery could be performed in 19 (24%) patients. Neocasp was formed by 0.1 mm PTFE in 17 of the patients. The postoperative RV/LV ratio was calculated as 0.57±0.12. Postoperative mean RVOT-PA gradient was measured as 23.4±7.3 mmHg. Our mortality rate is 2.5% (2 patients). Mean of intensive care stay was 8 days.

Conclusions:

Corrective surgery in infant patients with Tetralogy of Fallot is performed with low morbidity and short intensive care unit stay. These patients require less RV muscle resection and use a smaller patch. Therefore, we expect right ventricular functions to be better.

Keywords: Tetralogy of Fallot, InfantSurgical timingRight Ventricular Outflow TractPulmonary Artery

References:

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ID: 115

Topic:

Cardiovascular Surgery > Congenital heart disease

Presentation Type:

Oral Presentation

Prolonged Mechanical Ventilation After Congenital Heart Surgery in Patients with Down syndrome, Risk Factors, and Solutions

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OBJECTIVE

According to the current literature, Down syndrome (DS) is the most common chromosomal abnormality, occurring in 16 patients per 10000 live births. Cardiovascular disease is common in people with DS and includes various congenital heart disease (CHD) types. The fact that DS patients have respiratory comorbidities prolongs the extubation period after cardiac surgery. This study discussed postoperative pulmonary comorbidities of DS patients who were operated for CHD and solutions.

METHODS

In our clinic, 59 patients with DS who were operated on in the last year were analyzed retrospectively. Data were collected from patient's primary diagnosis, risk categories (RACHS-1), accompanying respiratory pathologies, accompanying comorbidities, and intensive care follow-up processes. The study did not include patients with a RACHS-1 score of 4 and above. As a result, 41 patients were analyzed. All patients were extubated with a high-flow nasal cannula.

RESULTS

The median age of the patients included in the study was 6.9 months (range three days to 13 years). Twenty-five patients were male (60.9%), and 16 were female (39.1%). Of the 41 patients included in the study, 9 were pulmonary debanding + VSD closure (21%), 8 had pulmonary banding due to VSD or AVSD (19.5%), five were operated for aortic coarctation and arch hypoplasia (12.4%), 7 were tetralogy of Fallot was corrected entirely (17%), 7 of them were diagnosed with ASD (17%), 4 of them were pulmonary debanding + AVSD repaired (10.2%), and 1 of them were operated for total abnormal pulmonary venous connection. Two patients died in the intensive care follow-up. The pulmonary banding procedure was performed with anterior thoracotomy, aortic coarctation repair with left posterolateral thoracotomy, and other procedures with median sternotomy. While the mean extubation time of the patients was 11.3 ±4.2 hours in the RACHS-1 category, it was 29.3 ±18.1 (range 13.1 hours ± 355 hours) in the RACHS-3 category. Four patients were re-intubated under elective conditions because of respiratory acidosis and hypoxia. Preoperative risk factors for prolonged ventilation were premature birth, extended neonatal intensive care stay, hospitalization for four or

more lower respiratory tract infections per year, advanced hypotonia, laryngomalacia, and pulmonary hypertension. Posterolateral thoracotomy and long cardiopulmonary bypass time were seen as intraoperative risk factors. In the postoperative period, renal failure, infection, high inotropic use, and high lactate level were observed as risk factors for prolonged intubation. It was observed that patients who received RSV prophylaxis were extubated earlier.

CONCLUSIONS

It is known that patients with Down syndrome carry a significant risk for pulmonary complications. Weakness of respiratory muscles, tracheomalacia, frequent lower respiratory tract infections, bronchopulmonary dysplasia associated with prolonged intubation in the neonatal period, and hypotonia are the main factors causing this condition. Early intervention in the postoperative period, high-flow oxygen therapy, and effective physiotherapy will improve the results.

Keyword: *down syndrome, congenital heart surgery, respiratuary*

ID: 116

Topic:

Cardiovascular Surgery > Pediatric cardiac surgery

Presentation Type:

Oral Presentation

Obstructed Extracardiac Fontan Conduit in an 18-Year-Old with Dextrocardia: A Unique Solution to A Unique Anatomy

MD Ali Mashadi[1], **Prof. Sameh Said**[* 2]

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[2] *Division of Pediatric and Adult Congenital Cardiac Surgery, Maria Fareri Children's Hospital, Westchester Medical Center, Valhalla, NY*

BACKGROUND: Palliation of functional single ventricle continues to be the standard surgical treatment with extracardiac Fontan (ECF) being the final common pathway. ECF is commonly performed using PTFE grafts. Although it is rare, PTFE grafts can be subjected to calcification and obstruction which may require repeat operations. We aim to present an alternative strategy to manage obstructed/calcified Fontan conduits.

METHODS: An 18-year-old man with functional single ventricle secondary to unbalanced AVSD with pulmonary atresia and TGA. He also had asplenia and dextrocardia. He underwent all his three-stage palliation through median sternotomy with an aortopulmonary shunt, Bidirectional Glenn, and prior Fontan. He had a polytetrafluoroethylene (PTFE) graft conduit for his extracardiac Fontan, but it appeared to be calcified and obstructed on his most recent cardiac catheterization. Based on this finding, the decision was made to replace his conduit.

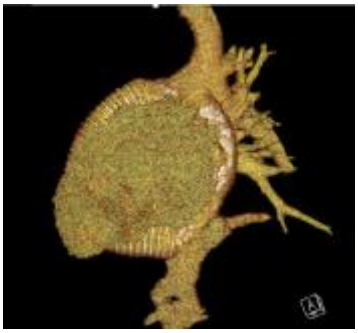
RESULTS: Through a 4th sternotomy, the main pulmonary artery stump was ligated and divided. After dissection of the conduit, the decision was made to add a new graft from the inferior vena cava to the right main pulmonary artery instead of explanting the entire Fontan conduit. This was done to avoid placing the new Fontan connection facing towards the left sided Glenn connection. A side-biting clamp was then placed on the inferior vena cava, leaving a portion of inferior vena cava as well as the left sided hepatic vein to drain through the previously placed Fontan conduit. An end-to-side anastomosis between a 20 mm ringed PTFE graft and the inferior vena cava was constructed using running 5/0 prolene suture. Clamp was removed and the graft was de-aired and adjusted. After which an arteriotomy was made and the distal graft to pulmonary artery anastomosis was constructed using running 6/0 prolene suture. He was extubated in the operating room and was discharged 9 days later. Table 1 displays his post-operative course. Post-operative CTA showed widely patent flow through the two extracardiac Fontan conduits. Image 1.

CONCLUSIONS: Utilization of small PTFE grafts at the time of initial Fontan completion should be avoided. Transcatheter options on smaller Fontan conduits especially when calcified are limited. Repeat operations may be necessary to improve cardiac output and decrease the risks related to

hepatic and renal dysfunction secondary to the obstructed conduit. The off-pump strategy is feasible, even in positional anomalies and helps avoid transfusions which may impact the Fontan circulation in the perioperative period.

Word count: 394 words

Image 1. Post-Operative CTA



Keywords: Fontan ProcedureSingle Ventricle PhysiologyCongenital Cardiac SurgeryDextrocardiaPTFE Conduit

References:

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ID: 117

Topic:

Cardiovascular Surgery > Congenital heart surgery

Presentation Type:

Oral Presentation

A Rare Case: Repair of Iatrogenic Left Ventricular Aneurysm in a 1-month-old Infant Without Using Cardiopulmonary Bypass.

MD İlker Mercan* **,** Assoc. Prof. Mehmet Tasar , Prof. Halil İbrahim Ucar
Ankara Etlik City Hospital, Department of Pediatric Heart Surgery

Background

Ventricular aneurysms are rarely seen in the neonatal period. While congenital ones can be detected in the prenatal period, iatrogenic aneurysms present with clinical manifestations ranging from asymptomatic to cardiac tamponade. The case we presented was an iatrogenic and incidentally diagnosed patient.

Case Summary

A 1-month-old male patient was diagnosed with congenital aortic valve stenosis (bicuspid aortic valve) in an external center. The aortic valve balloon valvuloplasty procedure was performed on the 3rd postnatal day in an external center for the patient with a peak-to-peak 85 mmHg gradient on the aortic valve. After the procedure, the peak gradient regressed to 21 mmHg, and he was discharged with 2nd-degree aortic valve insufficiency. When the patient comes to the cardiology clinic of our hospital for control, a 3x2 cm aneurysmatic dilatation is observed in the apical region of the left ventricle. The decision of surgery was made after a discussion in the council.

The pericardium was opened by median sternotomy. No hemorrhagic fluid was seen in the pericardium. The pericardium was hanged. The left ventricular apex was elevated with sponges. A pseudoaneurysm was observed in the apical region of the left ventricle, which was distinctly differentiated from the surrounding tissues. The periphery of the aneurysm was turned by crossing the plegite-supported sutures from the myocardium and tightened with snaring. The sac was opened with a vertical incision. A hole with a diameter of 4 mm connected with the left ventricle was seen through the sac. It was completely closed by turning around the hole twice with a plegite-supported 5.0 prolene suture. Bleeding control was achieved by tightening the snaring at this time. The aneurysm sac was sutured on itself. The operation was completed in 45 minutes, and there was no bleeding. The patient was extubated early in the intensive care unit. He was taken to the service on the 1st postoperative day. He was discharged uneventfully on the 4th postoperative day.

Conclusion

Although very rare, iatrogenic ventricular aneurysms can be seen in the neonatal period due to transcatheter procedures. Repair without the use of cardiopulmonary bypass should be considered in

terms of both rapid completion of the procedure and not complicating the surgery. However, controlling the aneurysm sac with plegite-supported sutures makes the procedure safer.

Keyword: *ventricular aneurysm, bicuspit aortic valve, congenital aortic stenosis*

ID: 246

Topic:

Cardiovascular Surgery > Congenital heart disease

Presentation Type:

Oral Presentation

Factors Affecting the Outcomes after Bidirectional Glenn Shunt

Prof. Ahmed Elmahrouk[*] [1] **,** Prof. Ahmed Jamjoom[2] , MD Abdelmonem Helal[2] , MD Aly Yousef[2] , MD Ahmed Dohain[3]

[1] *King Faisal specialist Hospital & Research Center*

[2] *King Faisal specialist hospital*

[3] *King Fahad Military Hospital Jeddah*

Background: Despite the improved management of patients with a single ventricle, the long-term outcomes are not optimal. We reported the outcomes of the bidirectional Glenn procedure (BDG) and factors affecting the length of hospital stay, operative mortality, and Nakata index before Fontan completion.

Methods: This retrospective study included 259 patients who underwent BDG shunt from 2002 to 2022. The primary study outcomes were operative mortality, duration of hospital stay, and Nakata index before Fontan.

Results: Mortality occurred in 10 patients after BDG shunt (3.86%). By univariable logistic regression analysis, postoperative mortality after BDG shunt was associated with high preoperative mean pulmonary artery pressure (OR: 1.06 (95% CI: 1.01- 1.23); P= 0.02). The median duration of hospital stay after BDG shunt was 12 (9- 19) days. Multivariable analysis indicated that Norwood palliation before BDG shunt was significantly association with prolonged hospital stay (β: 0.53 (95% CI: 0.12- 0.95), P= 0.01). Fontan completion was performed in 98 patients (38.13%), and the pre-Fontan Nataka index was 173 (130.92- 225.34) mm2/m2. Norwood palliation (β: -0.61 (95% CI: 62.63- 20.18), P= 0.003) and preoperative saturation (β: -2.38 (95% CI: -4.49- -0.26), P= 0.03) were inversely associated with pre-Fontan Nakata index in patients who had Fontan completion.

Conclusions: BDG had a low mortality rate. Pulmonary artery pressure, Norwood palliation, cardiopulmonary bypass time, and pre-BDG shunt saturation were key factors associated with post-BDG outcome in our series.

Keywords: Bidirectional Glenn ShuntSingle VentricleMalata indexFontan Palliation

References:

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ID: 108

Topic:

Cardiology > Diagnosis and treatment of valvular heart disease

Presentation Type:

Oral Presentation

The Aortic Annulus, Sinus Of Valsalva, Ascending Aorta Diameters And Z-Score Values in Children With Bicuspid Aortic Valve, Aort And Mitral Valve Prolapse

Şebnem Paytoncu[1]

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Objectives: The aim of this study is to evaluate echocardiographically (and determine pathology if there is any) the diameters and Z-scores of aortic annulus, sinus of valsalva and ascending aorta in patients with bicuspid aortic valve, aortic and mitral valve prolapse and healthy children.

Materials and Methods: This retrospective cross-sectional study includes three hundred and fifty patients with bicuspid aortic valve, aortic and mitral valve prolapse and healthy children. One hundred and ninety of them (54.3 %) are non-syndromic, non-operated, hemodynamically stable patients. One-hundred and sixty (45.7 %) are heathy control. Two hundred of all patients are boys (57.1 %) and 150 are girls (42.9 %). Patients' height and weight values were assessed. Body surface area and Z-score and percentile values were calculated. Aortic annulus, sinus of valsalva and ascending aorta were measured on the parasternal long axis view. The indexed values were obtained by dividing all measured parameters by body surface area. The Z-scores and percentile values are calculated for each group.

Results: Average indexed aortic annulus value is 1.59 cm/m2; sinus of valsalva value is 2.27 cm/m2 and ascending aortic value is 1.91 cm/m2 in our study. Average aortic annulus Z-score is 0.4; sinus of valsalva Z-score is 0.08 and ascending aorta Z-score is 0.15.

Conclusion: In the present study, children aged between 0.33-17.8 years, mean aortic diameters were determined in three levels. The aortic dilatations have been observed in the measurements of seventy eight of 190 patients (41 %) in patient group and twelve of 160 (0.7%) patients healthy control group. It is remarkable that non-syndromic bicuspid aortic valve, aortic and mitral valve prolapse patients who are thought to be healthy have also various levels of aortic dilatations even before they were diagnosed with aortopathy.

Keywords: Bicuspid aortic valvechildrenaortic diameter

References:

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Oral Presentation Session

Perspectives in Congenital Heart Surgery

Date: 04.11.2023 Time: 10:30 – 11:30 Hall: 7

ID: 102

Topic:

Cardiovascular Surgery > Adult congenital heart disease

Presentation Type:

Oral Presentation

Long-term follow-up results of adult ASD population

Assoc. Prof. Umit Yasar Sinan* **,** MD Hidayet Ozan Arabaci , MD Aybike Gul Tasdelen , Prof. Mehmet Serdar Kucukoglu

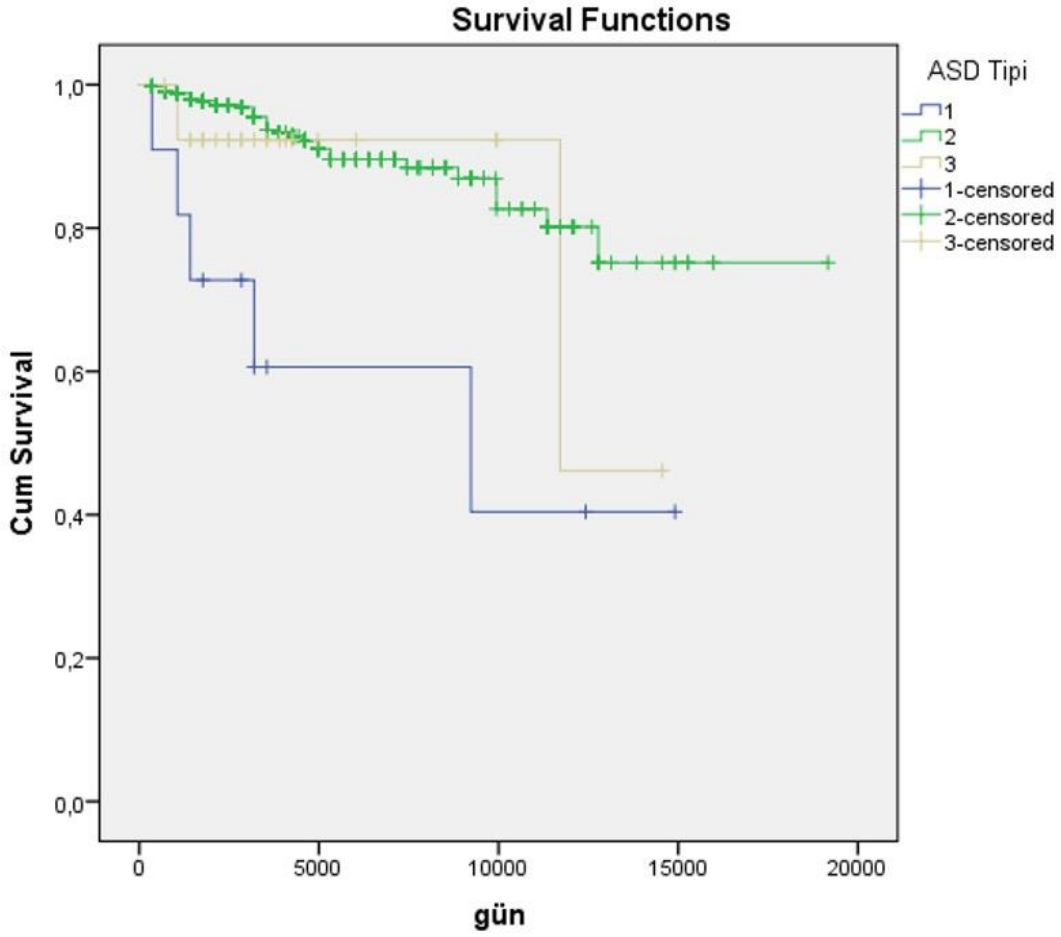
Istanbul University-Cerrahpasa Institute of Cardiology, Department of Cardiology

Background: Atrial septal defect (ASD) is an abnormal communication between left and right atrium due to defective development of interatrial septum (IAS). As ASD can remain undiagnosed until adulthood, it is the most common congenital heart defect (CHD) in adults.
Purpose: In this study we aimed to evaluate demographics, clinical characteristics, survival and mortality predictors of adult ASD population.

Material and Methods: All adult ASD patients regardless of treatment status who are followed by adult congenital heart disease (ACHD) outpatient of Istanbul University-Cerrahpasa Institute of Cardiology between 1980 and 2023 were included in this analysis.

Results: The study group consisted of 456 patients and most of them (71.3%) were female. The mean age was 48.4 ± 16.6 (min:17, max:98) years-old. The ASD type was ostium primum, secundum and other (sinus venosus or unroofed coronary sinus type) in 2.4%, 91.7% and 5.9% of patients, respectively. While 11 patients had ostium primum type ASD, just 2 patients had unroofed coronary sinus type defect. More than half of patients (51.5%) had undergone surgical closure and percutaneous closure was the treatment choice in 66 patients (14.5%). The most common rhythm was sinus rhythm in 81.4% patients and AF was the main rhythm in 10.7% of patients. Two-thirds of patients had either complete or incomplete right bundle branch block (RBBB). On echocardiography, the mean systolic pulmonary artery pressure (sPAP) was 37.4 ± 14.9 mmHg, the mean tricuspid annular plane systolic excursion (TAPSE) was 21.1 ± 3.8 mm. Less than half of patients (47.6%) had right heart catheterization (RHC) and hemodynamic data before closure of ASD. On RHC, the mPAP was 27.6 ± 12.2 mmHg, the mean PVR was 1.9 ± 3.5 WU, the mean right atrial pressure (RAP) was 11.2 ± 7.8 mmHg, the mean cardiac index was 2.5 ± 0.9 ml/ps/m2, the mean pulmonary capillary wedge pressure (PCWP) was 12.4 ± 5.3 mmHg. The mortality rate was 9.2%. In univariate analysis, primum type ASD, surgical closure and medical follow-up without closure, AF, RV hypertrophy, right or left axis deviation, RBBB, age, sPAP, TAPSE, PVR, mPAP, RAP, CI, PCWP were predictors of mortality. Cox regression analysis revealed age, TAPSE, PVR and PCWP as the predictors of mortality (Table 1). Figure 1. is showing Kaplan Meier survival analysis according to ASD type (54.5% for primum ASD, 91.8% for secundum ASD, and 88.9% for others, p=0.000).

Conclusion: In this long-term follow-up analysis of adult ASD patients, age, TAPSE, PVR and PCWP were found independent predictors of mortality. The mortality rate was 9.2% in almost half a century follow-up. Patients with primum ASD had worse outcome than the patients with other ASD types.



Keyword: *atrial septal defect, adult congenital heart disease, survival*

ID: 101

Topic:

Cardiovascular Surgery > Adult congenital heart disease

Presentation Type:

Oral Presentation

Demographics and clinical charactersitics of adult operated ToF patients

Assoc. Prof. Umit Yasar Sinan* **,** MD Aybike Gul Tasdelen , MD Hidayet Ozan Arabaci , MD Baris Guven , Prof. Mehmet Serdar Kucukoglu

Istanbul University-Cerrahpasa Institute of Cardiology, Department of Cardiology

Background: Tetralogy of Fallot (ToF) is characterized by the following four features: a nonrestrictive VSD; overriding aorta (but <50%); infundibular, valvular, supravalvular RVOTO and/or branch PA stenosis; and consequent RV hypertrophy (RVH). It is the most common cyanotic cogenital heart defect (CHD). Most of the patients will not reach into adulthood without surgery depending on the degree of RVOTO. So most of adult ToF patients had history of total correction surgery. Major consequences of adult operated ToF patients are pulmonary regurgitation (PR), residual RVOTO, residual VSD, aortic complication and RV and LV dysfunction.

Purpose: We aimed to describe demographic, clinical, echocardiographic and CMR characteristics of adult ToF patients.

Methods: Adult mostly operated ToF patients are followed at ACHD outpatient of our Universiy Institute of Cardiology were analyzed.

Results: There was 91 adult ToF patients (86 operated, 5 non-operated) and almost half of them was male (49.5% vs 50.5%). Seventeen of 46 women (18.7%) had a history of delivery. The mean age was 36.3 ± 9.9 (IQR: 19-71 years). The functional capacity was I, II, and III in 64.8%, 28.6% and 6.6%, respectively. On ECG, the mean QRS duration was 140.6 ± 26.5 msec. While most of patients (93.4%) was in sinus rhythm, there was 4 patients with AF/Aflutter and 2 patients with pace rhythm. On Holter monitoring, 7 patients had NSVT, 12 patients had SVT. On echocardiography, the mean LVEF was 57.8 ± 6.9 %, the mean RV diameter on parasternal long axis view was 31.8 ± 7.2 mm, and the mean TAPSE was 18.1 ± 3.0 mm. Patient with moderate-severe PR consisted 40.7% of whole study population. The mean PA and RVOT diameter on echocardiography were 30.6 ± 5.2 and 31.7 ± 9.6 mm. Table 1 is showing EF, RV and LV volumes and PR regurgitation volumes on CMR. Eighteen patients had fibrosis on CMR especially in RVOT.

Conclusion: Here we present demographics, clinical, ECG, echocardiographic and CMR characteristics of adult mostly operated ToF patients. Severe PR is one of the major concerns which necessitates re-intervention. Moderate to severe PR was found 40% in our study population. CMR is the gold standard imaging modality in these patient population to evaluate of PR severity and RV volumes which determines prognosis and re-intervention. RV fibrosis on CMR also should be investigated as fibrosis is a negative predictor of survival.

Parameter	Mean	Std Deviation
LVEF (%)	51.1	9.3
RVEF (%)	41.6	9.7
RVEDV (ml/m^2)	161.5	61.9
RVESV (ml/m^2)	96.4	44.7
PR Regurgitation volume(ml/m^2)	49.1	36.2

References:

- [1] 2020 ESC Guideline on Management of ACHD

Keyword: *adult congenital heart disease, operated ToF, pulmonary regurgitation, CMR*

ID: 230

Topic:

Cardiovascular Surgery > Congenital heart disease

Presentation Type:

Oral Presentation

A Novel Surgical Technique to Repair Supravalvular Pulmonary Stenosis After Arterial Switch for TGA

MD Onur Barış Dayanır* **,** Prof. Öztekin Oto
Dokuz Eylul University

OBJECTİVE: We present here a novel surgical technique for repairing post-operative supravalvular pulmonary stenosis that occurred after arterial switch operation for TGA. We have operated three cases so far with this technique.

METHODS: The last case was ten and half months old male baby with moderate malnutrition who had arterial switch operation at the second day of his life. Echocardiography revealed severe supravalvular pulmonary stenosis with 75 mmHg gradient. Also severe tricuspid regurgitation was found.

We planned performed peripheral cannulation and put the patient on CPB before starting re-sternotomy as a novel technique. Also whole operation was planned as beating hearth without aortic cross clamping avoiding further dissection around the aorta. The inferior and superior vena cava are tightened for total CPB. After clear exposure, small incision was performed. Through this pulmonary incision first venting cannula inserted into right ventricle and further incision towards pulmonary artery. A second venting cannula was placed distal to the pulmonary artery at this stage for excellent exposure. Hegar dilator was applied and suturing of the bovine pericardial patch started at the annulus of the native previously dilated pulmonary artery. We kept the both venting cannulas in situ until the very end of the anastomosis in order to have this bloodless clear exposure until the last suture. Then modified De-vega annuloplasty was performed for tricuspid regurgitation.

You can find the procedure details in this video.

RESULTS: Patient was in a good hemodynamic condition after coming off bypass. The previous two cases that we apply the same technique and also perfect post-operative outcome.

Table-1: Clinical characteristics of patients operated on using the novel surgical technique

Clinical information	**Case 1**	**Case 2**	**Case 3**
Personal information	Five years old male	Three years old male	Ten and half months old male
Complaint	Dyspnea	Dyspnea, cough	Vomiting, malnutrition
Medical history	Arterial switch operation at second day of his life	Arterial switch operation at first day of his life	Arterial switch operation at second day his life
Echocardiography	Supravalvular pulmonary gradient: 92 mmhg	Supravalvular pulmonary gradient: 128 mmhg	Supravalvular pulmonary gradient: 75 mmhg
Post-operative condition	Discharged at 10th post-operative day with no symptoms	Discharged at 15th post-operative day with no symptoms	Discharged at 7th post-operative day with no symptoms
***The first congenital pathology of these cases is transposition of the great arteries.**			
****In these cases, cardiopulmonary by-pass was started with peripheral cannulation before resternotomy**			
*****These cases were performed on a beating heart and two venting cannulas were used, no cross clamps were used**			

CONCLUSIONS: TGA is the most common cyanotic congenital heart disease and arterial switch operation is preferred for surgical correction[1]. Stenosis is due to undergrowth of the supravalvular neopulmonary anastomosis scar. Most common indication for cardiac re-operation in the first year of life.[2] Dyspnea, cyanosis, fatigue occurs, the diagnosis is usually made echocardiagraphically.[3] There are difficulties due to re-operation and pediatric cases. Risk of cardiac injury during re-sternotomy and adhesions around the great vessels due to previous operation are examples of these.[4]

In these cases, the risk of cardiac injury was reduced by decompressing the right ventricle with the peripheral cannulation before re-sternotomy. There was no myocardial protection problem in our procedure, as it was completed without the use of cross clamp on beating heart. Using two different vent cannulas also provided bloodless exposure. Our technique is effective, safe and reproducible in repairing postoperative supravalvular pulmonary stenosis.

References:

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Keyword: *supravalvular pulmonary stenosis, beating heart, Transposition of the great arteries, peripheral cannulation*

ID: 65

Topic:

Cardiovascular Surgery > Pediatric cardiac surgery

Presentation Type:

Oral Presentation

Our Fast-Track Extubation Experience In The Operating Room After Congenital Heart Surgery In Infants

Prof. Mustafa Karaçelik[*] [1] **,** MD Canan Salman Önemli[2] , Assoc. Prof. Kübra Evren Şahin[2] , MD Çağatay Bilen[3]

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OBJECTİVE:

Early extubation applications after pediatric congenital heart surgery have increased in recent years due to the positive results of the studies. Early extubation is also an important component of ERAS protocols in pediatric cardiac surgery (1). However, it is still controversial whether early extubation should be performed in the operating room or in the intensive care unit. In multicenter studies, the rate of early extubation in the operating room shows a wide variation, such as 25-94% (2,3). In this study, cases who underwent congenital heart surgery accompanied by cardiopulmonary bypass and were extubated in the operating room are presented.

METHODS:

Between May 2022 and December 2022, 12 infant patients aged ≤1 years who underwent congenital heart surgery and were extubated early in the operating room were included in the study. Demographic data of the patients, surgical intervention, duration of CPB, cross-clamp duration, duration of anesthesia, inotrope requirement, postoperative NIRS value, intensive care unit and hospital stay were recorded.

RESULTS:

All patients were extubated in the operating room immediately after surgery and were taken to the intensive care unit as extubated. Demographic and operative data of the patients are shown in Table 1. On the first postoperative day, the patients were followed up in the intensive care unit and followed up in the ward. There was no need for intraoperative and postoperative inotropes. No mortality was observed.

Table 1: Demographic and operation data of infants

	Age	Gender	Weight	Operation	CPB time	Anesthesia time	Postop NIRS	ICU stay	Hospital stay
Case 1	**1 years**	**Female**	**7,6 kg**	**ASD**	**62 min**	**195 min**	**90**	**1 day**	**8 days**
Case 2	**1 years**	**Female**	**10 kg**	**ASD**	**57 min**	**215 min**	**75**	**1 day**	**7 days**
Case 3	**1 years**	**Male**	**9,8 kg**	**ASD**	**44 min**	**180 min**	**72**	**1 day**	**4 days**
Case 4	**1 years**	**Male**	**12 kg**	**ASD+Pulmonary valvotomy**	**87 min**	**245 min**	**75**	**1 day**	**7 days**
Case 5	**11 months**	**Male**	**10 kg**	**VSD**	**91 min**	**270 min**	**78**	**2 days**	**11 days**
Case 6	**5 months**	**Female**	**5 kg**	**VSD+ASD**	**56 min**	**235 min**	**94**	**1 day**	**15 days**
Case 7	**5 months**	**Female**	**7 kg**	**VSD+Coronary AV fistula closure**	**95 min**	**220 min**	**70**	**1 day**	**6 days**
Case 8	**4 months**	**Male**	**4 kg**	**PDA**	**No**	**90 min**	**68**	**1 day**	**9 days**
Case 9	**2 months**	**Female**	**6 kg**	**PDA**	**No**	**115 min**	**70**	**1 day**	**4 days**
Case 10	**1 month**	**Male**	**5 kg**	**ACoA+PDA**	**No**	**165 min**	**75**	**1 day**	**12 days**
Case 11	**1 years**	**Female**	**8 kg**	**ACoA+PDA**	**No**	**150 min**	**71**	**1 day**	**8 days**
Case 12	**1 years**	**Male**	**9 kg**	**ACoA+Aortic arch plasty +PDA**	**No**	**200 min**	**92**	**1 day**	**7 days**

CONCLUSIONS:

We think that a significant portion of infant patients can be safely extubated in the operating room after congenital heart surgery. With early extubation, the need for sedation and inotropes can be reduced, and complications associated with mechanical ventilation can be avoided. Cost reduction can be achieved by reducing the length of stay in the intensive care unit with early nutrition and early mobilization.

References:

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Keyword: *Infant, fast-track, extubation, operating room, congenital heart surgery*

Oral Presentation Session

Surgical Approach to Carotid Disease: A Master Class Setting

Date: 04.11.2023 Time: 11:45 – 12:45 Hall: 7

ID: 112

Topic:

Cardiovascular Surgery > Diagnosis and treatment of valvular heart disease

Presentation Type:

Oral Presentation

Cerebral Oxymetry In Determining The Tactics Of Surgical Treatment Of Multiple Atherosclerotic Lesions Of The Carotid Arteries

Prof. Abdurasul Yulbarisov*

1RSCSA – Republican Special Center Of Surgical Angioneurology, 2TMA – Tashkent Medical Academy, Tashkent, Uzbekistan

Shavkat Karimov[1,2]; Akmal Irnazarov[2]; Abdurasul Yulbarisov[1]; Xodjiakbar Alidjanov[1];Bunyod Nosirjonov[1]; Sarvar Abduraxmonov[1]

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[2]TMA – Tashkent medical academy, Tashkent, Uzbekistan

Aim of the study. Investigate the role and place of cerebral oximetry in the choice of treatment for patients with multiple atherosclerotic lesions of the carotid arteries.

Material and methods. The results of surgical treatment of 144 patients with multiple atherosclerotic lesions of the carotid arteries are presented. The effectiveness of cerebral oximetry performed in the preoperative period in predicting the tolerance of the brain to ischemia during surgery was evaluated. The features of cerebral hemodynamics in patients with multiple atherosclerotic lesions of the carotid arteries were studied.

Results. Depending on the degree of damage to the ipsilateral and contralateral carotid arteries, the patients were conditionally divided into 5 groups. When performing cerebral oximetry with compression tests, it was found that in groups I and II, rSO_2 decreased to the minimum values within 10-45 seconds, and then, before the termination of compression tests, rSO_2 returned to the initial values or close to them (within the next 30-60 seconds). In other groups, rSO_2 decreased significantly more, and recovery was much slower than in groups I and II; in patients with an isolated middle cerebral artery, rSO_2 recovery did not occur at all until the compression tests were stopped. In the 1-day of postoperative period, cerebral oximetry showed no changes in rSO_2 both in the operated side and in the intact side. At the same time, there is a 46% decrease in the magnitude of interhemispheric asymmetry compared with preoperative values. By day 3, there was an increase in rSO_2 by 11.5% on the side of the operation compared with preoperative values ($p=0.03$).

Conclusion. Our studies confirm the effectiveness of cerebral oximetry in combination with exercise tests in assessing the brain's tolerance to ischemia and predicting the magnitude of the decrease in regional blood oxygenation of the cortical parts of the brain during carotid reconstruction.

ID: 148

Topic:

Cardiovascular Surgery > Diagnosis and treatment of carotid artery disease

Presentation Type:

Oral Presentation

AmpliSeq Transcriptome Profiling of Carotid Atherosclerotic Plaques: Comparative Analysis Between Asymptomatic and Symptomatic Patients

MD Ceyda Colakoglu Bergel[*] [1] **,** Assoc. Prof. Isil Ezgi Eryilmaz[1] , MD Atif Yolgosteren[2] , Prof. Unal Egeli[1] , MD Basak Erdemli Gursel[3] , Prof. Murat Bicer[2] , Prof. Gulsah Cecener[1] , Prof. Mustafa TOK[2]

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OBJECTIVE: Carotid artery stenosis (CAS) accounts for 30% of all strokes. Several factors, including plaque biology, intraplaque hemorrhage, and ulcerations, are related to CAS symptoms. However, these can also observe in asymptomatic patients whose stenosis degrees correlate with stroke, but carotid stenoses progress to occlusion without any stroke-related symptoms. Thus, asymptomatic patients do not benefit much from surgery compared to symptomatics. Therefore, more studies are needed for molecular mechanisms underlying the CAS symptoms to perform a multidisciplinary assessment for better clinical management of CAS. We performed RNA transcriptome analysis in the plaques of CAS patients to discriminate asymptomatics from symptomatic ones, even in the presence of ulceration.

METHODS: Eight CAS patients, 50% (n=4) of asymptomatic, were included in the study. Stenosis degree and plaque ulceration were determined radiologically before CAE. Then, total RNAs were isolated from plaques, and quality confirmations were performed. AmpliSeq transcriptome human gene expression panel was used for transcriptome analysis on an IonGeneStudio^{TM}S5 sequencer. AmpliSeq data were analyzed using CLC workbench and IonReporter. Differentially expressed genes (DEGs) were selected based on p<0.001&log2FC between asymptomatic and symptomatic groups.

RESULTS: The mean age of the patients was 68.9±6.7 years. 25% (n=2) were female, and 75% (n=6) were male. The degree of stenosis was 70% and greater in all patients. While 100% of symptomatic patients (n=4) have ulcerated plaque, 50% of asymptomatic ones (n=2) showed ulceration. Totally, 2,361 DEGs were detected (p<0.001, log2FC±1.5-fold). From 250 transcripts showing the most variation, the most significant ones were selected based on the gene representation heatmap and compared between asymptomatic and symptomatic groups. In asymptomatics, 116 and 32 DEGs were upregulated and downregulated, respectively. Enrichment analysis showed that the transcripts with the most significant upregulation, including NPR3 (10.46-fold), BMP6 (16.86-fold), and ITLN1 (34.87-fold), mainly play a role in vascular remodeling and immune response. The transcripts to be downregulated, including SLC1A3 (6.64-fold), SLC37A2 (6.67-fold), and ACP5 (7.68-fold), have a function in glucose metabolism and immune response. When the patients with ulcerated plaques were compared, 73 DEGs were upregulated, mainly responsible for calcification and cell adhesion, FHL5 (5.64-fold), TMEM47 (4.21-fold), and OMD (3.49-fold), in the asymptomatic group. However, 33 DEGs were significantly downregulated, including PTGDS (4.79-fold), SLC37A2 (2.98-fold), and CHICL3 (4.2-fold), which act in lipid and glucose metabolism, tissue damage, and remodeling.

CONCLUSIONS: Our results suggest that increased plaque calcification, vascular remodeling shifting, and altered glucose metabolism contribute to distinguishing asymptomatic and symptomatic CAS patients.

ID: 94

Topic:

Cardiovascular Surgery > Endovascular surgery

Presentation Type:

Oral Presentation

Removal of the Broken Wire Piece with the Help of Vena Cava Filter During Angiographic Pharmacomechanical Thrombectomy Treatment of Deep Vein Thrombosis

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Deep vein thrombosis is a condition that can cause life-threatening complications if left untreated. In addition to traditional medical treatment approaches for its treatment, it is included in angiographic methods with a high success rate, which are widely used today and give results in a shorter time. Angiographic methods have serious complications related to the materials used and angiographic techniques. In our case, pharmacomechanical thrombectomy was performed with endovenous angiographic method due to acute iliofemoral deep vein thrombosis. During the removal of the poseidon hydrophilic guide piece, which broke off in the mid-femoral region during the procedure, it moved proximally and was attached to the vena cava filter. The broken guidewire piece was successfully removed together with the vena cava filter. Our case was found worthy to be presented in order to emphasize the importance of using vena cava filter in such interventions.

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Keyword: *Derin ven Trombozu, Farmakomekanik Trombektomi, Vena kava filtresi.*

ID: 96

Topic:

Cardiovascular Surgery > Surgical treatment of AF

Presentation Type:

Oral Presentation

Analysis Of Complications Related To Heart Ischemia In The Postoperative Period In Patients Who Have Performed Carotid Edarterectomy

Prof. Abdurasul Yulbarisov*

Republican Specialized Center of Surgical Angioneurology

Karimov Sh. I., Irnazarov A.A., Yulbarisov A.A., Alidzhanov H.K., Ahmatov O.M., Nurmatov D.Kh., Muminov R.T., Djalilov A.A., Djumaniyazova D.A., Abdurakhmonov S.A.,

Republican Specialized Center of Surgical Angioneurology

The purpose of the study: to study the incidence of cardiological complications after carotid endarterectomy (CEAE) in patients with asymptomatic ischemic heart disease (IHD).

Materials and methods. In 2018-2020, the medical history of 600 patients with chronic cerebrovascular insufficiency (CCI) admitted to the Department of Vascular Surgery of Multidisciplinary Clinic of Tashkent Medical Academy and Republican Specialized Center of Surgical Angioneurology was analyzed. Patients who did not undergo coronary angiography before surgery, but underwent CEAE, were included in the study. The average age of the patients was 64.5±2.6 years. Among the patients, 344 (57.3%) were men, 256 (42.7%) were women. Complaints and anamnesis were collected in all patients, accepted general clinical examination methods were performed. Patients were followed up from 6 to 24 months after surgery.

Results. Arterial hypertension (AG) was detected in 515 (85.8%) patients. Average systolic blood pressure (SBP) is 136.6±22.3 mm cm. diastolic blood pressure (DBP) is 85.2 ± 16.4 mm Hg. The average number of beats per minute of the heart is 78.3±14.2 times. Among 600 patients studied in the early postoperative period, 15 (2.5%) patients had myocardial infarction (MI), 45 (7.5%) patients had transient myocardial ischemia with significant changes in the amount of cardiospecific biomarkers in their plasma. All infarcts occurred within the first 5 postoperative days, with 11 patients having non-Q wave MI and 4 patients having Q wave MI. In the majority of patients with transient myocardial ischemia (38 out of 45 patients), signs of ischemia were manifested on the electrocardiogram (ECG) in the form of horizontal or oblique depression of the ST segment, and only in 7 patients - in the elevation of the ST segment. In the long-term follow-up after CAE, 35 patients had MI and 46 (7.7%) patients underwent percutaneous coronary intervention (PCI) or coronary artery bypass grafting (ACB).

Conclusions.

1. Carotid atherosclerosis requires an individual and multidisciplinary approach to consider patients with probable coronary artery disease and to choose their treatment tactics.

2. Cardiological complications observed in the early periods after CEAE practice have the following characteristics: myocardial infarction is often painless, without Q wave and does not lead to the

development of severe heart failure, most episodes of myocardial ischemia are manifested in the form of depression of the ST segment and painless ischemia on the ECG.

3. Systematic coronary angiography examination before CEAE in patients with asymptomatic IHD and performing PCI or ACS in patients with coronary vessel changes can, in turn, significantly reduce the incidence of MI that can be observed in the early and late periods after CAE and increase the life expectancy of patients.

Oral Presentation Session

Pitfalls in Coronary Surgery: Rational for Solutions

Date: 04.11.2023 Time: 13:00 – 14:00 Hall: 7

ID: 18

Topic:

Cardiovascular Surgery > Coronary bypass surgery

Presentation Type:

Oral Presentation

Risk Factors For 1-Year Mortality After Postoperative Sternal Wound Infection In Patients Undergoing Coronary Bypass

MD Hasan Toz*

Bakırköy Dr.Sadi Konuk Training and Research Hospital,Istanbul,Türkiye

OBJECTIVE

The development of sternal wound infection is a life-threatening complication in patients who underwent coronary bypass surgery with median sternotomy. This study was conducted to describe the mortality associated with postoperative sternal wound infections after coronary bypass surgery and to find risk factors linked to increased mortality in 1 year follow-up.

METHODS

This retrospective single-center study data includes 2150 open heart surgery patients who underwent coronary bypass with median sternotomy at Bakırköy Dr.Sadi Konuk Training and Research Hospital between January 1, 2015 and December 31, 2021. Sternal wound infection patients were identified, their 1-year mortality status was recorded, and the related risk factors were analyzed.

RESULTS

We detected a total of 50 (2.3%) postoperative sternal wound infection patients. The 1-year mortality associated with a postoperative sternal wound infection was 12%. No statistically significant factor was found associated with an increase in 1-year mortality before surgery. In addition to the humidity of the operating room and being unsuitable for sterilization, prolonged stay in the intensive care unit after the surgery, stroke, delirium, long intubation time and co-infection were associated with an increase in 1-year mortality.

CONCLUSIONS

The risk factors found for increased 1-year mortality were perop and postoperative. In order to reduce the mortality due to sternal wound infections, the surgical room with appropriate humidity and temperature, emphasis on sterilization, and postoperative care and evaluation continue to be the most important factors.

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Keyword: *Sternal Wound Infection*

ID: 142

Topic:

Cardiovascular Surgery > Coronary bypass surgery

Presentation Type:

Oral Presentation

Management of Coronary Artery Bypass Graft Operation in a Patient with Romatoid Arthritis

MD Sümeyye Fatma Özer[*] [1] , **Assoc. Prof. Özgür Altınbaş[2]** , Assoc. Prof. Mehmet Işık[3]

[1] *Karaman Training and Research Hospital*

[2] *Gaziantep University*

[3] *Konya Necmettin Erbakan University*

OBJECTIVE: Romatoid arthritis is a kind of inflammatory disease characterized by systemic and joint manifestations. Females are affected more than males. Its association with coronary artery disease is well established in the literature. In this study we aimed to report the management of a patient with romatoid arthritis underwent coronary artery bypass graft operation (CABG).

METHODS: A 55 year old woman was evaluated with the complaint of chest pain. She was diagnosed with romatoid arthritis for ten years and her medication includes sulfasalazine and a non steroid antiinflammatory drug (NSAID). Coronary angiography revealed 90%< stenosis in LAD, Cx and RCA. There was no additional cardiac pathology and ejection fraction was 55%. CABG was decided. NSAID was stopped and sulfasalazine was continued before operation.

RESULTS: CABG was performed with the anastomosis of LIMA-LAD, Ao-Cx andAo-RCA. The patient was extubated on the operation day and stayed 2 days in intensive care unit. Sulfasalazine was admitted as soon as the patient's oral intake started. She was discharged on postoperative 5th day without any complication.

CONCLUSIONS: Management of the chronic inflammatory diseases requires attention not only in terms of medication but also probable accompanied disorders. Rheumatid arthritis affects many organs and systems. Cardiovascular system is one of the systems involved in rheumatoid arthritis. A meta-analysis of 14 studies involving 41,490 patients with RA revealed that the risk of CVD increases by 48% and the risk of myocardial infarction increases by 68%. Inflammatory mediators produced by the synovium destroy the vascular endothelial cells and alter lipid distribution and insulin resistance. Blood pressure also affected by these mediators. Progression of atherosclerosis occurs as the result of these processes. Therefore it is important to keep on mind that patients with romatoid arthritis may be a candidate for coronary artery disease and routine follow up is vital. One of the medications given in rheumatoid arthritis is sulfasalazine and it must be continued until operation time and started as soon as possible in early postoperative period due to its cardioprotective effects.

ID: 250

Topic:

Cardiovascular Surgery > Coronary bypass surgery

Presentation Type:

Oral Presentation

Survival Beyond a Decade: Unveiling the Ten-Year Mortality Outcomes after CABG in Turkey

Assoc. Prof. Taylan Adademir , **MD Ayhan Güneş*** , MD Fatih Yiğit , Prof. Fuat Büyükbayrak , Assoc. Prof. Sabit Sarıkaya , Prof. Kaan Kırali

University of Health Sciences Koşuyolu High Specialization Education and Research Hospital

BACKGROUND: Coronary artery bypass surgery is considered the gold standard treatment method for severe coronary artery disease and has been successfully applied in Turkey since the 1970s. Numerous studies have investigated early-term mortality following the operation. However, there is a lack of comprehensive research specifically addressing long-term mortality within the context of Turkey. The objective of our study is to elucidate the mortality rates after isolated CABG in our country and fill this important knowledge gap in the literature.

Metod: All patients who underwent isolated CABG surgery at our hospital between July 2011 and August 2013 were included in the study. Early mortality was defined as deaths occurring within the first 30 days of hospitalization or within the hospital premises. Long-term mortality data were accessed through the mortality reporting system. Patients were reevaluated based on their age, gender, and the number of distal anastomoses performed during the operation.

Results: Data of all 1867 patients who underwent isolated CABG surgery between July 2011 and August 2013 were checked through the mortality reporting system. The mean age of the patients was 60.4 ± 10.1 years (59.8 ± 9.9 years for males, 62.4 ± 10.7 years for females). 22.2% of the patients (n=414) were female. The mean follow-up duration was 116.1 ± 6.8 months. After excluding the data of 72 patients (26 females, 46 males) who had early mortality (3.9%), the long-term mortality rate was determined as 29.6% (n=532) (Table 1). In female patients, this rate was 33.1% (n=128), while in male patients, it was 28.8% (n=404) (p>0.05).

The mortality rate in patients below 60 years old was 21,0%, whereas it was 36.4% in the age range of 60-75, and 57.3% in those aged 75 and above. Regarding the number of distal anastomoses performed during the operation, the long-term mortality rate was 37.6% (n=103/274) in patients who underwent single-vessel CABG, 27.9% (n=131/470) in those with two-vessel CABG, 30.2% (n=218/722) in those with three-vessel CABG, and 24.8% (n=80/322) in patients who received four or more grafts.

Conclusion: The long-term mortality rates following isolated CABG in our country are comparable to those observed in developed countries. However, further extensive studies are needed to identify the factors influencing long-term mortality.

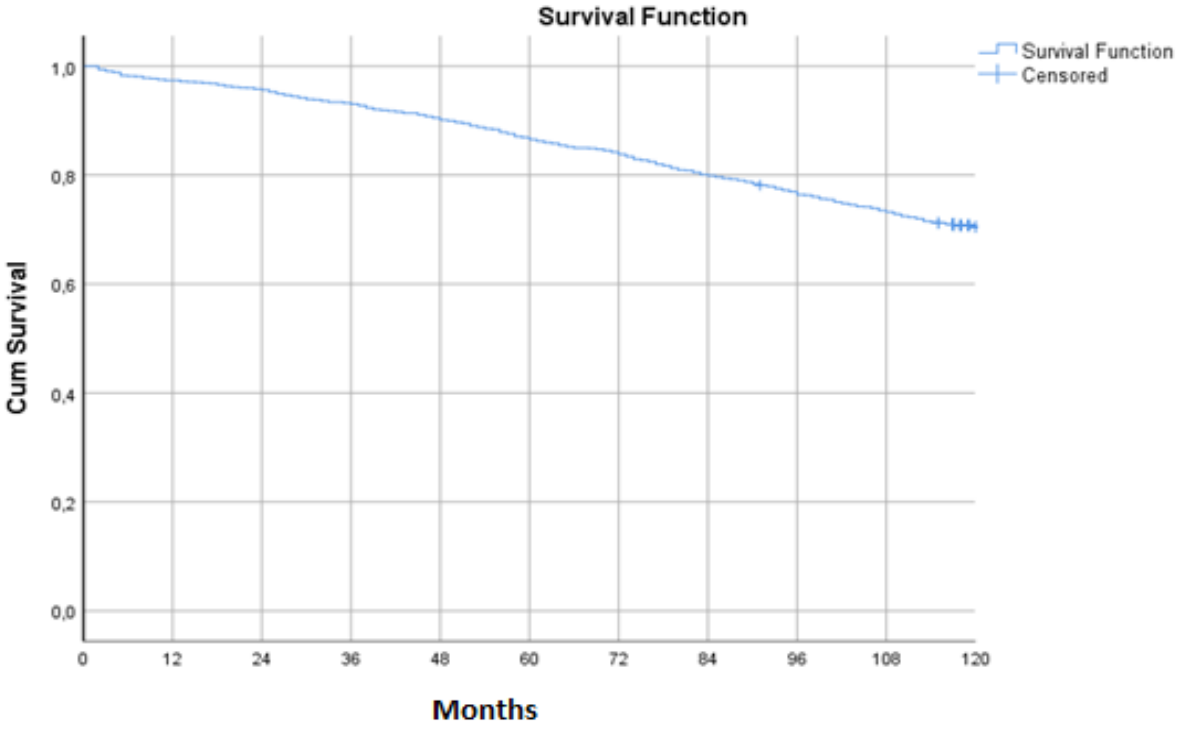


TABLE 1: Late-Mortality after isolated CABG

ID: 147

Topic:

Cardiovascular Surgery > Endovascular surgery

Presentation Type:

Oral Presentation

Current perspectives on venous grafts in cardiac surgery: Focus on long-term patency

MD Vasily Kaleda* **,** Prof. Anatoly Molochkov
Central Clinical Hospital

Background: Despite the increasing evidence of the superiority of arterial grafts in coronary artery bypass grafting surgery (CABG), venous grafts are still the most popular ones: about 95% of CABG cases utilize at least one venous graft. Hence, techniques to improve vein graft patency are extremely important.

Methods: We present a review of the literature on various current approaches to improve early and late results of venous grafting in cardiac surgery.

Results: Among the methods used to improve the results of venous grafting there are medical therapy, vein preservation solutions, arteriovenous composites, endoscopic vein harvesting, no-touch vein harvesting, and others.

Conclusions: There is vast room for approaches to improve the results of venous grafting, with the most effective, probably, a combination of several techniques. Endoscopic no-touch vein harvesting is one of the most demanding techniques. However, its' main limitation is the absence of dedicated instrumentation.

Keyword: *CABG, vein graft, EVH, no-touch vein graft harvesting*

ID: 5

Topic:

Cardiovascular Surgery > Minimally invasive mitral valve surgery

Presentation Type:

Oral Presentation

Cannulation Strategies in Minimally Invasive Cardiac Surgery

MD Tayfun Özdem*

Department of Cardiovascular Surgery, Gulhane Training and Research Hospital, University of Health Sciences, Ankara, Turkey.

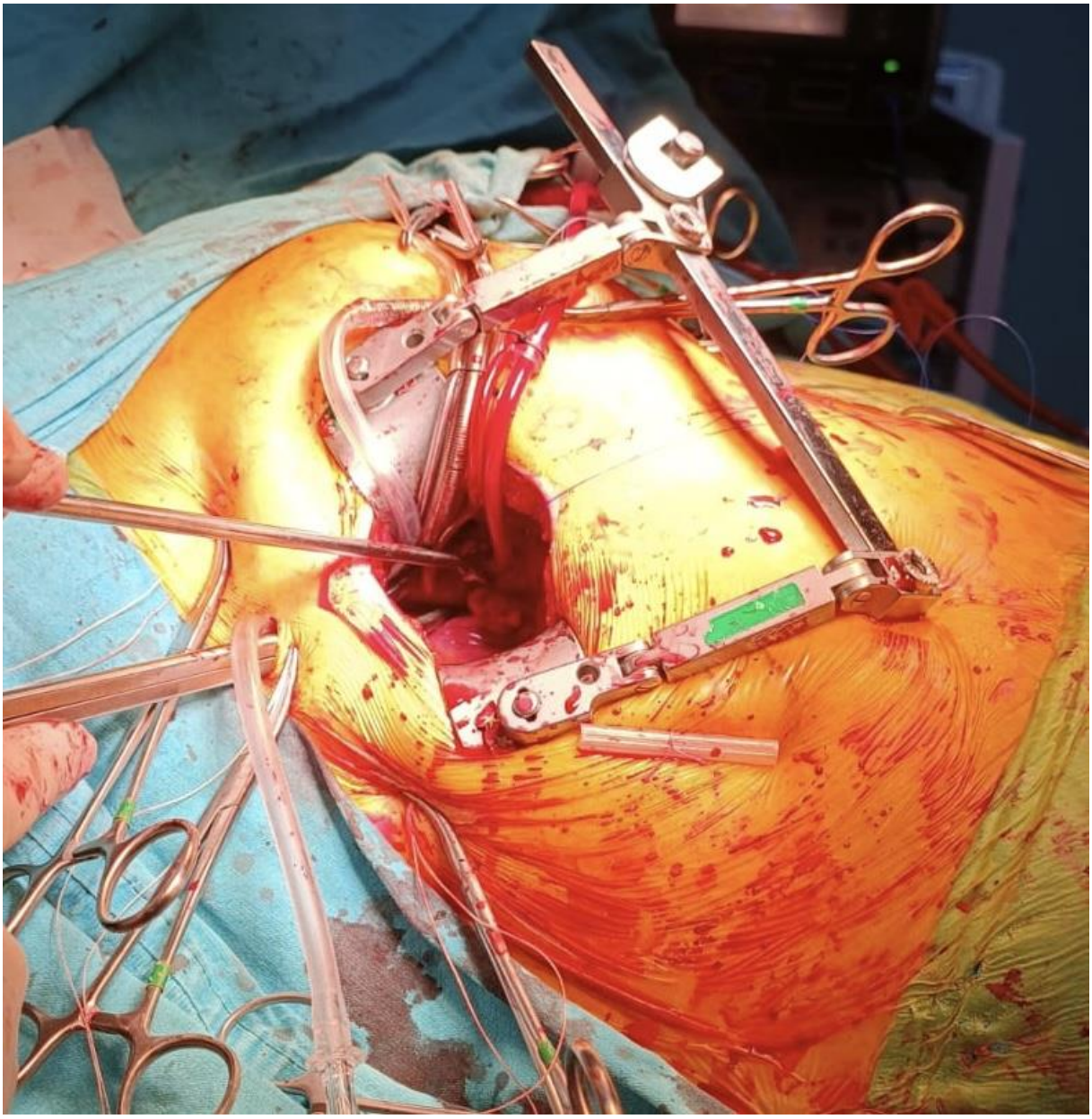
Abstract

Objective: The development of minimally invasive cardiac surgery continues with increasing momentum. The diversity and development of cannulation techniques, which are the basic elements of minimally invasive cardiac surgery, are accompanied by this acceleration. In this study, we will share our experience with central aortic cannulation accompanied with percutaneous femoral venous cannulation techniques and surgical peripheral arterial and venous cannulation techniques in minimally invasive cardiac surgery.

Methods: The cannulation strategies of 118 patients who underwent minimally invasive cardiac surgery in our clinic between February 2021 and June 2023 were evaluated retrospectively.

Results: Surgical methods which performed of 118 patients were as follows**;** Mitral valve replacement in 40 cases**,** ASD repair in 22 patients, mitral valve replacement accompanied with tricuspid valve surgery was performed in 29 patients, minimally invasive CABG in 11 patients, intracardiac mass resection in 8 patients, isolated tricuspid valve surgery in 5 patients, combined aortic, mitral, tricuspid valve surgery in 2 patients and, isolated aortic valve replacement in 1 patient. While central aortic cannulation was preferred in 66 patients (Figure 1), surgical femoral arterial cannulation was applied in 52 patients. Of 118 patients, 70 were female and 48 were male. Mean age of the patients was 54 ± 15 (17-77). Cross clamp time was 85 ± 31(19-162) minute. Cardiopulmonary bypass time was 144 ± 55 (59-300) minute. When the patients were compared according to the length of hospital stay and intensive care unit, there was no significant difference between the groups. One patient died due to prosthetic valve dysfunction in the early period, one patient died on the eleventh postoperative day due to sepsis secondary to pulmonary infection, and one patient died on the third postoperative day secondary to low cardiac output syndrome.

Conclusions: Cannulation strategies in minimally invasive cardiac surgery vary according to different centers. Possible complications secondary to surgical femoral arterial cannulation such as wound infections and vascular complications could be performed despite minimally invasive techniques. Therefore, we conclude that, aortic arterial cannulation with percutaneous peripheral venous cannulation techniques may be a feasible alternative for patients who are scheduled for minimally invasive cardiac surgery.



Keyword: *minimal invasive cardiac surgery, cannulation, aortic cannulation, peripheral cannulation*

ID: 283

Topic:

Cardiovascular Surgery > Coronary bypass surgery

Presentation Type:

Oral Presentation

Outcomes of Internal Mammary Artery Graft to Right Coronary Artery in Young Patients Undergoing Coronary Bypass Surgery

Assoc. Prof. Ahmet Dolapoğlu[* 1] , Assoc. Prof. Eyüp Avcı[2]
[1] *Balıkesir University Medical School, Departmet of Cardiovascular Surgery*
[2] *Balıkesir University Medical School, Department of Cardiology*

OBJECTİVE: The superiority of the left internal mammary artery (IMA) over the saphenous vein graft (SVG) have been well known from all surgeon. The use of both mammary arteries (right and left) was then used much more in order to achieve better long-term results when compared to single IMA and SVG. In this study we assessed postoperative outcomes and potential complications in patients with left anterior descending and right coronary artery bypass with bilateral internal mammary arteries.

METHOD: We retrospectively enrolled 12 patients under 50 years old with coronary artery disease, who electively underwent an on-pump coronary artery bypass graft (CABG) surgery with using bilateral IMA for left anterior descending (LAD) and right coronary artery (RCA). The patients were followed for 12 months after their operations. Clinical characteristics, laboratory findings, surgical details, and postoperative outcomes were obtained from the patient's chart. The patients with chronic kidney disease on dialysis, patients who had active endocarditis, patients with concomitant valve disease, patients with previous history of cardiac surgery and patients who underwent urgent CABG were excluded from the study.

RESULTS: The mean age of the patients included in the study was 45 ± 4.9 years and 33 percent of the patients were female. Demographic, clinical, and angiographic characteristics of all the patients of the groups were presented in Table 1. RIMA were used to RCA and LIMA to LAD in all patients. There were no in-hospital and one year mortality. Although two patients had sternal wound dehisence, no deep sternal wound infections were seen.

CONCLUSION: We describe RIMA graft to RCA and LIMA to LAD in coronary bypass surgery. Based on this study's findings, RIMA graft to RCA bypass technique have good postoperative outcomes. Our results need to be confirmed by large multi-center prospective trials.

Clinical characteristics, laboratory findings, surgical details, and postoperative outcomes	N:12
Age	45 ± 4.9
Female Gender	4 (33%)
BMI	21±2
DM	6 (50 %)
HT	2 (16%)
HL	4 (30%)
COPD	-
Smoking	3 (25%)
PAD	1 (8%)
EF	50±5
Preoperative MI	3 (25%)
CPB time	41±8
X-Klemp time	29±5
Endarterektomy Left Right	1 (8%) 4 (33%)
Postop SVO	-
Postop KBY	-
Mortality: In Hospital One year	-
Postop MI	-
Deep Sternal Wound Infection	-

BMI: body mass index; CPB: cardiopulmonary by-pass; COPD: chronic obstructive pulmonary disease; DM: diabetes mellitus; EF: ejection fraction; HL: hyperlipidemia; HT: hypertension; PAD: peripheral arterial disease

Oral Presentation Session

Contemporary Discussions in Coronary Bypass Surgery

Date: 04.11.2023 Time: 14:10 – 15:30 Hall: 7

ID: 185

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

Minimizing The Need For Intraoperative Blood Transfusion In Three Different Ways Comparatively In Coronary By-Pass Surgery Patients Using Pre-Op Acetylsalicylic Acid

MD Volkan Yurtman* **,** Prof. Ömer Bayezid
Antalya Turkey

OBJECTIVE

The decrease in platelet counts and aggregation abilities after cardiopulmonary bypass is an important cause of postoperative bleeding. On the other hand, aspirin, which is routinely used in coronary artery disease, increases hemorrhagic diathesis by affecting platelet functions even one week after the last dose is taken. In this study, it was planned to compare the effects of desmopressin acetate and autologous blood transfusion in coronary bypass operations performed under the influence of aspirin in patients with the same demographic data, individually and together with normal patients, and to evaluate prospectively in terms of bleeding and transfusion need in the early postoperative period.

METHODS

Three different types of peri-op intervention were planned in order to reduce the blood transfusion need of these groups as much as possible by prospectively following up 120 coronary artery graft patients who were operated while under the influence of ASA. According to Magovern transfusion risk scoring, 120 patients from three different risk groups (40 patients from each group) were planned to be evaluated. It was planned to divide these 40-person groups equally into four(3 study + 1 control) groups.

Magovern Transfusion Risk Scoring System

Emergency 4

Cardiogenic shock 3

Priority 3

Body mass index<24 2

Left ventricular EF<30% 2

Age>74 2

Woman 2

Red cell mass<1500mL 2

Diabetes 1

Peripheral vascular disease 1

Creatinine >1.8mg/dL 1

Albumin<4gr/dL 1

Reoperation 1

Low risk group <2 points

İntermediate risk group 2-6 points

High risk group >6 points

Treatment was planned in accordance with the following algorithm for the patients in three different risk groups, which were divided into four, together with the control group.

Prospective Study Algorithm

Group I :Transfusion score group I: <2 points

Gruop II :Transfusion score group II: 2-6 points

GroupIII :Transfusion score group III: >6 points

Group A: Desmopressin administered group

Group B: Autologous blood transfusion group

Group C: Desmopressin + Autologous blood transfusion group

Group D: Control group

Patients were continued to be included in the study until the required number of patients was reached. In this way, 172 patients were included in the study. Thus, a total of 120 patients were randomly determined for 3 different risk groups.

RESULTS

Age and gender distributions of the patients who were operated on in all groups were similar. There was no statistically significant difference between pre-op PT and aPTT values. In addition, there was no significant difference between the groups in terms of discontinuing the use of acetylsalicylic acid on a daily basis. There was no statistically significant difference between pre-op, post-op 6th hour, post-op 24th hour, post-op 1st month and post-op 6th month values in all groups within the same period.

It was observed that the long-term recovery process and therefore the morbidity were the same in all three blood preservation methods compared to each other and to the control group. No statistically significant difference was found in the first three groups (A, B, C) in which blood preservation techniques were applied compared to the control group in terms of urine follow-up and total urine output.

There was a statistically significant difference in the use of RBC and TDP in the first three groups(A, B, C) in which blood preservation techniques were applied compared to the control group. Significant difference in P value was found for Group D(P = <0.001).

There was a statistically significant difference in the first three groups (A, B, C) in which blood preservation techniques were applied compared to the control group in terms of surgical bleeding in the intensive care unit. Significant difference in P value was found for Group D(P = <0.001).

CONCLUSIONS

Non-surgical bleeding complication with extracorporeal circulation; It may be due to heparin, platelets and fibrinolysis. Insufficiency of coagulation factors is rarely encountered as a cause of bleeding during and after open heart surgery. Today, the use of homologous blood products is becoming increasingly limited due to both side effects and availability. For this reason, alternative and blood preservation methods should be developed in order to reduce the use of blood and to perform bloodless surgery if necessary.

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ID: 73

Topic:

Cardiovascular Surgery > Coronary bypass surgery

Presentation Type:

Oral Presentation

Coronary Revascularisation In Diabetic Patients, Results Of Cardiac Surgery Departement In Algeria

MD Abir Riache* **,** Prof. Djamal Kebour
Cardiac Surgery Departement Of Algiers

BACKROUND

diabetes affects more than 537 million people worldwide (1/10 people), 90% of whom have type II. The galloping progression of diabetes and coronary artery disease in the Algerian population has largely influenced our activity within the cardiac surgery department of the central military hospital of the army. A large proportion of diabetic patients are increasingly offered coronary surgery. Coronary artery bypass grafting (CABG) is the standard treatment for diabetics. However, comorbidities and degenerative disorders make perioperative management more delicate, the keystone of which is strict perioperative glycemic control and the most complete "all-arterial" revascularization possible. The aim of this work is to present the short and medium term results of a series of 241 consecutive diabetic patients operated on by CABG over a period of 6 years from January 2017 to July 2022. We will compare these results with those of the literature and determine the predictive factors of morbidity and mortality.

Methods

We report the results of coronary surgery in a population of diabetic coronary patients operated in the cardiac surgery department of the central military hospital of the army. This is a retrospective study conducted between January 2017 and July 2022 (6 years), involving 241 diabetic patients operated on for coronary bypass surgery. The mean age of the patients was 63.56 years (30 - 81 years) with a sex ratio (M/F) of 3.8. All type 2 diabetic patients on anti-diabetic treatment were included in this study. Left main trunk stenosis was present in 32.7% of patients and 51.8% were trivessel, the mean Euro-score was 1.63% and the mean number of bypasses was 3.13.

Results

Hospital mortality was 7 deaths (2.9%), the average length of stay in intensive care was 24 hours. Postoperative complications were myocardial infarction, infection of the wall, and stroke respectively 1.24% , 7%, 1.24% of patients.

Coronary surgery in diabetics offers excellent results in the short and medium term to the detriment of low morbidity and mortality, which makes it the treatment of choice.

Conclusion

Diabetes, an increasingly common disease, is associated with more diffuse and progressive atherosclerosis in coronary patients and subject to postoperative complications. Rigorous management of both diabetes and coronary artery disease is the only guarantee of a better outcome. Outcomes of surgery have improved markedly with the increasing use of AMI, complete revascularization.

ID: 197

Topic:

Cardiovascular Surgery > Coronary bypass surgery

Presentation Type:

Oral Presentation

Hydroxycobalamin In Severe Refractory Vasoplegic Shock Syndrome After Off-Pump CABG

MD Beatrice Bacchi[*] [1] **,** MD Francesco Cabrucci[1] , MD Bruno Chiarello[1] , Assoc. Prof. Aleksander Dokollari[2] , Prof. Massimo Bonacchi[1]

[1] *Cardiac Surgery Unit, AOU Careggi Hospital, Università degli studi di Firenze, Florence, Italy*

[2] *Department of Cardiac Surgery Research, Lankenau Institute for Medical Research, Main Line Health, Wynnewood, PA, USA*

Background: Vasoplegic shock syndrome (VSS) complicates up to 3% of off-pump coronary artery bypass grafting (OPCABG) cases. While VSS following on-pump cardiac surgery using cardiopulmonary bypass (CPB) is better understood, the mechanism and therapy for VSS after OPCABG are not well described. We report, to our knowledge, the first case of severe refractory VSS after OPCABG successfully treated with an infusion of hydroxycobalamin.

Methods: A 61-year-old male underwent elective four-vessel OPCABG for severe triple vessel coronary artery disease. Left ventricular ejection fraction was 28%, and heart failure optimization included a two-week titration of sacubitril/valsartan. In addition, an intraortic balloon pump (IABP) was placed immediately preoperatively. Surgery was uneventful and after separation from CPB transesophageal echocardiography (TEE) showed improved biventricular contractility.

Results: The patient was transferred to ICU without inotropic support. After one hour, the patient developed hypotension and hyperlactatemia addressed unsuccessfully with fluid administration and low-dose vasopressor. No bleeding was observed. TEE ruled out any pericardial tamponade and confirmed good contractility. Systemic vascular resistance (SVR) was calculated to be 480 dyn/cm5/s. Despite aggressive pharmacologic treatment, including up-titration of norepinephrine and vasopressin, as well as methylprednisolone, there was no improvement in MAP (< 50 mmHg) or SVR. Methylene blue infusion was commenced with no success and the patient remained profoundly vasoplegic. Hydroxycobalamin (10 g) was infused centrally. Within 30 minutes, the patient's MAP rose to 65 mmHg with a SVR>800 dyn/cm5/s. This improvement was sustained and in the next few hours, the SBP exceeded 90 mmHg. Vasopressors were weaned and hyperlactatemia improved.

Conclusions: Our case demonstrates the importance of recognizing refractory VSS in cardiac surgery without the use of CPB, highlighting the role of the surgical procedure itself as causing severe systemic inflammation. Sacubitril-Valsartan, recently started, exacerbated the effect in this patient. Previously described only in the therapy of VSS in on-pump cardiac procedures, hydroxycobalamin played a crucial role in restoring hemodynamics in this setting. Hydroxycobalamin, a nitric oxide scavenger, has a more favorable safety profile than methylene blue(MB), and we propose that it should be used prior to MB in VSS. With our case study, we hope to encourage further research in this area.

ID: 74

Topic:

Cardiovascular Surgery > Coronary bypass surgery

Presentation Type:

Oral Presentation

Off Pump Coronary Artery Bypass Graft: Results Of Cardiac Surgery Department Of The Military Hospital Of Algiers, Algeria

MD Abir Riache* **,** Prof. Djamal Kebour
Cardiac Surgery Departement Of Algiers

Backround : Although it remains a subject of debate, off pump coronary artery revascularization can be considered a reliable and reproducible technique in the vast majority of cases. The aim of this work is to demonstrate the interest of off pump coronary artery revascularization in terms of reducing morbidity and mortality.

Material et methods : we present the short and medium term results of a series of 102 coronary patients operated by coronary artery bypass grafting over a period of 5 years. We will compare these results with those of the literature and determine the predictive factors of morbidity and mortality. We report the results of coronary surgery in a population of coronary patients operated in the cardiac surgery department of the central military hospital of the army. This is a retrospective study conducted between January 2018 and July 2022 (5 years), involving 102 coronary patients operated for beating-heart coronary bypass surgery. The mean age of the patients was 65.02 years (35 - 80 years) with a sex ratio (M/F) of 3.08. The average ejection

fraction was 57.56%. The left common trunk stenosis was present in 25.49% of the patients and 33.33% were tri-truncular, the average Euro-score was 1.34% and the STS mean score 0.89% and mean number of graft 2.36.

Results : Hospital mortality was 1 death (0.98%), the average length of stay in intensive care was 24 hours in 97%. The duration of hospitalization was less than 8 days for the majority of patients Postoperative complications were myocardial infarction 2.94%, wound infection, and stroke respectively 3.92%, 2.94% of patients.

Conclusions : offpump coranary artery bypass graft makes it possible to defer the undesirable effects of pump bypass with acceptable immediate results, including in multi-truncal patients and especially at high risk.

ID: 88

Topic:

Cardiovascular Surgery > Coronary artery disease - CABG surgery

Presentation Type:

Oral Presentation

Simple Techniques To Manage The Patent Internal Mammary Artery In Redo Cardiac Surgery

Assoc. Prof. Ahmed Ahmed*
Ain Shams University, Cairo, Egypt

Abstract: The presence of a patent internal mammary artery (IMA) represents a well-known technical challenge in redo cardiac surgery. Dissection of the IMA and controlling its flow during cardioplegic delivery has thus been considered essential steps. This maneuver however, is associated with the risk of damaging the IMA. Herein, we report a technique, which involves no attempts to dissect, or clamp the IMA in 44 consecutive redo cardiac surgery procedures. The results demonstrate that this technique is simple, safe, and reduces the chance of IMA injury.

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Bar-El Y, Kophit A, Cohen O, Kertzman V, Milo S. Minimal dissection and continuous retrograde cardioplegia for aortic valve replacement in patients with a patent left internal mammary artery bypass graft. The Journal of Heart Valve Disease. 2003;12:454–7.

Keyword: *cardiac reoperation, arterial grafts*

ID: 255

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

The Unbearable Lightness Of Coronary By-Pass Surgery With Modified Del Nido: Less Arrhythmic Potential And Preserved Chronotropic Ve Dromotropic Effect

MD Volkan Yurtman[*] [1] **,** MD Bekir Korkmaz[2]

[1] *Antalya / Turkiye*

[2] *Antalya / Turkıye*

Private Akdeniz Hospital, Cardiovascular Surgery Clinic, Antalya

OBJECTIVE

Private Akdeniz Hospital, Cardiovascular Surgery Clinic was established in 2020 and successfully performed the first open heart surgery after licensing in August 2020. About 1 year after its establishment, minimally invasive coronary artery surgery was started. With our transition to Mimimal Invasive Cardiac surgery, our cardioplegia usage habits have changed. This study compared the effects of modified Del Nido cardioplegia(mDNC) versus conventional whole blood cardioplegia(WBC) on postoperative complications in patients undergoing coronary artery bypass grafting (CABG).

METHODS

We switched to Del Nido cardioplegia, especially due to the long pump times during the learning period. Over time, we gradually increased and titrated the blood concentration and modified it at the point where we reached the most appropriate efficiency, and switched to standard use in all bypass patients. By the time, it was noticed that the incidence of arrhythmia decreased visibly with the agreement of the anesthesiologists and perfusionists who followed the patients. After that, it was decided to perform a prospective analysis on 120 patients who underwent CABG with modified Del Nino cardioplegia mDNC(n=60) and control blood cardioplegia (BC)(n=60) between 2021 and 2023. The cohort and propensity score of mDNC and WBC recipients were matched. Demographic and echocardiographic data were standardized in both groups of patients. Patients with recent or previous MI were excluded from the study.

Completes to 1000ml	DNC	mDNC	WBC
Potassium %7,5	26ml	26ml	23ml
Magnesium %15	14ml	14ml	10ml
NaHCO3 %8.4	13ml	13ml	10ml
Lidocaine %2	6,5ml	6,5ml	-----

Mannitol %20	17ml	17ml	10ml
Balanced Elect. Sol. / Blood	3:1(750ml+250ml)	1:1(500ml+500ml)	0:1(0ml+1000ml)
Blood Glu Level> 200mg/dl	-----	8ü crys. insülin	-----
Safe Time Limit	90-120min	60-80min	15-20min

RESULTS

There was no significant difference in mDNC and WBC groups, mean cardiopulmonary bypass time, aortic cross-clamp time, and operative mortality. There was a statistically significant reduction in the incidence of postoperative atrial fibrillation and postoperative ventricular arrhythmia in patients using mDNC. In the perioperative operating room and postoperative intensive care follow-ups, a statistically significant decrease was found in the amount and duration of inotropic needs.

CONCLUSION

The situation, which was first detected sporadically in patients undergoing CABG using mDNC, was later demonstrated by a prospective study. It was seen that mDNC could be a safe alternative as it has a lower incidence of postoperative arrhythmias compared to WBC and reduces the need for peri-op inotropes. This can be cost effective by improving the overall outcome of patients undergoing cardiovascular surgery and shortening the overall hospital stay.

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ID: 260

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

Coronary Bougie - A New Device In Endovascular Surgery?

MD Grigoriy Sazanov*
Russian Federation

Aim. To assess the effect of coronary artery bougienage 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 721 patients admitted to the hospital within the first 12 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 of coronary artery bougienage.

Results. The lowest frequency of no/slow-reflow phenomenon was in the groups in which bougienage was performed before stent implantation.

Conclusion. The most preferred in PCI is perform bougienage if there is an appropriate technical feasibility. In patients with a blood flow level TIMI 0 is recommended to make bougienage. After this manipulation antegrade blood flow may be achieved.

Keyword: *STEMI, percutaneous coronary interventions (PCI), no-reflow phenomenon, slow-reflow phenomenon, coronary artery bougienage*

Oral Presentation Session

Basic and Translational Cardiology: Inflammation, Biomarkers and Beyond

Date: 04.11.2023 Time: 15:30 – 16:30 Hall: 6

ID: 196

Topic:

Cardiology > Covid-19 and cardiology

Presentation Type:

Oral Presentation

MRNa Covid Vaccines Dramatically Increase Vascular and Cardiac Inflammation: A Single Institution Warning

MD Steven Gundry*
The International Heart and Lung Institute

Our group has been using the PLUS Cardiac Test (GD Biosciences, Inc, Irvine, CA) a clinically validated measurement of multiple protein biomarkers which generates a score predicting the 5 yr risk (percentage chance) of a new Acute Coronary Syndrome (ACS). The score is based on changes from the norm of multiple protein biomarkers including IL-16, a proinflammatory cytokine, soluble Fas, an inducer of apoptosis, and Hepatocyte Growth Factor (HGF)which serves as a marker for chemotaxis of T-cells into epithelium and cardiac tissue, among other markers. Elevation above the norm increases the PULS score, while decreases below the norm lowers the PULS score. The score has been measured every 3-6 months in our patient population for 8 years. With the advent of the mRNA COVID 19 vaccines (vac) by Moderna and Pfizer, dramatic changes in the PULS score became apparent in most patients.

This report summarizes those results. A total of 566 pts, aged 28 to 97, M:F ratio 1:1 seen in a preventive cardiology practice had a new PULS test drawn from 2 to 10 weeks following the 2nd COVID shot and was compared to the previous PULS score drawn 3 to 5 months previously pre- shot. Additionally, new actual acute coronary events were noted.

Baseline IL-16 increased from 35=/-20 above the norm to 82 =/- 75 above the norm post-vac; sFas increased from 22+/- 15 above the norm to 46=/-24 above the normpost vac; HGF increased from 42+/-12 above the norm to 86+/-31 above the norm post vac. These changes resulted in an increase of the PULS score from 11% 5 yr ACS risk to 25% 5 yr ACS risk. Three patients with known previous coronary artery disease, (hx of stents) died 2 to 4 weeks 2nd injection of MI, while four patients developed acute atrial fibrillation. These PLUS changes persist for at least 3-6 months post second dose of vac.

We conclude that the mRNA vacs dramatically increase inflammation on the endothelium and T cell infiltration of cardiac muscle and may account for the observations of increased thrombosis, cardiomyopathy, death, atrial fib, and other vascular events following vaccination.

ID: 98

Topic:

Cardiology > Acute coronary syndromes

Presentation Type:

Oral Presentation

Association Between COVID-19 Infection and Cardiac Biomarkers in Hospitalized Patients at a Tertiary Care Center

MD Mahmoud Bader[*] [1] **,** MD Abdulqader Alaa adeen[1] , MD Omar Hetta[1] , MD Alwaleed Aloufi[1] , MD Muhannad Fallata[1] , MD Abdulaziz Alsiraihi[1] , Assoc. Prof. Mohammed Ahmed[2] , Prof. Abdulhalim Kinsara[1]

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[2] *College of Sciences and Health professions, King Saud bin Abdulaziz University for Health Sciences*

Objective

The effects of COVID-19 infection on the cardiovascular system are well established. However, knowledge gaps in the clinical implications of cardiac involvement in COVID-19 patients are yet to be addressed. This study aimed to investigate acute cardiac injury (ACI) risk factors and the outcomes associated with COVID-19 infection with cardiac involvement.

Method

In this study, we included hospitalized patients between March 2020 and May 2022 with confirmed COVID-19 infection and evidence of cardiac involvement.

Results

In total, 501 patients were included, of whom 396 (79%) had evidence of ACI. The median troponin level was 25.8 (interquartile range [IQR]: 10.8–71). Patients with evidence of ACI were significantly more likely to have diabetes mellitus (75% vs. 60%), cardiovascular disease (48% Vs. 37%), chronic lung disease (22.2% vs. 12.4%), and chronic kidney disease (32.3% vs. 16.2%). Additionally, patients with ACI were significantly more likely to have cardiomegaly (60.6% vs. 44.8%) and bilateral lobe infiltrates (77.8% vs. 60%) on X-ray. Patients with ACI were significantly more likely to suffer from complications such as cardiogenic shock (5.3% vs. 0%), pneumonia (80.1% vs. 65.7%), sepsis (24.2% vs. 9.5%), and acute respiratory distress syndrome (ARDS) (33.1% vs. 8.6%). Patients with ACI were also significantly more likely to be admitted to the intensive care unit (ICU) (57% vs. 26.7%) and significantly more likely to die (38.1% vs. 11.4%). The results of the multivariate regression analysis indicate that mortality was significantly higher in patients with elevated troponin levels (adjusted odds ratio [OR]: 4.73; 95% confidence interval [CI]: 2.49–8.98). Additionally, the results of the Kaplan-Meier survival curve showed that Patients with ACI had significantly shorter median survival duration than the patients without ACI (70 vs. 33 days; p = 0.001), with a hazard ratio of 2.11 (p = 0.013) adjusted for age and gender.

Conclusion

In COVID-19 patients who exhibited signs of cardiac involvement, age, diabetes mellitus, chronic lung disease, and chronic kidney disease were associated with increased risk of ACI. Patients with these risk factors are at risk of severe complications, such as ICU admission, sepsis, and death.

Keyword: *COVID-19, Acute cardiac injury*

ID: 137

Topic:

Cardiology > Pulmonary arterial hypertension (PAH)

Presentation Type:

Oral Presentation

The Relationship Between Right Heart Catheterization Parameters And Albumin Bilirubin (ALBI) Score

MD Mert Evlice*

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Background: It has been shown that the increase in volume and pressure in the right heart chambers increases liver congestion and liver stiffness. The Albumin-Bilirubin (ALBI) score is a useful and easy-to-use score for objectively assessing liver function. There is no information in the literature regarding the changes in ALBI scores in patients undergoing right heart catheterization(RHC).

Objectives: The aim of our study is to investigate the changes in ALBI score and its clinical impact in patients undergoing RHC.

Methods: Of the 156 analyzed patients, 20 were excluded. Correlation and regression analysis between ALBI and RHC data was performed on the remaining 136 patients who underwent RHC. The ALBI score was calculated based on serum albumin and total bilirubin levels using the following formula: ALBI= (log10 bilirubin [umol/L] * 0.66) + (albumin [g/L] * -0.085).

Results: Of these 136 patients included in the study, the mean age was 45.8±17.2 years, 85 of them (62.5 %) were women, and their body mass index was 27.2±5.9 kg/m2 (Table 1, Table 2). Linear regression analysis was performed for parameters significantly associated with ALBI in univariate and multivariate analysis. As a result of this analysis, mixed venous oxygen saturation [(r= -0.362 p<0.003), (B= -0.345, p=0.089)], mean pulmonary arterial pressure [(r=0.288, p=0.017), (B=0.192, p=0.167))], mean pulmonary capillary wedge pressure [(r=0.526, p<0.001), (B=0.191, p=0.206)], mean right atrial pressure [(B=0.668, p <0.001), (B=0.530, p=0.001))], and cardiac index [(r= -0.384, p=0.002), (B= -0.293, p=0.064)] were found to be associated with ALBI. In multivariate linear regression analysis, the ALBI score was independently associated with mean right atrial pressure.

A mean right atrial pressure greater than 6 mmHg as measured by RHC was associated with increased ALBI scores (cut-off = - 3.53) with a sensitivity of 69.1% and a specificity of 88% (area under the ROC curve = 0.818, 95% CI 0.726–0.909, p<0.001) (Figure 1).

Conclusions: ALBI score was independently associated with mean mean right atrial pressure. The ALBI score could be a simple, evidence-based, objective, and discriminatory method to evaluate liver function and gain insight into right atrial pressure in patients with cardiac problems that may affect right heart hemodynamics.

Table 1. Baseline demographic and clinical data of the study

Age, years	45.8±17.2
Sex, female, n (%)	85 (62.5 %)
Body mass index, kg/m2	27.2±5.9
Albumin,g/dL	39.17±5.31
Bilirubin, umol/L	0.87±0.75
ALBI score	3.38±0.59
Alanine aminotransferase, U/L	19.5±13.1
Aspartate aminotransferase, U/L	25.0±12.6
Gamma-glutamyl transferase, U/L	35.8±24.8
Alkaline phosphatase, U/L	78.4±27.7
Lactate dehydrogenase, U/L	265.2±73.7
Triglyceride, mg/dL	108.3±61.0
Total cholesterol, mg/dL	174.2±46.8
eGFR, mL/minute/1.73m2	111.3±15.5
White blood count, 10^3/µl	7.92±2.36
Hematocrit, %	40.0±4.4
Platelet count, 10^3/µl	299.8±99.0
INR	1.11±0.19
LVEF, %	59.7±4.2

ALBI: Albumin-bilirubin, LVEF, left ventricular ejection fraction.

Table 2. Baseline right heart catheter parameters of the study

Mixed venous oxygen saturation, %	68.3 (29.3-83.5)
Pulmonary capillary wedge pressure, mmHg	10.0±4.2
Mean pulmonary arterial pressure, mmHg	32.3±17.1
Right ventricular systolic pressure, mmHg	51.4±25.5
Right atrial mean pressure, mmHg	10.4±5.5
Cardiac output, Liter/minute	4.4±1.3
Cardiac index, Liter/minute/m2	2.46±0.72
Pulmonary vascular resistance, woods	5.01±4.13

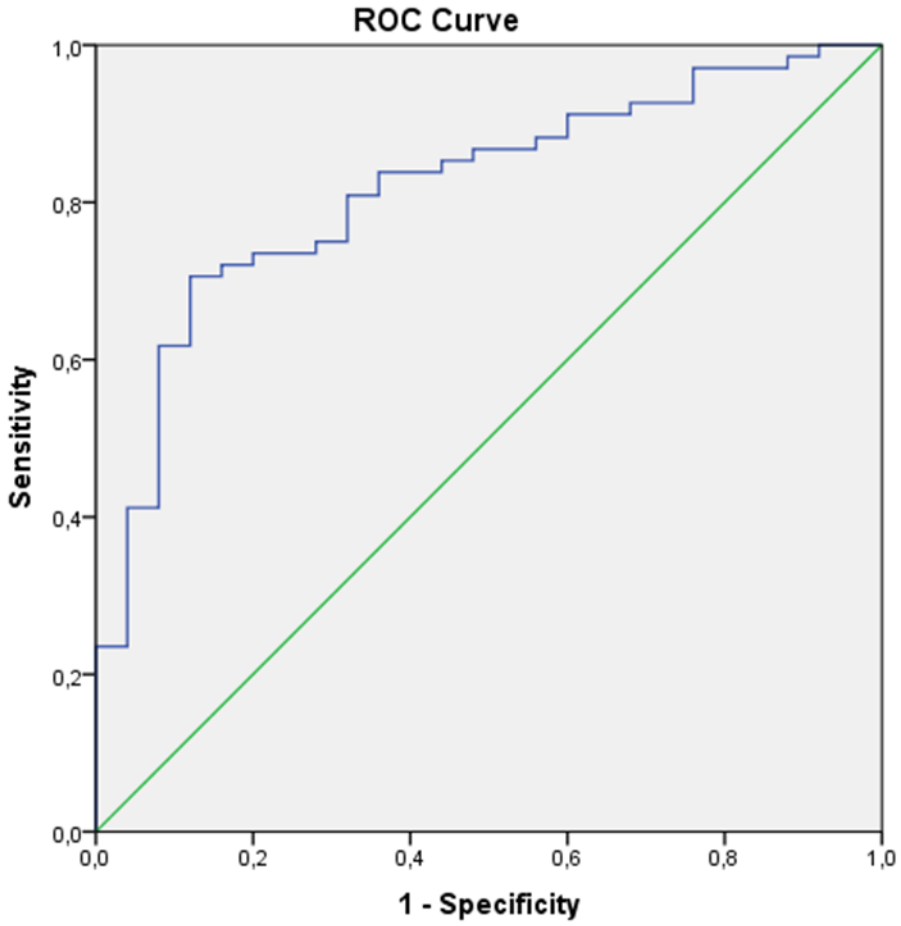

Figure 1. ROC analysis showing sensitivity and specificity with ALBI score for elevated mean right atrial pressure. Note: A mean right atrial pressure greater than 6 mmHg as measured by right heart

catheterization was associated with increased ALBI scores (cut-off = - 3.53) with a sensitivity of 69.1% and a specificity of 88% (area under the ROC curve = 0.818, 95% CI 0.726–0.909, p<0.001).

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Keyword: *Albumin-bilirubin score, liver congestion, liver stiffness, mean right atrial pressure, right heart catheterization*

ID: 247

Topic:

Cardiology > Cardiac pacing for bradyarrhythmias

Presentation Type:

Oral Presentation

The Relation Between Platelet / Lymphocyte Ratio and Cardiac Pacemaker Infection

MD Sebnem Nergiz[1] , MD Cansu Ozturk[2] , **Prof. Onder Ozturk[* 2]**

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OBJECTIVE: The platelet-to-lymphocyte ratio (PLR) has emerged as an informative marker revealing shifts in platelet and lymphocyte counts due to acute inflammatory and prothrombotic states. PLR has been extensively examined in neoplastic diseases accompanied by immune suppression and thrombosis, which can be predicted by combined blood cell counts and their ratios. Several large observational studies have demonstrated the value of shifts in PLR in evaluating the severity of systemic inflammation and predicting infections and other comorbidities. Infectious complications after cardiac implantable electronic device implantation are increasing over time and are associated with substantial mortality. Infection in pacemakers is one of the dreaded complications which need a multidisciplinary approach in its management. The purpose of this study was to research the relation between PLR and cardiac pacemaker infection.

MATERIALS AND METHODS: In this retrospective study, 86 patients with cardiac pacemaker implantation were registered. 36 patients were female and 50 patients were male. The mean age of patients were 66.43 ± 17.04 years. Demographic, clinical and laboratory parameters were evaluated admission to cardiology clinic, before cardiac pacemaker implantation. The PLR was calculated according to the following formula “Platelet / Lymphocyte”. P-value <0.05 was considered statistically significant.

RESULTS: Cardiac pacemaker implanted patients were divided into two groups. Group-1 patients have not cardiac pacemaker infection. Group-2 patients have cardiac pacemaker infection. There is no significant difference between groups according to the clinical and demographic parameters. However, WBC, neutrophil, lymphocyte and PLR were significantly higher in Group-2 patients than Group-1 patients (Table 1).

CONCLUSIONS: In our study, we found that a relation between cardiac pacemaker infection risk and PLR in patients with cardiac pacemaker implantation.

Table 1: Demographic, clinical and laboratory variables of patients.

Parameters	Group-1 patients (n=66)	Group-2 patients (n=20)	p value
Age (year)	66.71±15.67	65.50±21.38	0.782
Gender (F/M)	29 / 37	7 / 13	0.607
Coronary artery disease	40 (60%)	14 (70%)	0.599
Hypertension	40 (60%)	17 (80%)	0.059
Diabetes Mellitus	34 (51%)	11 (55%)	0.804
Glucose (mg/dl)	151.50±64.92	144.83±79.37	0.614
Creatinin (mg/dl)	1.16±0.61	1.44±0.72	0.190
Hemoglobin	13.07±2.08	12.55±2.62	0.377
WBC (10^9/L)	6.64±2.29	13.31±3.93	0.000
Neutrophil (10^9/L)	6.07±1.95	9.80±4.13	0.000
Lymphocyte (10^9/L)	1.77±0.69	2.612±2.24	0.012
Platelet (10^9/L)	229.59±81.32	241.73±100.07	0.592
LVEF (%)	45.45±16.97	48.50±13.18	0.463
PLR	145.05±72.53	187.10±78.16	0.045

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Keyword: *platelet-to-lymphocyte ratio, infection, cardiac pacemaker*

ID: 38

Topic:

Cardiology > Cardiac pacing for bradyarrhythmias

Presentation Type:

Oral Presentation

Methemoglobinemia; Unexpected, Fatal But Easily Treatable Rare Complication After Pacemaker Implantation

MD Cuma Süleymanoğlu[*] [1] **,** Assoc. Prof. Deniz Elçik[2] , Prof. Mehmet Tuğrul İnanç[2]

[1] *Osmaniye Devlet Hastanesi*

[2] *Erciyes University*

Caption

t a case that is one of the rare cases in which methemoglobinemia treated by inexpensive easily accessible agent. A 68 year old female complaining syncopal episodes, Holter monitoring reveled paroxysmal second degree AV block , After excluding temporary causes we planned to place DDD pacemaker. Following sterile draping , Prilocaine 0.5 mg/kg was injected subcutaneously, the puncture and implantation in approximately 40 minutes. After implantation the patient complained dyspnea and vomiting, physical examination was normal, oxygen saturation was 86% by pulse oximeter despite oxygen support , bedside echocardiography excluded mechanical complications, chest x-ray excluded pneumothorax . ABG showed PH:7.5 sO2:99 MetHb:15.2 , of note the color of the blood sample was clearly dark and fingertips like cyanotic. Excluding other possibilities, methemoglobinemia due to local anesthesia was diagnosed, methylene blue was not available due to financial reasons, we inject Redox-C 500mg/5ml of totally 2 mg IV , the first dose was 1 mg inside 250 cc SF given in 30 minutes and the other dose 1 hour later at the same manner . The first hour MetHb was 11.2 and second hour MetHb

was 2.2 . Patient feeling better and saturation was normal in both the pulse oximeter and blood gas sample. A discrepancy of oxygen saturation between pulse oximeter and blood gas analysis should remind physician about methemoglobinemia , Prompt recognition is important as this condition may necessities specific treatment . In the light of all information prilocaine should be used with caution and not exceed upper limit of safe dose.

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Keyword: *methemoglobinemia, local anesthesia, ascorbic acid, pacemaker*

Oral Presentation Session

Coronary Bypass Surgery: Peculiarities and Tactics

Date: 04.11.2023 Time: 15:30 – 16:50 Hall: 7

ID: 9

Topic:

Cardiovascular Surgery > Coronary bypass surgery

Presentation Type:

Oral Presentation

Early Outcomes Of MIDCAB, A Minimally Invasive Direct Coronary Artery Bypass Surgery

MD Izatullah Jalalzai* **,** Assoc. Prof. Uğur Kaya , Assoc. Prof. Abdurrahim Çolak , Assoc. Prof. Eyupserhat Çalık , Assoc. Prof. Ümit Arslan

Atatürk University Research Hospital, Department of cardiovascular surgery

Objective: The minimally invasive direct coronary bypass (MIDCAB) surgery procedures may enhance healing and shorten hospital stays. To mitigate issues brought on by a complete sternotomy, MIDCAB surgery was introduced. This study assessed the MIDCAB experience at our clinic, including the length of the procedure, the number of bypasses, and the conversion to sternotomy.

Methods: We examined a total of 31 consecutive patients with similar demographic properties who underwent MIDCAB surgery at our institution.

Results: Mortality at 30 days was 0% overall (0/30). Patient's average ages were 60 years old, with 33% of them being women. There was no early myocardial infarction or cardiac-specific mortality. Postoperative stroke and haemorrhage was not observed in any case. Bilateral carotid endarterectomy and patch plasty were performed as additional procedures in one patient. Overall 95 distal anastomosis were performed. Mean michanical ventilation duration was 3.8 hours in intenssive care unit with average mobilization time of 2 hours after extubation. Anastomosis took an average of 15 minutes to complete during the full surgical operation, which took 3 hours on average. Intraoperative flow were measured after anastomosis in every graft. Endoscopic safenous vein graft harvesting was used in 73.3% (11/31) of patients. With only one conversion to sternotomy with cardiac bypass and one use of a safenous vein graft to the left anterior descending artery (LAD) due to injury to the left internal mammary artery (LMA) during harvesting, in-hospital complication rates were comparatively modest. The most frequent complication, which was documented in 4 of the patients, was rib fracture. One patient had thoracotomy insision wound infection requiring revision while another had an iliac artery dissection caused by femoral artery cannulation that required graft bypass surgery.

Conclusions: The minimally invasive coronary surgery technique for coronary artery bypass grafting is a safe and efficient treatment for multivessel revascularization and has developed into a remarkable substitute for traditional coronary artery bypass grafting. Following surgery, These data show that minimally invasive coronary bypass surgery has generally satisfactory early results. Future studies should concentrate on developing comparably powered, randomised trials that are sufficiently powered to examine major adverse cardiac and cerebrovascular events (MACCE) outcomes over the short- and long-term.

ID: 240

Topic:

Cardiovascular Surgery > Coronary bypass surgery

Presentation Type:

Oral Presentation

Using Bilateral Internal Mammary Artery In Coronary Artery Bypass Grafting

MD Mikhail Fomenko* , Prof. Yuri Schneider , Prof. Victor Tsoi
Federal State Budgetary Institution «Federal Centers of High Medical Technologies» Health Ministry, Kaliningrad, Russian Federation

Objective: Coronary artery bypass grafting is most operation of choice to treat patients with coronary artery disease. The gold standard in CABG is the using left internal mammary artery for revascularization left anterior descending artery. Most retrospective article by using bilateral internal mammary artery showed better long-term survival when compared to a single internal mammary artery. Despite results, employment BIMA in CABG is not common in treatment coronary artery diseases.

The point of study was evaluate effectiveness and safety application BIMA in CABG.

Methods: Recruitment of patients in the study was retrospective by “continuous observation”. Primary endpoint was mortality, secondary endpoints was: myocardial infarction, stroke and stenting of coronary artery. Between October 2012 to April 2023, in our center was examined and underwent CABG in 5589 patients. CABG with BIMA was performed in 3007 (53.8%) cases. Mean age patients was 67.9 ± 14.2 years (range 48 to 85 years). In the study prevailed men 60.3%.

Results: Hospital mortality in group was 0.6% (18 patients). Operations was performed off pump in 35,1% cases, supported on pump in 64.9% cases. The main procedure-related complications was as: postoperative bleeding 56 patients (1,9%), wound infection 35 patients (1.2%) and stroke 5 patients (0.2%). Mean time intensiv care was 1.6 ± 0.5 days. Mean time of hospitalization was 10.4 ± 2.2 days. Mean follow-up period for group was – 65.9 months. Survival estimate by Kaplan–Meier method showed survival in group for 36 months 98.3%, 60 months – 92.7%.

Conclusions: Application of BIMA in CABG is safety and effectiveness procedure who showed the good mid-term results of surgical treat of coronary artery disease.

Keyword: *coronary artery disease; coronary artery bypass grafting; heart failure.*

ID: 180

Topic:

Cardiovascular Surgery > Minimally invasive CABG

Presentation Type:

Oral Presentation

Journey to the Minimally Invasive Coronary Artery Surgery via Left Anterior Mini-Thoracotomy with Babliak Retractor: Paths, Pitfalls and Signs for Safe Travel

MD Volkan Yurtman*

Private Akdeniz Hospital Antalya Turkiye

OBJECTIVE

Private Akdeniz Hospital, Cardiovascular Surgery Clinic was established in 2020 and successfully performed the first open heart surgery after licensing on 12/08/2020. About 1 year after its establishment, minimally invasive cardiac surgery was started with Coronary Surgery. In this report, we aimed to share our experiences for beginners by evaluating the selection criteria of the operated patients, their preparation for the operation, and evaluating the results retrospectively.

METHODS

Between September 2021 and March 2023, 62 patients underwent coronary by-pass surgery via left anterior anterior thoracotomy through the fourth intercostal space and was performed using Babliak retractor. In the technique in which right inguinal peripheral cannulation and Modified del Nido cardioprotection are standardized. Laboratory data of the patients, perfusion measurements, echocardiography findings, preop jaw-knee biphasic CT Angio recording, personal archive and information recording system of the hospital were collected.

RESULTS

Emergency sternotomy was performed in 2 patients (3%) due to uncorrected hemodynamic disorders.The mean EuroSCORE was calculated as 1.9±1,1. The mean Ejection Fraction was calculated as 53.42±15,85. Graft Count(2,3 ± 0,9**)**, Crossclamp Time(76,6 ± 30,7**)** and Total Perfusion Time(157,8 ± 67,3) The most common postoperative morbidity, respectively. Left lung lower lobe atelectasis 25%, Atrial fibrillation 12% and Left hemidiaphragma elevation 6%, ATN was seen in 1%. There was no early and/or late postoperative mortality. 1 patient (diffusion negative MRI) never woke up. In the first year, 2 patient underwent redo bypass surgery.

PATHS, PITFALLS AND SIGNS FOR SAFE TRAVEL

Patient Selection

The younger patient tolerates longer perfusion time and aortic manipulation better. Asthenic and athletic type, female patient with large and large breasts, patients with a long history of HT and an EF value below 50% are not suitable. Because it is difficult to manipulate. Jaw-knee biphasic Arterial CT value very important. It is not suitable if the effective lumen diameter of the femoral artery is less than 8 mm. The amount of opaque material delivered during and during the angiography and the time between coronary angiography and surgery is the most important factor determining the incidence of ATN.

Anestesia

Pre-expansion of the common working area with a special apparatus for possible emergencies is very important beyond estimation in terms of safe surgery.

Personal Preparation

Work at least 2 surgeons. Watch a pioneer from start to finish multiple times before you begin. Start with a single-vessel patient. Advance as you progress. Do not be afraid to open the skin incision long and break the rib during the learning period. 3,5> Magnification Loop problem! DONT'T USE! Be sure to have a good personalized light source. Be sure to use the radial artery at first and stain it methylene blue.

Babliak Retractor

Advantages: Partly practical, not complicated. Your hands are not restricted in the vertical axis during operation. The LIMA retractor allows to create and operate a larger area for the distal and proximal anastomoses inside.

Disadvantages: I am using third generation. Fourth generation on market. There will be 5th and 6th generations as well. It still continues to be developed. For patients with small bodies, this situation challenges the surgeon and the surgery. Does not allow long harvesting of LIMA. Even if it does it doesn't rule out late LIMA damage? The risk of pain and subclavian vein thrombosis increases as the LIMA retractor remains attached for longer duration of the operation.

Peripheral Canulation and Perfusion

The starting and ending points of the purse-string suture (5:0/20mm prolene) should be proximal. Venous cannula first. Use your right CFV even if left CFA is to be used. It is enough just to turn the artery. A venous vacuum pump is absolutely necessary. 30-50mmHg negative pressure with central vacuum. Make sure the reservoir is not airtight! If the body surface area (BSA) is <1.8, the bicaval single venous cannula is definitely sufficient. If the BSA is between 1.8-2, anterior wall anastomosis can be performed with a single venous cannula. If BSA >2, double venous cannula is required.

Surgical Insights and Awareness

Making distal anastomoses is not as difficult as you might think! RCA isn't hard to reach either. Harvest the proximal of LIMA as CPB begins. Should the inferior vena cava and left pulmonary veins be turn araound? Not necessary. There are 3 important parts of the surgery that require learning time: Harvesting the LIMA, Turning aound the Aorta and Performing the proximal anastomoses.

Warning!

The crucial point that is not written in the books but facilitates minimally invasive surgery at every stage is the expansion of the intercostal dissection to the mid-axillary line without widening the subcutaneous incision.

CONCLUSIONS

Minimally invasive coronary approach can be done safely in every center and will become widespread in a short time when knowledge sharing and experiences are transferred within the framework of the rules of respect for tissue.

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- [4] Minimally Invasive Coronary Bypass Grafting as a Standard Approach for Myocardial Revascularization Oleksander D. Babliak

ID: 59

Topic:

Cardiovascular Surgery > Coronary bypass surgery

Presentation Type:

Oral Presentation

Coronary Endarterectomy Combined with Coronary Artery Bypass Grafting: Experience of a Single Centre

Assoc. Prof. Seyhan Yılmaz[*] [1] , MD Abdullah Çelik[2] , Prof. Serdar Günaydın[3]

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Background: It has been reported that coronary artery endarterectomy may be necessary to provide revascularization or to improve the quality of anastomosis in cases of long segment occlusion or very thin lumen due to extensive atherosclerosis in the coronary arteries. Although it has been reported that the risk in coronary artery bypass grafting combined with coronary endarterectomy is higher than in patients who undergo coronary artery bypass grafting alone, due to the increased incidence of diffuse or complex coronary heart disease in the patient group requiring revascularization, endarterectomy can be applied to achieve complete revascularization and the results have been restored with advances in surgical technique and perioperative management.

Methods: Our retrospective study was performed in patients who underwent coronary artery bypass grafting. Patients who underwent elective isolated coronary artery bypass grafting for the first time (combined or not with coronary endarterectomy) were included in the study. Patients who underwent a different cardiac, carotid or aortic surgery simultaneously with coronary artery bypass grafting operation, patients who underwent a different open heart operation, and patients who underwent open heart surgery for the second time were not included in the study.

Results: The mean age of 184 patients (142 males) included in the study was 63.5+/-9.58 years. Coronary artery endarterectomy combined with coronary artery bypass grafting was performed in 10 of the patients. Endarterectomies to the left anterior descending artery and diagonal artery (50% of coronary endarterectomy patients) were performed using the open technique. Early mortality was observed in 2 patients who underwent coronary endarterectomy. The clinical features of the patients who underwent coronary artery bypass grafting combined with coronary endarterectomy are shown in the Table.1.

Conclusion: We think that coronary artery bypass grafting combined with coronary endarterectomy may be safe and the results may be acceptable, especially in the presence of surgical experience and appropriate patient selection, in conditions that reduce anastomosis quality and complicate anastomosis, such as the presence of long segment severe stenosis/occlusion in the target coronary arteries, and we think that it would be useful to carry out studies too.

Table.1. Clinical characteristics of patients undergoing coronary endarterectomy

Age (year)	Gender	Preoperative comorbidity	Preoperative EF(%)	Vessels undergoing CE	CPB usage	IABP usage	Complication	Mortality

Patient1	62	M	CVD	50	PDA	Yes	No	No	No
Patient2	77	M	CRF	45	LAD	Yes	No	CVD	Yes
Patient3	38	M	CRF	60	RCA	Yes	No	No	No
Patient4	67	M	None	35	LAD	No	No	AF	No
Patient5	67	F	None	55	Diagonal	Yes	No	AF	No
Patient6	79	M	None	50	OM	Yes	No	CVD	Yes
Patient7	71	M	None	60	RCA	Yes	No	No	No
Patient8	51	M	None	55	LAD, OM	Yes	Yes	Bleeding Revision	No
Patient9	52	M	None	60	OM, Diagonal	Yes	No	Hayır	No
Patient10	75	M	None	50	OM	Yes	No	Hayır	No

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Keyword: *atherosclerosis, coronary artery bypass grafting, endarterectomy*

ID: 109

Topic:

Cardiovascular Surgery > Mitral valve surgery

Presentation Type:

Oral Presentation

Comparison Of Medium And Long-Term Outcomes Of Mitral Valve Surgery In Patients With Concomitant Ischemic Mitral Regurgitation Undergoing Isolated Coronary Artery Bypass Grafting

MD Fatih Yiğit* [1] **,** MD Kudret Atakan Tekin[2] , MD Adnan Ak[1] , Prof. Mesut Şişmanoğlu[1]

[1] *Koşuyolu High Specialization Education And Research Hospital*

[2] *Hitit University Erol Olcok Education And Research Hospital*

Introduction:
Ischemic mitral regurgitation can have a significant impact on morbidity and mortality in patients undergoing coronary bypass surgery. There is ongoing debate over the treatment of moderate mitral regurgitation. In this study, we aimed to examine the mid- and long-term results of treating moderate ischemic mitral regurgitation.

Materials and Methods:
This retrospective, cross-sectional, observational study included 126 patients. We analyzed 52 patients in two groups: isolated CABG and CABG+MVR/r. We conducted early period, 1-year, and 5-year echocardiographic and survival analyses of the patients.

Results:
Our analysis revealed that patients who underwent isolated CABG had higher mitral regurgitation grades at the post-op 1st year ($p<0.05$), but there was no statistically significant difference in the 5-year follow-up ($p>0.05$). There was no significant difference between the two groups in terms of 1-year and 5-year survival. The number of revascularized vessels ($p=0.007$, HR: 0.605 CI:0.421-0.869) and a history of postoperative cerebrovascular disease ($p=0.001$, HR: 20.794 CI:3.669-117.856) were independent predictive factors affecting survival.

Conclusion:
Our findings suggest that moderate ischemic mitral regurgitation management requires careful preoperative echocardiographic and clinical evaluation, and postoperative LV remodeling. Accurate quantification of the degree of mitral regurgitation and evaluation of all treatment options in accordance with guideline recommendations are essential.

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ID: 238

Topic:

Cardiovascular Surgery > Coronary bypass surgery

Presentation Type:

Oral Presentation

Is Allen Test Sufficient For Radial Artery Use?

Assoc. Prof. Mustafa Dağlı[*] [1] **,** Prof. Kadir Durgut[1]
[1] *Konya City Hospital*

The radial artery, which can be used as a graft in cardiac surgery, is now routinely used in aortocoronary bypass surgeries in suitable patients. For this purpose, the hand of the removed radial artery
The adequacy of the Allen test in evaluating its effects on blood circulation was investigated.

Hand circulation, Allen test and capillary filling time in the preoperative period in 14 patients who underwent cardiac surgery and had a positive Allen test positive for radial artery removal; Only capillary refill time was evaluated before postoperative discharge.

Hand ischemia was not observed in patients with positive Allen test and radial artery removal, since radial and ulnar artery flows were sufficient.

Result:
Allen's test, which shows that the ulnar artery flow is sufficient before the operation, is sufficient for the safety of hand circulation.

ID: 270

Topic:

Cardiovascular Surgery > Coronary artery disease - CABG surgery

Presentation Type:

Oral Presentation

Suturing Right Pleura (Surgical Integrity) Affects Early Respiratory Functions In Bilateral Internal Mammary Artery Used CABG Operations

MD Begench Orazgeldiyev*

Ashgabat International Cardiology Center/Turkmenistan

Bilateral internal mammary artery (BIMA) grafting strategy is widely used as a choice of multi vessel coronary artery disease. The preservation of pleural integrity during artery bypass grafting (CABG) operations improve pulmonary function and post-operative clinical outcomes. While it extends operation time during harvesting bilateral IMA as preserved pleura, the use of BIMA is not optimal all over the world. We designed this retrospective study to evaluate early postoperative pulmonary functions as a suturing of right pleura (surgical pleural integrity) versus opened pleura in patients who receive bilateral internal mammary artery grafts.

96 selected patients undergoing elective on-pump CABG between March 2014 and June 2023 were included in the present study. The patients were divided into Either 2 groups: those who underwent BIMA harvesting with bilateral opened pleura (OP)(n=52) or with one side pleural integrity by suturing the right pleura (SP) (n=44). Preoperative patient characteristics were similar. Postoperative respiratory functions were compared between two groups by chest x-ray, arterial blood gas analyses and respiratory function tests.

The mean age of patients was 57,8+-6,3. The incidence of atelectasis and pleural effusion were significant higher in the OP group($p<0.01$). Respiratory functions and arterial blood gas analysis were both better in SP group. Moreover the duration of hospital stay were markedly higher in OP group than in the CP group.

We demonstrate that Suturing the right pleura by making surgical pleural integrity in BIMA used bilateral opened pleura patients has beneficial effects on early respiratory functions. During the harvesting BIMA, opened bilateral pleura make surgeon comfortable area as shortening operation time as well.

Oral Presentation Session

Basic and Experimental: A Glimpse into the Future

Date: 05.11.2023 Time: 08:00 – 09:00 Hall: 7

ID: 224

Topic:

Cardiovascular Surgery > Congenital heart disease

Presentation Type:

Oral Presentation

Acute Changes in Myocardial Expression of Heat Shock Proteins and Apoptotic Response Following Blood, delNido, or Custodiol Cardioplegia in Infants Undergoing Open-Heart Surgery

MD Kenan Öztürker[*] [1] , MD Abdullah Arif Yılmaz[1] , Assoc. Prof. Ömer Faruk Şavluk[2] , MD Fatih Tomrukçu[1] , Assoc. Prof. Babürhan Özbek[1] , Prof. Eylem Tunçer[1]

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Objective: Stress caused by cardioplegic ischemic arrest was shown to alter the expression levels of heat shock proteins (Hsp), but little is known about their efects, particularly on pediatric hearts. This study aimed to investigate whether myocardial cellular stress and apoptotic response changes due to diferent cardioplegia (CP) solutions during cardiopulmonary bypass (CPB) in infants and to determine their infuence on surgical/clinical outcomes.

Methods: Therefore, twenty-seven infants for surgical closure of ventricular septal defect were randomly assigned to a CP solution: normothermic blood (BCP), delNido (dNCP), and Custodiol (CCP). Hsp levels and apoptosis were determined by immunoblotting in cardiac tissue from the right atrium before and after CP, and their correlations with cardiac parameters were evaluated.

Results: No signifcant change was observed in Hsp27 levels. Hsp60, Hsp70, and Hsp90 levels decreased signifcantly in the BCP-group but increased markedly in the CCP-group. Decreased Hsp60 and increased Hsp70 expression were detected in dNCP-group. Importantly, apoptosis was not observed in dNCP- and CCP-groups, whereas marked increases in cleaved caspase-3 and -8 were determined after BCP. Serum cardiac troponin-I (cTn-I), myocardial injury marker, was markedly lower in the BCP- and dNCP-groups than CCP. Additionally, Hsp60, Hsp70, and Hsp90 levels were positively correlated with aortic cross-clamp time, total perfusion time, and cTn-I release.

Conclusion: Our fndings show that dNCP provides the most efective myocardial preservation in pediatric open-heart surgery and indicate that an increase in Hsp70 expression may be associated with a cardioprotective efect, while an increase in Hsp60 and Hsp90 levels may be an indicator of myocardial damage during CPB.

ID: 37

Topic:

Cardiovascular Surgery > Coronary bypass surgery

Presentation Type:

Oral Presentation

The Relationship Of Epicardial Fat Tissue And Some Hormone Levels Measured In The Preoperative Period With Postoperative Atrial Fibrillation

MD Kudret Atakan Tekin[* 1] **,** MD Fatih Yiğit[2] , MD Ayhan Güneş[2] , MD Ahmet Zengin[3] , Assoc. Prof. Halime Hanım Pençe[4] , Assoc. Prof. Ali Karagöz[2] , Assoc. Prof. Rezan Aksoy[5] , Prof. Murat Bülent Rabuş[2]

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Objective: The amount of epicardial adipose tissue (EAT) is associated with atrial fibrillation (AF). In the study, we measured epicardial adipose tissue thickness (EATT) and some hormone levels in the preoperative period in patients planned for coronary artery bypass grafting (CABG) surgery. We aimed to examine the relationship between these values and postoperative complications, especially postoperative atrial fibrillation (POAF).

Methods: Between September 2020 and July 2021, 161 patients were included in the study. The patients' data were collected prospectively from their files. EATT was measured by echocardiogram (ECHO) and computed tomography (CT) and adiponectin, leptin, and resistin hormone levels were measured in the preoperative period for patients undergoing CABG operation. The study evaluated the relationship between those levels and some postoperative complications in patients.

Results: A total of 161 patients, 130 male (80.7%) and 31 female (19.3%), were included in the study. The mean age was 61±9 years, body mass index (BMI) was 28.72±5.22 kg/m², and the waist circumference was 100.5±11.1 cm. POAF developed in 29 of the patients (18.0%). There was a statistically significant difference in terms of EATT and left ventricle end-diastolic diameter between the group with POAF and the groups without POAF (EATT in the group with POAF: 6.4±1.9 mm, EATT in the group without POAF: 5.5±1.8 mm) ($p<0.05$). In multivariate logistic regression analysis, epicardial adipose tissue thickness was shown to be an independent predictor factor in the development of POAF (OR: 1.24, CI: 1.01-1.53, $p=0.04$). A statistically significant difference was found between EATT and BMI and waist circumference ($p=0.002$ and $p<0.001$, respectively).

Conclusions: Measuring EATT preoperatively can provide an idea about the development of POAF. A high correlation was found between EATT values measured by CT and ECHO. In this regard, ECHO can be considered a good alternative to CT, which is the gold standard in EATT measurement. ECHO is more accessible, reproducible, and cost-effective without radiation exposure.

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Keyword: *epicardial adipose tissue, transtoracic echocardiography, computed tomography, postoperative atrial fibrillation*

ID: 173

Topic:

Cardiovascular Surgery > Research

Presentation Type:

Oral Presentation

Imaging And Functional Evaluation Of The Positive Effect Of Transplantation Of Undifferentiated Mesenchymal Stem Cells In Experimental Model Of Myocardial Infarction.

MD Antonella Koutela[*] [1] **,** Assoc. Prof. George Loudos[2] , Assoc. Prof. Dimitris Kletsas[3] , Assoc. Prof. Andreas Karameris[4] , Prof. George Zografos[5] , Prof. Dimitrios Dougenis[6] , Prof. Apostolos Papalois[5]

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Introduction : Cardiovascular diseases like ischemic myocardial infarction remain worldwide with high lethality and mortality beside the extended researches for pharmaceutical therapies. Isolation of mesenchymal stem cells (ADSCs) from adipose tissue created a new spectrum of research. ADSCs are now known to be able to differentiate to myocardial cells and create cardiac tissue. In our protocol we use the genetic factors GATA-4 and nkx2,5 which are associated with the regeneration and differentiation of the myocardium respectively.

Methods : We used 46 adult Wistar rats of conventional microbiological status (40 females – receivers and 6 males - donors) weighting 200-250gr. The adipose tissue was collected from the male donors and was immediately transferred to the laboratory at 4°C. The female-receivers were randomly allocated in 3 groups (sham operated,control and experimental group). On Day -7 (7 days pre-operatively) we performed a SPECT–CT with injection of 99mTc-sestamibi to all female animals. On Day 0 (operation day) all groups underwent left thoracotomy and - besides sham operated - ligation of LAD for 45min with ECG monitoring confirming ischemia. Control : injection of N/S intramyocardially. Sham: no ligation. Experimental : injection of ADSCs intramyocardially without removal of ligation. On Day +7 and Day +14 (7 and 14 days post-operatively) the animals that survived underwent new SPECT-CT followed by euthanasia on Day +16 (16 days postoperatively) together with blood sampling and heart harvesting for histological and immunohistochemical evaluation.

Results : ADSCs were successfully engrafted into the myocardium and had beneficial effect on the ischemic myocardial area of the experimental groups with regeneration and increase of contractility especially in the 14th postoperative day compared with the control groups. Specifically imaging with SPECT-CT revealed significant absorption of 99Tc and viability of the myocardium on postoperative Day 14 in the experimental groups. The expression of GATA-4, nkx2,5 and IL-6 was significantly upregulated compared with the control groups.

Conclusion : ADSCs are definitely the therapeutic approach of the future and GATA-4 as nkx2,5 are the genetic factors that are leading to an extended regeneration of the ischemic myocardium. The promising results so far are leading us to increase the number of animals in our protocol to further evaluate the clinical significance of ADSCs transplantation in cases of acute myocardial infarction.

ID: 160

Topic:

Cardiovascular Surgery > VAD and heart TX

Presentation Type:

Oral Presentation

Relationship Between Preoperative NTproBNP and Postoperative Adverse Events in Patients with Left Ventricular Assist Device

MD Osman Fehmi Beyazal[*1], Prof. Ümit Kervan[2], Assoc. Prof. Mehmet Karahan[2], Assoc. Prof. Sinan Sabit Kocabeyoğlu[2], Assoc. Prof. Doğan Emre Sert[2], MD Mustafa Akdi[2], Prof. Ahmet Temizhan[2], Prof. Burcu Demirkan[2], Prof. Zeki Çatav[2]

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Table 6. The Status of investigating the difference between postoperative adverse events in terms of NT-proBNP when patients were divided into groups by cut-off point.

	NT-proBNP ⩽1725.5 pg/ml	NT-proBNP >1725.5 pg/ml	*p*
	(*n* = 11)(%)	(*n* = 35)(%)	
Late RVF	1 (9.1)	2 (5.7)	0.723[a]
Early RVF	1 (9.1)	5 (14.3)	0.621[a]
Reoperation due to bleeding	2 (18.2)	5 (14.3)	0.765[a]
Ischemic CVA	2 (18.2)	5 (14.3)	0.765[a]
Hemorrhagic CVA	2 (18.2)	9 (25.7)	0.585[a]
GI bleeding	3 (27.3)	2 (5.7)	0.123[a]
Pump thrombosis	2 (18.2)	5 (14.3)	0.765[a]
	Median (Q_1–Q_3)	Median (Q_1–Q_3)	
Duration of Intubation	1.0 (1.0–3.0)	1.0 (1.0–2.0)	0.899[b]
Duration of ICU stay	6.0 (4–14)	7 (4–19)	0.611[b]
P.o. First day amount of bleeding	800.0 (500.0–1100.0)	600.0 (450.0–750.0)	0.211[b]
P.o. Second day amount of bleeding	400.0 (200.0–600.0)	400.0 (250.0–550.0)	0.924[b]
First 24 h RBC using	1.0 (0–3.0)	1.0 (0-2.0)	0.846[b]
First 24 h FFP using	3.0 (2.0–4.0)	2.0 (2.0-3.0)	0.130[b]

RVF: right heart failure, CVA: cerebrovascular accident, GI: gastrointestinal, P.o: postoperative, RBC: red blood cells, FFP: fresh frozen plasma. Q_1: first Quarter, Q_3: third Quarter.
[a]It was done using the significance test of the difference between the two percentages.
[b]It was done by Mann-Whitney U test.

Background: The aim of this study is to investigate the relationship of preoperative NT-proBNP values with postoperative adverse events in patient left ventricular assist device (LVAD) implantation.

Method: Forty-six patients (35 males; mean age 49.4±12.9years) who underwent LVAD implantation between 2016 and 2018 were evaluated in this study. Firstly, the relationship between preoperative NT-proBNP and mortality, postoperative right ventricular failure (RVF), reoperation due to bleeding, cerebrovascular accident, gastro intestinal bleeding, pump thrombosis, postoperative drainage, number of blood products transfusion, duration of intubation, duration of intensive care unit (ICU) stay, postoperative need for extracorporeal membrane oxygenation (ECMO) or intraaortic balloon pump (IABP) was examined. The optimal NT-proBNP cut-off values for predicting mortality were determined using Receiver Operator Characteristic (ROC) curve analysis and the patients were divided into two groups according to the specified cut-off point. The relationship between these two

groups in terms of NT-proBNP in terms of postoperative adverse events was examined. Afterward, correlation analysis was performed with preoperative NT-proBNP.

Result: Median NT-proBNP was higher in patients who died, had postoperative ECMO, and early RVF. The median NT-proBNP was 11,103 pg/ml in patients with IABP, and 2943 pg/ml in patients without IABP, and the difference was statistically significant (p=0.002). No statistically significant correlation was found between preoperative NT-proBNP and postoperative drainage, the number of blood products administered, duration of intubation time, and duration of ICU stay (p>0.05). The cut-off point for NT-proBNP was found to be 1725.5pg/ ml (Sensitivity:0.929, Specificity:0.688). Accordingly, when the patients were divided into two groups and analyzed, no statistically significant difference was found between preoperative NT-proBNP below or above 1725.5 and postoperative adverse events. There was no statistically significant correlation between preoperative NT-proBNP and postoperative drainage, duration of intubation time, and duration of ICU stay (p>0.05).

Conclusion: Although no statistically significant association was found, preoperative NT-proBNP was higher in patients with LVAD implanted in those with postoperative adverse events. Besides, when looking at the results of other studies in the literature, evaluating postoperative NT-proBNP in addition to preoperative NT-proBNP, comparing these values with preoperative values, and observing NT-proBNP at routine intervals in the postoperative period can guide physicians in their follow-up. However, we think that in the future, by conducting prospective studies with larger number of patients and looking at preoperative NT-proBNP as well as postoperative NT-proBNP, postoperative advers effects can be predicted and more positive results can be obtained.

Keyword: *Heart-assist devices, pro-brain natriuretic peptide, right ventricular dysfunction, bleeding, cerebrovascular accident*

ID: 107

Topic:

Cardiovascular Surgery > Minimally invasive mitral valve surgery

Presentation Type:

Oral Presentation

Hyperbilirubinemi After Peripheral Cannulation in Redo Cardiac Surgery

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OBJECTIVES: In open heart surgery, central or peripheral cannulation is preferred for extracorporeal circulation. Central cannulation is more common, but peripheral cannulation practice has increased due to minimally invasive procedures, aortic pathologies, redo surgeries.1 Peripheral cannulation has advantages such as rapid vascular access, decompression of the heart, less manipulation of the aorta.2 Many articles have reported less bleeding and death when peripheral cannulation is performed, especially in redo operations.2-3

Hyperbilirubinemia is a cost-effective, widely available prognostic marker for mechanical ventilator requirement, hospital mortality, and long-term survival after postoperative cardiac surgery.4 In addition, extracorporeal circulation is a risk factor for hyperbilirubinemia.5 In this study, we present the results of postoperative hyperbilirubinemia in 164 patients who underwent femoral venous cannulation in our center.

METHODS: This was a retrospective study including patients who underwent open heart surgery at Dokuz Eylul University between 2014 and 2023. We identified patients who underwent peripheral cannulation without preoperative hyperbilirubinemia. We analyzed the demographic and surgical procedure data of these patients and divided them into 2 groups as primary and redo surgery. We evaluated the conjugated bilirubin level measured in the first 24 hours postoperatively and compared the values in the two groups.

RESULTS: Venous drainage was provided from the main femoral vein using the Seldinger method in all cases, and cannulation was routinely performed before sternotomy in redo cases. In 164 operations, conjuge hyperbilirubinemia was detected in 141 (85%) patients. In the comparison between 86 primary surgeries and 78 redo surgeries, conjugated hyperbilirubinemia was found to be significantly higher in redo surgery. (OR:3.86 95 % CI:1.35 to 10.98 p=0.011) In addition, in the last 9 years, peripheral cannulation was mostly preferred in our institution because of redo surgery. We also found that peripheral cannulation was preferred because of minimally invasive procedures and no touch aorta technique.

Table 1: Association of demographic and surgical procedure data with hyperbilirubinemia	Redo Surgery (n=78)		Primary Surgery (n=86)		p Value	Odds Ratio
	Conjugated Hiperbilirubinemi (n=73)	Normal (n=5)	Conjugated Hiperbilirubinemi (n=68)	Normal (n=18)	0.0112	3.86
Male	22	3	38	9	0.4423	1.73
Famale	51	2	32	6	0.0647	4.78
<18 years	21	0	11	4	0.0659	16.82
>18 years	54	3	58	13	0.0367	4.03
Congenital Procedures	28	2	16	4	0.1738	3.50
Minimally İnvasive Procedures	6	0	48	4	0.9141	1.18

CONCLUSIONS: Peripheral cannulation is a valid and reproducible option to make redo cardiac surgery safer and faster during resternotomy. The absence of a cannula in the operating area increases the comfort of the surgeon. However, it has disadvantages such as additional incision, risk of vascular complications and long cardiopulmonary bypass time. Hyperbilirubinemia is an important prognostic factor commonly seen after cardiac surgery. In this study, a high rate of hyperbilirubinemia was detected in redo and primary surgeries with peripheral cannulation. The hyperbilirubinemia in redo surgeries was statistically significant compared to primary surgery. As a result, routine peripheral cannulation before resternotomy may increase the postoperative hyperbilirubinemia by prolonging the time of extracorporeal circulation.

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Keyword: *redo cardiac surgery, hyperbilirubinemia, peripheral cannulation*

ID: 271

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

The Surgical Approach for Patients Developing Sternal Dehiscence After Sternotomy

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Aim: Sternotomy is the most common approach in cardiac surgery. Sternal instability and infection are serious complications after median sternotomy. Reoperation is often required to maintain sternal stability. In this study, we presented our surgical approach methods in cases with sternal dehiscence.

Material-Method: Between December 2020 and July 2023, patients who underwent sternotomy for 518 coronary artery disease, 71 mitral valve replacement and 43 aortic valve replacement, who developed sternal dehiscence during the follow-up period, were retrospectively analyzed in Tekirdag Dr.Ismail Fehmi Cumalıoglu City Hospital,.

Results: Surgical intervention was performed in 23 of 632 median sternotomy cases. The median age was 62 ± 8.7 years (Range: 40-77), while 18 (78.3 %) were male and 5 (21.7 %) were female. The presence of comorbidity was seen in 16 (69.6 %) cases. While local infection was seen in 2 (8.7 %) cases, systemic infection was observed in 4 (17.4%) cases. Operation types; 4 (17.4%) steel wire removal, 5 (21.7%) reuse of steel wire, 4 (17.4%) Robicsek technique, 2 (8.7%) use of sternal plate and 8 (34.8%) use of sternal clip. Two of the patients were performed resurgery for sternal dehiscence and mortality or morbidity were not observed in the series.

Conclusion: Sternal dehiscence is a complication that can cause serious morbidity and mortality, its intervention is important. With our clinical experience, we prefer the sternal clip application as the most appropriate and physically supportive material in terms of providing sternal stability.

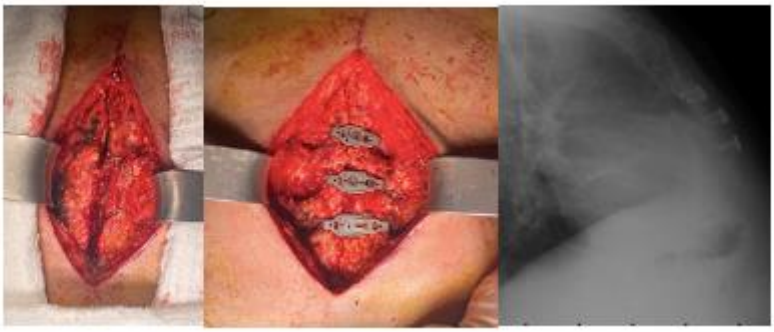

Figure 1: Sternal clips

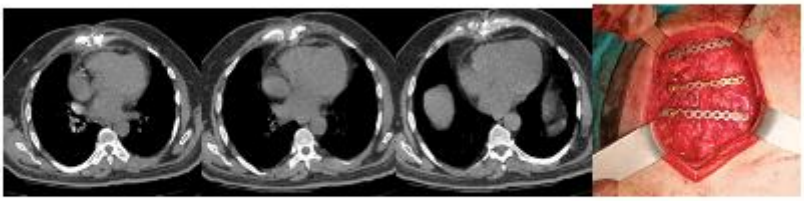

Figure 2: Sternal plate

Figure 3: Robicsek technique

Caption

ID: 76

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

Surgical Pericardiectomy For Constrictive Pericarditis

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BACKGROUND

Chronic constrictive pericarditis is the result of an inflammatory disease that modifies the elasticity of the pericardium. These diseases create a fibrous and calcified pericardium which could develop heart failure. Pericardiectomy is the gold standard for chronic constrictive pericarditis, improving clinical symptoms and long term outcomes. The aim of this study is to describe etiology, our surgical results and recurrence in our 17 years of experience.

METHODS

A retrospective study carried out over 17 years, on patients underwent pericardiectomy. All patients underwent median sternotomy and pericardiectomy without the use of cardiopulmonary bypass. Pericardiectomy was performed removing the pericardium between both phrenic nerves.

RESULTS

Twenty one patients were included. Mean age was 61 yo. 23,8% were female and 4.7% had previous surgery. Hospital mortality was 14%. Regarding etiology, 52% was idiopathic, followed by infectious disease 38%, and less frequent neoplastic cause and postcardiotomy, beeing 4,7%. Concomitant valve surgery was necessary in one patient, three patients had cardiac tamponade requiring emergent surgery. 57% presented NYHA II. Mean hospital stay was eight days. One patient needs a reintervention. Average of survival rate was 81% at 7.8 years.

CONCLUSIONS

Periardiectomy performed by median sternotomy is an effective treatment in the vast majority of patients,improving long term outcomes. In our series long term mortality is 14% with a very low recurrence rate.

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ID: 272

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

Surgical Approach Of Thymic Tumors

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Introduction: Thymic epithelial tumors, grouping together thymomas and thymic carcinomas, are rare tumors, nevertheless representing 20% of mediastinum tumors, and even 50% of those located in the anterior mediastinum. Often accidentally discovered, thymomas have the particularity of being associated with autoimmune diseases, in particular myasthenia gravis. The objective of this work is to describe the video-assisted minimally invasive surgical technique (VATS) used in thymic surgery and specify its indications, advantages and limits. Patients and Methods: Retrospective monocentric study of 26 patients who underwent VATS thymectomy, collected in the thoracic surgery department over a 5 year period. The surgical technique, type of resection, operative time, hospital stay, postoperative complications and recurrence were studied. Results: This study consisted of 26 patients (16 women and 10 men), with an average age of 39.7 years. The presence of myasthenia was noted in 19 patients. Using the MGFA classification, 61.53 % of the patients were classified as stage III. All patients were operated for thymectomy by VATS thoracoscopic approach. No intraoperative incidents were noted. There was no conversion to sternotomy and no perioperative death. The average operating time was 95 min. The postoperative course was simple without any postoperative complications, in particular no myasthenic crisis. The mean duration of chest tube was 2 days. The average length of hospitalization was 4 days. At the anatomopathological study, 50 % of patients had thymic hyperplasia, 25 % had thymoma, 12.5 % had thymolipoma and 12.5 % had involutional thymus. According to the postoperative MGFA, 69 % of patients achieved pharmacological remission or minimal manifestations status. After thymectomy, 88.46% of patients improved their myasthenic score. Evaluation of drug therapy after surgeryshowed a reduction or elimination of the use of anticholinesterase drugs in 80.77 % of patients, corticosteroids in 61.53 % of patients, and immunosuppressants in 38.46 % of patients. Conclusion: Minimally invasive surgery is a safe approach that seems to be part of the therapeutic arsenal for the management of Masaoka stage I and II thymoma, whether or not associated with autoimmune myasthenia gravis, as an alternative to conventional sternotomy. VATS is a safe and reliable technique with a low functional impact and should be used more and more in our context

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Keyword: *Video Assisted Thoracic Surgery, Thymectomy, Thymoma, Myasthenia Gravis*

Oral Presentation Session

Critical Issues in Carotid Artery Disease: A Moment of Attention

Date: 05.11.2023 Time: 09:15 – 10:15 Hall: 7

ID: 95

Topic:

Cardiovascular Surgery > Diagnosis and treatment of valvular heart disease

Presentation Type:

Oral Presentation

The Role Of Ultrasound Scanning In Studying The Changes In Williziev's Circulation In Patients Underwent Staged Reconstructive Operations On Bilateral Carotic Arteries

Prof. Abdurasul Yulbarisov*

Republican Special Center Of Surgical Angionevrology

Yulbarisov A.A., Alidzhanov H.K., Djumaniyazova D.A., Muminov R.T., Nurmatov D.Kh., Abdurakhmonov S.A., Aripova F.M.

Republican Specialized Center of Surgical Angioneurology

The purpose: to analyze the results of hemodynamic changes in the ultrasound scanning before and after the procedure in patients who had staged procedures on bilateral carotid arteries.

Methods: in 2021-2022, 45 (100%) patients underwent bilateral reconstructive surgery on carotid arteries at the Republican Center of Surgical Angioneurology. They were examined by transcranial duplex scanning (TCDS) in the pre- and post-operation periods. The age of the patients ranged from 64 to 76 years, the mean age was 69±4.3. All patients underwent step-by-step reconstructive operations on bilateral carotid arteries. The side to be operated on was determined according to the degree of stenosis and neurological status. The average time between operations was 2 months.

Results: The study schowed that in 35 (78%) cases of patients who were operated on the first side after the MATAS test was performed on TCDS, high tolerance to ischemia was detected. These patients were recommended to be operated without using a shunt during the operation. In 31 of the above 35 patients, the shunt was not used at the time of operation, and the above mentioned conclusions were confirmed. However, in the remaining 4 cases, it was determined that the tolerance of the brain to ischemia was low during the operation, and the shunt had to be introduced. The results of MSCTA of the intracranial arteries of those 4 patients showed that the critical narrowing of the anterior artery and in the 3 patients the absence of posterior communicant arteries were detected.

In 8 patients, low tolerance was detected during the operation, and it was recommended to use a shunt for the operation. In 6 of these patients, high tolerance during the operation was determined and the patients were operated without shunting. In all 6 patients were diagnosed severe narrowing of the anterior connecting arteries and critical narrowing of the posterior connecting arteries. In order to study the compensation X-ray contrast angiography was performed and the result was that these patients had well-developed anastamoses between the external carotid artery and cervical and brachial artery networks with the cerebral artery.

In all patients, a positive result was obtained in the TCDS examination in the period after the first operation.

After the second operation, a positive result was obtained in the TCDS examination, the mean flow in patients was expected to be from 38cm/sec to 74cm/sec. It was determined that the difference in cerebral blood flow between the operations decreased from 45% to 9% and the asymmetry was reduced.

After the first operation, the volume of the total circulation of the brain increased from 112 ml/min to 189 ml/min, and after the second operation, it increased from 184 ml/min to 295 ml/min.

Conclusion: TCDS has the highest informativeness in evaluating the results of the operation performed on the carotid arteries and studying changes in intracranial hemodynamics and provides great information to surgeons.

ID: 189

Topic:

Cardiovascular Surgery > Diagnosis and treatment of carotid artery disease

Presentation Type:

Oral Presentation

Benefits Of Using A Small Skin Incision For Carotid Endarterectomy

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Aim: To identify advantages and disadvantages of different accesses to the carotid arteries (classical, longitudinal and transverse mini-incisions).

Material and Methods: 58 patients underwent eversion carotid endarterectomy. The patients were divided into two groups based on the type of surgical accesses used. Group 1 (n = 37) included patients who underwent surgeries performed through small incisions (less than 5 cm), and was divided into the subgroup A - transverse mini skin incision along the natural skin wrinkle (n = 17), and the subgroup B - longitudinal mini skin incision (n = 20). Group 2 (n = 21) included patients who underwent surgeries using generally accepted longitudinal access. The observation periods were 1 month and 1 year. Criteria: mortality, stroke, TIA, cranial nerve (CN) neuropathies. Cosmetic outcomes were evaluated using the POSAS (Patient and Observer Scar Assessment Scale, Draaijers, 2004).

Results: After 1 month mortality, stroke and TIA were not observed. CN neuropathies - 1A gr: 0; 1B gr: 2 (10%); 2 gr: 6 (28.5%). Cosmetic effect - 1A gr: 48.4 ± 9.5 points (the sum of the assessment by the patient and the doctor); 1B gr: 52.4 ± 9.2; 2 gr: 63.1 ± 11.1. After 12 months: mortality - 1A gr: 0; 1B gr: 0; 2 gr: 2 (AMI). Stroke - 1A gr: 0; 1B gr: 0; 2 gr: 1. CNN - 1A gr: 0; 1B gr: 0; 2 gr: 4 (21%). Cosmetic effect - 1A gr: 37.2 points; 1B gr: 40.0; 2 gr: 55.1. QOL, physical component: 1A gr: 51.63 ± 6.31 points; 1B gr: 46.01 ± 7.53; 2 gr: 38.85 ± 5.33; psychological component: 1A gr: 49.64 ± 6.72 points; 1B gr: 45.68 ± + 5.63; 2 gr: 48.6 ± 7.36.

Conclusion: Transverse mini invasive access to the carotid arteries is a safe alternative to the classical longitudinal incision and can reduce the risk of postoperative complications with a significant cosmetic effect.

ID: 113

Topic:

Cardiovascular Surgery > Diagnosis and treatment of valvular heart disease

Presentation Type:

Oral Presentation

Our Experience Of Surgical Treatment In Combined Stenosis Of Carotid Bifurcations And Supra-Aortic Arteries

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Objectives: The purpose of our study is to describe the technique, while evaluating the safety and efficacy of hybrid carotid revascularization in the treatment of combined occlusive lesions of the carotid bifurcation and supra-aortic arteries (common carotid artery (CCA) or the brachiocephalic trunk (BCT)).

Materials and Methods: This is a single-center prospective cohort study, including all patients undergoing hybrid carotid revascularization from 2018 to 2023. A total of 21 patients were included in our cohort. There were 16 men and 5 women, with an average age of 56.8 ± 7.1 years. Atherosclerosis was the presumed etiology of arterial stenosis in all of the cases. All surgical interventions were performed with local anesthesia by means of standard operative access to the carotid artery bifurcation. A 6F sheath was placed in the femoral artery and a pigtail catheter was positioned in the aortic arch so that positioning can be confirmed before stent placement. The antegrade stenting of the CCA or BCT was then performed, depending on the clinical situation. After the correction of the proximal stenosis of the CCA or BCT and the performance of the angiography for confirmation of position, the carotid endarterectomy (CEA) was performed. The mean follow-up was 19.8 months (range, 6-36).

Result: In 15 cases, hemodynamically significant stenosis of the left internal carotid artery (ICA) of more than 70% was found in combination with stenosis of more than 60% of the left CCA. These patients underwent stenting of the left CCA stenosis in combination with CEA. 2 patients underwent CEA using the eversion technique and 13 patients using patch angioplasty. In 6 cases, patients had right ICA stenosis of more than 70% combined with critical stenosis of the BCT of more than 70%. These patients underwent CEA with patch angioplasty of the right ICA in combination with stenting of the critical BCT stenosis. During the early postoperative period and follow-up to 36 months, a stroke was not registered. None of the patients experienced procedural or immediate postprocedure bleeding, access site complications, or myocardial infarction. During the follow-up, 2 patients died. The cause of death in the first case was coronary heart disease (6 months) and in the second case was related to malignancy (12 months).

Conclusion: Hybrid interventions (CEA and stenting of the CCA or BCT) allow practitioners to combine the advantages of each method in providing a therapeutic intervention for patients with multilevel lesions of the carotid bifurcations and supra-aortic arteries. This single center study supports the safety and durable efficacy of these procedures in a small cohort of patients.

ID: 222

Topic:

Cardiovascular Surgery > Vascular surgery and vascular access

Presentation Type:

Oral Presentation

Post-Tonsillectomy Carotid Artery Injury With High Bifurcation, A Case Report and Literature Review

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Background: Post-tonsillectomy carotid artery injury is rare but a potentially life-threatening complication. This report presents a unique case of post-tonsillectomy carotid artery injury and its implications for clinical practice, with a review of the literature.
Methods and results: This case report describes a 25-year-old male patient with no comorbidities who developed an intraoperative post-tonsillectomy carotid artery injury with hemorrhagic shock associated with high carotid bifurcation, control of bleeding was achieved by external carotid artery surgical ligation.
A review of the literature since 1990 revealed the rarity of carotid injury during tonsillectomy, various open surgical and endovascular techniques were implicated.
Conclusion: Prompt recognition and management are crucial to preventing catastrophic outcomes in cases of post-tonsillectomy carotid artery injury.

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Keyword: *Carotid artery, Bleeding, Tonsillectomy, High bifurcation*

ID: 99

Topic:

Cardiovascular Surgery > Surgical treatment of AF

Presentation Type:

Oral Presentation

SURGICAL TREATMENT OF PATIENTS WITH VERTEBROBASILAR INSUFFICIENCY

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Relevance. Circulatory disorders in the vertebrobasilar pool (VBP) are widespread and account for 25-30% in the structure of all cerebrovascular disorders. One of the promising methods for the treatment of vertebrobasilar insufficiency (VBI), in particular in hemodynamically significant stenoses, is stenting of the vertebral arteries.

Purpose: to study the results of various methods of treating patients with clinical manifestations of vertebrobasilar insufficiency.

Material and methods. The results of treatment of 78 (100%) patients with VBI syndrome who were hospitalized at the Republican Specialized Center for Surgical Angioneurology from 2021 to 2023 were analyzed. All patients depending on the tactics of treatment were divided into 3 groups. group 1 - 30 (38.5%) patients who underwent stenting of the 1st segment of the vertebral artery, group 2 - 28 (35.9%) patients who underwent carotid endarterectomy as a treatment method, group 3 - 20 (25.6%) of patients who received conservative treatment. Patients of the 3 groups were comparable in terms of sex and age. All these patients had hemodynamically significant stenoses (more than 65%) in segment I of the vertebral and carotid arteries. Of these, signs of chronic dyscirculation in the VBP were identified in 24 patients (31%), transient ischemic attacks in the VBP were observed in 19 patients (24%), and in 35 patients (45%) a history of ischemic stroke in the VBP was verified. If a hemodynamically significant lesion of the carotid arteries (more than 70% stenosis) and preserved blood flow in the ipsilateral posterior communicating artery were detected, the patients underwent carotid reconstructions of the carotid arteries.

Results: The follow-up period averaged 24.6±8.8 months (from 6 months to 2 years). After conservative therapy, 15 (76%) patients showed clinical improvement - regression of VBI symptoms, disappearance of dizziness and unsteadiness when walking, but after 4-6 months these symptoms reappeared. In 5 (24%) patients, no clinical improvement was found after conservative therapy. Among 28 patients who underwent carotid reconstruction of the carotid artery, a clinical improvement in symptoms and velocity parameters of blood flow through the posterior communicating artery was observed in 24 (86%) patients. The rest 4 (14%) patients of this group showed no changes in the VBI clinic. Among patients who underwent stenting of segment I of the vertebral arteries, in 27 (91%) cases, a persistent clinical improvement was observed, manifested in a decrease or disappearance of the VBI clinic during the follow-up. In 3 (9%) patients after X-ray endovascular intervention, no significant clinical improvement was found, although with TCDS they had an increase in the blood flow velocity in the basilar artery.

Conclusions: 1. When determining the indications for carotid reconstruction in patients with VBI, the conditions of the circle of Willis should be taken into account.

2. Stenting of segment I of the vertebral arteries in patients with VBI can be considered as an alternative to open VA reconstruction with a good clinical effect.

ID: 278

Topic:

Cardiovascular Surgery > Vascular surgery and vascular access

Presentation Type:

Oral Presentation

Comparison Of The Effects Of Acetylsalicylic Acid+Pentoxyphilline With Cilostazol Treatments In Carotid Artery Stenosis Patients

Assoc. Prof. Seyhan Yılmaz[*] [1] **,** Prof. Serdar Günaydın[2]

[1] *Giresun EAH*

[2] *Ankara City Hospital*

Background: Stroke is the third common reason of mortality in USA. 80% of stroke cases is ischemic type and 30% of them is secondary to carotid artery stenosis. This study aims at searching the efficiency of actual medications used commonly in the treatment of carotid artery stenosis patients inappropriate for surgery for six months comparing prognosis, carotid artery diameter, percentage of stenosis, intimal thickness, flow velocity, increase in resistance, plaque diameter and impact on semptomatology.

Methods: A total of 40 patients inappropriate for revascularization surgery were randomized for medical treatment either to receive cilostazol 2x100 mg or acetylsalicylic acid 1x150 mg+pentoxifylline 2x600 mg. Data of baseline and six month after treatment were recorded.

Results: In six-month control, internal carotid artery Vmax, percentage stenosis, plaque diameter and intimal thickness decreased in both groups. Decrease in cilostazol group was significantly better than control group. Control internal carotid artery diameter increased in both groups, but it was significantly better in cilostazol group. Control internal carotid artery resistance index parameter decreased in cilostazol group but increased in acetylsalicylic acid group. This combination therapy can be predicted from the results of activity observed in the study of ex vivo studies and explained by the effect on platelet P-selectin expression induced by tearing.

Conclusion: This study demonstrates that cilostazol treatment may be a good alternative with control of
risk factors in the follow-up of carotid artery stenosis patients inappropriate for surgery.

References:

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Keyword: *carotid artery stenosis, cilostazol, acetylsalicylic acid*

Oral Presentation Session

Understanding Pulmonary Hypertension

Date: 05.11.2023 Time: 10:30 – 11:30 Hall: 6

ID: 191

Topic:

Cardiology > Other

Presentation Type:

Oral Presentation

Evaluation of a Large Single-Center Series of Patients with Acute Pulmonary Embolism from Different Risk and Treatment Categories From the Perspective of the Presence of Malignancy

MD Aykun Hakgör[*] [1] **,** MD Seda Tanyeri[2] , Prof. Cihangir Kaymaz[3]

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[2] *Kocaeli City Hospital*

[3] *UHS Kosuyolu Training and Research Hospital*

Introduction:

Although it is known that the frequency of venous thromboembolism is increased in patients with malignancy, literature data on disease severity, prognosis and optimal treatment approach is still unclear, especially in the acute pulmonary embolism (APE) subgroup. In this retrospective-observational study, a large single-center APE patient series was analyzed for the presence of malignancy.

Method:

864 patients diagnosed with APE and treated with different pharmacological or interventional treatments according to risk categories were analyzed retrospectively. Clinical features, vital signs, pulmonary embolism severity index (PESI)/simplified PESI (sPESI) scores, shock indices, echocardiographic and CT pulmonary angiograpy (CTPA) data of all patients at admission and after treatment were recorded.

Results:

The numbers and rates of low-risk, intermediate-low-risk, intermediate-high-risk and high-risk APE patients were 121(14%), 146(16.9%), 516(59.7%), 81(9.4%), respectively. Of these patients, 235(27.2%) were treated with ultrasound-assisted thrombolysis (USAT), 56(6.5%) with rheolytic thrombectomy (RT), 144(16.7%) with IV t-PA infusion, and 429(49.7%) with parenteral anticoagulation alone. In-hospital and long-term mortality, minor and major bleeding rates were 59(6.8%), 118(13.7%), 40(4.6%), and 41(4.7%), respectively. 127(14.7%) patients were suffered from oncological disorder in study group. When the patients were evaluated for the presence of malignancy, statistically significant differences were observed in terms of age, initial systolic, diastolic blood pressure, heart rate, room air oxygen saturation, shock index, risk status, PESI and sPESI scores. There was no significant difference in other baseline characteristics, echo and CTPA measurements (Table-1). Considering the risk status of APE, it was determined that patients with malignancy were statistically more frequently in the IHR and HR groups (p=0,001) (Table 2-a).

When the treatment preferences were compared in terms of the presence of malignancy, it was reported that USAT and IV t-PA infusion were utilizeded less proportionally, the use of RT and only anticoagulation were applied more frequently in patients with malignancy (p>0.05) (Table 2-b). Statistically significant increase was observed in patients with malignancy for both in-hospital and long-term mortality (OR:2.32, 95%CI (1.26–4.27), p<0.05 and OR:4.78, 95%CI (2.97–7.7), p<0.05). There was no significant difference between major and minor bleeding rates (p>0.05).

Table-1: Baseline characteristics of patients with and without malignancy.

Variable	Malignancy (+)	Malignancy (-)	p value
Age	65,2±13,3	60,9±17,3	0,002
Heart rate (bpm)	111,9±19,4	105,7±20,3	0,001
Systolic blood pressure (mmHg)	116±24,2	124,1±24,3	0,001
Diastolic blood pressure (mmHg)	71,2±16	76,1±17,7	0,004
Oxygene saturation (%)	88,5±6,4	89,4±6,9	0,008
PESI	132,5±31,2	95,6±35,4	<0,01
sPESI	3,3±10,7	1,2±1	0,029
Shock index	1,03±0,36	0,92±0,39	0,006
Echo sPAP (mmHg)	50,7±13,8	50,4±14,3	0,859
TAPSE (cm)	2±2,6	1,8±0,4	0,599
Right ventricle TDI (St) (cm/sec)	11±3,2	11,6±2,9	0,118
RV/LV ratio	1,1±0,2	1,1±0,2	0,406
RA/LA ratio	1,6±3,3	1,4±2,9	0,644
Qanadli score	20±7,3	20,3±7,4	0,694
Main PA / Aortic ratio	2,1±6,5	1,3±3,8	0,302

Table-2: Comparison of pulmonary embolism risk status (a) and treatment modality (b) between patients with and without malignancy.

	Pulmonary Embolism Risk Status				
	LR	ILR	IHR	HR	Total
Malignancy (-)	113 (15,3%)	121 (16,4%)	444 (60,2%)	59 (8%)	737
Malignancy (+)	8 (6,3%)	25 (19,7%)	72 (56,7%)	22 (17,3%)	127
Total	121 (14%)	146 (16,9%)	516 (59,7%)	81 (9,4%)	864

(a)

	Treatment Modality				
	USAT	RT	IV t-PA	AC ALONE	Total
Malignancy (-)	211 (28,6%)	43 (5,8%)	132 (17,9%)	351 (47,6%)	737
Malignancy (+)	24 (18,9%)	13 (10,2%)	12 (9,4%)	78 (61,4%)	127
Total	235 (27,2%)	56 (6,5%)	144 (16,7%)	429 (49,7%)	864

(b)

Conclusion:

As a result of this study, the presence of malignancy may aggravate the risk of disease and hemodynamic status in patients with APE, and increase both in-hospital and long-term mortality regardless of the treatment approach. In addition, the use of thrombolytic-based therapies seems to be more limited as it is predicted that patients with malignancy are more susceptible to bleeding.

Keyword: *acute pulmonary embolism, malignancy, risk groups, bleeding, thrombolysis*

ID: 100

Topic:

Cardiology > Pulmonary arterial hypertension (PAH)

Presentation Type:

Oral Presentation

The Impact Of The New Hemodynamic Definition On The Prevalence Of Pre-Capillary Pulmonary Hypertension

Assoc. Prof. Umit Yasar Sinan* **,** MD Kemal Engin , Prof. Mehmet Serdar Kucukoglu
Istanbul University-Cerrahpasa Institute of Cardiology, Department of Cardiology

Background: The current 2022 ESC pulmonary hypertension (PH) guideline suggests mean pulmonary artery pressure (mPAP) >20 mm Hg, pulmonary arterial wedge pressure (PAWP) <15 mm Hg, and pulmonary vascular resistance (PVR) >2 WU as new hemodynamic definition of pre-capillary PH.

Purpose: We aimed to investigate the impact of the new ESC 2022 PH definition on number of pre-capillary PH patients.

Methods: The results of right heart catheterization (RHC) performed with various clinical indications between 2017 and 2023 were analyzed. Both 2015 and 2022 European Society of Cardiology (ESC)/European Respiratory Society (ERS) PH guidelines were used to identify PH patients.

Results: One hundred twenty-three RHC procedures were performed in a 6-year period. Most of them were female (72.4%). The clinical indications for RHC were suspicion of congenital heart disease associated pulmonary arterial hypertension (APAH-CHD) in 32.5% of patients, idiopathic PAH in 43.9% of patients, PH due to left heart disease in 17.9% of patients and chronic thromboembolic pulmonary hypertension (CTEPH) in 5.7% of patients. The mean age was 53.1±16.6 years. The RHC results revealed a mean PAP of 35.4±17.8 mm Hg, PAWP of 13.3±6.0 mm Hg, and PVR of 5.2±6.3 WU. While 20% of patients had no PH, almost 10% of patients had pre-capillary PH according to new 2022 ESC/ERS guideline hemodynamic PH definition criteria which was not able to be classified as pre-capillary PH according to previous ESC/ERS guideline. There was 8.1% patients had combined pre and post-capillary PH according to current guideline. Finally 15.4% of patients had undefined PH, defined as mPAP >20 mmHg, but PVR <2WU, which was a novel definition for the first-time mentioned in 2022 guideline.

Conclusion: Current ESC/ERS guidelines for the diagnosis and treatment of PH will increase almost 10% our PAH patients population who are going to be treated with PAH specific drug therapy.

Table 1. The prevalence of pre, post and combined pre, post-capillary PH patients according to 2022 ESC/ERS PH guideline.

Definition	**Patients, N (%)**
Current pre-capillary PH (PVR >2 WU, mPAP >20 mmHg and PCWP ≤15 mmHg)	12 (9.8%)
Previous pre-capillary PH (PVR >3 WU, mPAP >25 mmHg and PCWP ≤15 mmHg)	35 (28.5%)
No PH (mPAP <20 mmHg)	25 (20.3%)
Current combined pre and post-capillary PH (PVR >2WU, mPAP >20 mmHg and PCWP >15mmHg)	10 (8.1%)
Previous combined pre and post-capillary PH (PVR >3WU, mPAP >25 mmHg and PCWP >15 mmHg)	20 (16,3%)
Previous isolated post-capillary PH (PVR <3WU, mPAP >20 mmHg and PCWP >15mmHg)	2 (1.6%)
Undefined PH (mPAP >20 mmHg, but PVR <2WU)	19 (15.4%)

Abbreviations: PAP; pulmonary artery pressure, PCWP; pulmonary capillary wedge pressure, PH; pulmonary hypertension, PVR; pulmonary vascular resistance.

References:

- [1] 2022 ESC/ERS Guideline on Diagnosis and Management of PH

Keyword: *pulmonary hypertension, right heart catheterization, hemodynamic definition*

ID: 193

Topic:

Cardiology > Other

Presentation Type:

Oral Presentation

A Novel Artificial Intelligence Based Diagnostic Method in the Coronary Artery Disease with Balanced Ischaemia, Cardisiography

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[3] *Kolan International Hospital Group*

OBJECTIVE:

Cardiovascular diseases are still the leading cause of death worldwide. High-sensitivity screening for CAD may lead to a significant reduction in cardiovascular mortality and morbidity. Cardisiography is a new diagnostic method with artificial intelligence analysis aiming to detect CAD early. The sensitivity was found to be >90%, promising a high accuracy rate for ischaemia testing (1).

METHODS

A 60-year-old woman with known DM and HT was admitted to outpatient clinic with stable angina pectoris. ECG was SR, EF was 60% on echocardiography. No findings of ischaemia/infarction on MPS. At this stage, the patient was also examined with a new diagnostic method "Cardisiography''. Cardisiography revealed a high risk for perfusion abnormality (figure 1). Although MPS was negative, coronary angiography was performed because the patient had typical symptoms. Angiography revealed proximal70% mid70% lesions in LAD, proximal30% distal subtotal lesions in Cx, osteal80% lesions in high-Om-1, proximal60% lesions in RCA.

RESULTS

Cardisiography is a supervised machine learning algorithm combined with 5-lead vectorcardiography. Vectorcardiography allows three-dimensional evaluation of the excitation signals of the heart. Cardiography measurement is performed at rest, 290 parameters are analysed with artificial intelligence and a detailed report is obtained (1).

P-index was detected 0,701 in the Cardisiography report of the case. This value indicates that the patient's parameters are 70% correlated with the positive cases for CAD in the train data of the algorithm. The test showed positivity for myocardial perfusion impairment.

Although MPS is one of the most sensitive non-invasive tests for the detection of CAD, cases of normal MPS have been reported in patients with angiographically significant coronary artery disease (2). Side branch stenosis, Cx artery stenosis, inadequate exercise, caffeine intake and balanced ischaemia may be the causes of false negativity (3,4).

We think that the MPS negativity in our case was due to balanced ischaemia caused by multivessel disease. Since the Cardisiography algorithm is trained to detect patients with >50% stenosis on coronary angiography, it is likely to overcome the challenge of detecting coronary ischaemia even in the presence of balanced ischaemia.

CONCLUSİONS:

Conventional non-invasive diagnostic methods used in the screening of CAD have important limitations such as low sensitivity, stress requirement, and expertise in interpretation. Cardisiography may be a promising diagnostic method due to its advantages compared to conventional tests.

Legends:

Figure-1: cardisiography report of a multivessel coronary artery disease case

References:

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Keyword: *Coronary artery disease, Vectorcadiography, Artificial intelligence*

ID: 264

Topic:

Cardiology > Other

Presentation Type:

Oral Presentation

The Prognostic Value Of Uric Asid/Albumin Ratio To Predict In-Hospital Mortality In Patient With Acute Pulmonary Embolism

MD Aslan Erdoğan* **,** MD Duygu İnan , MD Berk Erdinç
Cam&Sakura City Hospital

Background:

Serum uric asid to albumin ratio (UAR) has been defined as an inflammation-based prognostic marker. Systemic pro-coagulant and pro-inflammatory factors underlie the pathophysiology and prognosis of acute pulmonary embolism (APE). Hemodynamic parameters, cardiac function and some laboratory parameters are important factors for predicting APE prognosis. Many different scoring systems have been developed to predict prognosis in APE, but precise predictors of mortality are still unclear. We evaluated prognostic value of UAR in patients with APE.

Method

This was a retrospective, cros-sectional, cohort study. A total of 201 patients hospitalized with acute PE between Nowember 2015 and February 2018 were enrolled in this study. All patients underwent computed tomography pulmonary angiogram (CTPA) to confirm pulmonary embolism. Admission serum levels of uric asid and albumin were used for calculation of UAR. A prediction model was created for independent predictors of one-month mortality.

Results:

31 (15 %) died within 30 days of PE. Advanced age, low blood pressure, low albumin level, high hs-CRP and uric acid levels and UAR were observed more frequently in the non-survive group . In the univariate regression analysis, UAR (OR, 2.0; 95% CI, 1.4-2.9, p<0.001), mean- blood pressure (OR, 0.98; 95% CI, 0.97-1.00, p=0.046), hs-CRP (OR, 1.0; 95% CI, 1.00-1.01, p=0.011) and age (OR, 1.11; 95% CI, 1.06-1.17, p<0.001) were predictors of short term mortality. Multivariate analysis also showed that UAR (OR, 3.03; 95% CI, 1.07-8.56, p=0.035), and age (OR, 1.08; 95% CI, 1.03-1.14, p=0.001) were associated with one-month mortality following APE . In the receiver operating characteristic curve, the optimal cutoff value of UAR to predict a one-month mortality was 1161, with 91% sensitivity and 90% specificity (area under the curve: 0.957). A graph was revealed to show the uric acid/albumin ratio values of the study population broken down by monthly mortality .

Conclusion

UAR was a novel, available, easily measurable marker of inflammation seemed to be an independent predictor of short-term mortality in patients with APE. UAR was a more powerful tool than traditional inflammatory markers for predicting the severity of disease in these patients.

Table1. Baseline clinical and laboratory variables comparison between the survivors and those who died.

Variable	Survivors (n=170)	Deceased (n=31)	p
Demographic features and risk factors			
Age, (years)	69 (55-78)	80 (72-87)	**<0.001**
Sex, (male) n (%)	99 (58.2)	20 (64.5)	0.513
Diabetes mellitus, n (%)	31 (18.2)	7 (22.5)	0.570
Hypertension, n (%)	81 (47.6)	14(45.1)	0.847
Smoking, n (%)	40 (23.5)	9 (29.1)	0.201
CAD, n (%)	28 (16.4)	7 (22.5)	0.051
At admission parameters			
SBP, mmHg; Median [IQR]	120(110-138)	120(70-120)	**0.047**
DBP, mmHg; Median [IQR]	70(61-80)	70(60-79)	**0.023**
MBP, (mmHg)	86.6 (79.8-100)	80 (73-93)	**0.009**
Heart rate, (beat/minute)	79 (69-89)	100 (87-111)	0.188
P02, (mmHG); Median [IQR]	43.8(32.6-59.6)	42.6(30.4-54.1)	0.327
O2 saturation, %, Median [IQR]	90(86-94)	89(85-92)	0.117
Laboratory findings			
WBC ,(x 10^3/µL)	11.0 (8.2-13.5)	12.1 (9.9-14.8)	0.225
Platelet ,(x 10^3/µL)	219 (168-281)	249 (173-374)	0.559
Hemoglobin, (g/dL)	12.9 (11.2-14.4)	11.7 (10.5-13.7)	0.104
Creatinine, (mg/dL)	1.0 (0.8-1.1)	0.91 (0.80-1.11)	0.055
Glucose, (mg/dL)	137 (109-182)	136 (94-151)	0.864
D-dimer, (ng/Ml)	2723(1090-5320)	2052(1579-4010)	0.779
CRP, (mg/dL)	63(23-116)	91(60-108)	**<0.001**

Uric acid, (mg/dL)	5.6 (4.5-6.8)	6.0 (3.9-9.3)	**<0.001**
Albumin ,(g/L)	3.5 (3.1-3.7)	2.6 (2.3-2.9)	**<0.001**
UAR	1.6 (1.2-2.1)	2.0 (1.4-4.3)	**<0.001**

Abreviations: CAD:coronary artery disease,CRP: C reactive protein, EF:ejection fraction,IQR:ınterquartile range MBP:mean blood pressure, UAR: uric acid/albumin ratio, mmHg: milimercury,PO2 Partial pressure of oxygen,Continuous variables given as median interquartile range (25^{th}-75^{th}), Categorical variable expressed as absolute number and percentage.

Table 4. Univariate and multivariate regression analysis for predicting one-month mortality

	Univariate Analysis			**Multivariate Analysis**		
Variable	OR	CI(95%)	p	OR	CI (95%)	p
Age	1.11	1.06-1.17	<0.001	1.08	1.03-1.14	**0.001**
MBP	0.98	0.97-1.00	0.046	0.98	0.96-1.00	0.080
CRP	1.00	1.00-1.01	0.011	1.00	0.99-1.00	0.991
UAR	2.09	1.4-2.9	<0.001	3.03	1.07-8.56	**0.035**

CRP: C reactive protein, HR:hazard ratio, MBP;mean blood pressure, OR:odds ratio UAR: uric acid/albumin ratio, Regression coefficient of continuous variables in the models represented as their 25^{th} to 75^{th} quartile increase.

Oral Presentation Session

Arterio-Vernous Fistula and Beyond: Inspirational Observations

Date: 05.11.2023 Time: 10:30 – 11:30 Hall: 7

ID: 237

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

Bandage Application For Arteriovenous Fistula Maturation

Assoc. Prof. Mustafa Dağlı*
Konya city hospital

Presence of an AVF that works well for hemodialysis patients
is indispensable.
Arteriovenous fistula maturation is a difficult process and the main reason for the failure of the maturation process is insufficient expandability of the vein.
Cephalic vein dilatation by intraluminal hydrostatic pressure is a useful technique during surgery to ensure adequate vasodilation.
Hand exercise after the operation and applying a short-term bandage to the arm during this exercise may increase maturation.
In this study; vein during autologous arteriovenous fistula formation
vein with pressurized saline fluid applied into
It was aimed to examine the fistula's openness and maturation with the dilatation provided and then hand exercise and bandage application.

For this purpose, a total of 21 patients with AVF were included in the study and analyzed retrospectively. When the results of the study were compared with the patency rate and the maturation literature, 6-8 weeks were predicted for maturation in the literature, while AVF usability was observed in our patients in 4-6 weeks.
In conclusion; Although vein dilatation with the use of intraluminal fluid is a simple application, it can be said that it is an effective and safe method on early period AVF patency and maturation, according to the results of the study, with a short-term (90 sec) bandage application 3 times a day with hand exercise after the operation.

ID: 244

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

Popliteal Artery Trauma Following Knee Dislocation: A Case Report

Assoc. Prof. Redha Lakehal[*] **,** Prof. Radouane Boukarroucha
Department Of Heart Surgery, Dr Djaghri Mokhtar, Constantine, Algeria

We report a case of traumatic dislocation of the right knee without fracture of the ipsilateral tibial shaft in association with thrombosis of the popliteal artery without nerve damage. All elements of this injury were recognized and treated quickly, resulting in a good functional outcome.

ID: 104

Topic:

Cardiovascular Surgery > Endovascular surgery

Presentation Type:

Oral Presentation

Effectiveness Of Directional Atherectomy With The Drug-Coated Balloon Method For Heavily Calcified In Below-The-Knee Lesions

MD Volkan Aksu*

Balikesir Ataturk City Hospital, Cardiovascular Surgery Clinic

OBJECTIVE= This study aimed to examine the mid-term results of patients who underwent directional atherectomy (DA) for vascular preparation before drug-coated balloon (DCB) angioplasty with below-the-knee lesions and severe calcification and compare these patients with those treated with DCB angioplasty alone.

METHODS= This prospective study enrolled 140 patients (96 males, 44 females; mean age: 59.3+8.8 years) with below-the-knee lesions treated with DA before DCB angioplasty or DCB angioplasty alone between Jan 2020 and March 2022. The patients were evaluated in two groups according to DA use: the DA+DCB group with 105 patients and the DCB group consisting of 35 patients. The results of these two methods were compared, and the outcomes were followed up for one year after the treatment. Primary outcomes were patency, freedom from target lesion revascularization, and unplanned amputation.

RESULTS= There was no statistically significant difference between the two groups in demographic features, risk factors. Our study, the primary patency of the DCB and DA+DCB group was 63.5% and 80.3%, respectively ($p<0.05$). The below-knee amputation rate was statistically significantly lower in the DA+DCB group (13.0% vs. 18.0%) ($p=0.36$).

CONCLUSIONS= In below the knee lesions, pre-DCB-DA can provide better patency and reduce the amputation rate.

ID: 153

Topic:

Cardiovascular Surgery > Research

Presentation Type:

Oral Presentation

Role of Hsa-miR-124 in Molecular Reprogramming and Therapeutic Effect Of Melatonin-miR-124 Combination In A Senescence-Related Secretory Phenotype (SAPS) Induced Vascular Atherosclerosis Model

Assoc. Prof. Orkut Guclu[*] [1] **,** Assoc. Prof. Serhat Huseyin[1] , Prof. Oguzhan Doganlar[2] , MD Tourkian Chasan[2]

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OBJECTIVE: Atherosclerosis is a major cardiovascular disease that affects older patients, leading to disability and reduced quality of life. Several factors such as aging, inflammation, oxidative stress, chronic DNA damage, age-related hypoxia, and angiogenesis contribute to the development of this disease. Senescent vascular smooth muscle cells are the primary source of various hypoxia-related signals, pro-inflammatory cytokines, and extracellular remodeling factors, which contribute to atherosclerosis pathogenesis. While several treatment options targeting senescence have been developed, challenges and side effects still require attention. Melatonin plays a crucial role in regulating circadian rhythms, hormones, and exhibiting chronobiotic properties such as anti-inflammatory, antioxidative, anxiolytic, and antidepressive effects. Hsa-miR-124, a microRNA, regulates gene expression at the posttranscriptional level and is elevated under both physiological and pathological conditions. Although studies have demonstrated the regulatory roles of melatonin and miR-124 in certain cardiovascular pathologies, their effects on the mechanisms involved in senescence-induced atherosclerosis processes remain unclear.

METHODS: We investigated the molecular signals associated with hypoxia, angiogenesis, oxidative stress, DNA damage, and inflammation induced by senescence-based senescence-associated secretory phenotype expression. The study explored the regulatory effect of miR-124 on these pathways using a vascular senescence-induced atherosclerosis model. Furthermore, the role of individual and combined treatments involving miR-124 and melatonin in the senescence process of vascular smooth muscle cells were examined. We used a combination of 25 µM lipopolysaccharide and 10 µg/ml deferoxamine to induce inflammation, oxidative stress, and hypoxia signaling in vascular cells to simulate the pathophysiology of atherosclerosis in vitro.

RESULTS: The study found that the administration of a combination of melatonin and miR-124 mimic (MLT+miR-124-mimic) holds potential as a therapeutic intervention for senescence-induced atherosclerosis. The results revealed increased hypoxia, oxidative stress, and DNA damage signals in the senescence (SN) groups. In the inhibitor groups, where miR-124 expression was suppressed, these signals were significantly similar to the SN group and statistically distinct from the control and treatment groups. There was a significant decrease in the hypoxia pathway involving VEGF/MMP9 and the apoptosis pathway in SN-induced cells, as well as in the groups treated with both miR-124 mimic and melatonin. The gene expression data were supported by Western blot results.

CONCLUSIONS: In summary, the study suggests that the combination of melatonin and miR-124 mimic may be a promising therapeutic approach for treating senescence-induced atherosclerosis.

Keyword: *VSMC, Senesence, Atherosclerosis, Melatonin, hsa-miR-124*

ID: 17

Topic:

Cardiovascular Surgery > Vascular surgery and vascular access

Presentation Type:

Oral Presentation

Effect of Radiocephalic and Brachiocephalic Arteriovenous Fistula on Cardiac Function in Hemodialysis Patient

MD Nilüfer Bektaş , Assoc. Prof. HELİN El Kılıç , **MD Yasin Saraç*** , MD AHMET İBRAHİM BALKAYA , Assoc. Prof. Tolga Demir , Prof. Ismail Koramaz

Department of Cardiovascular Surgery, Sisli Hamidiye Etfal Training and Research Hospital, University of Health Sciences Turkey, Istanbul, Turkey.

Objectives: End-stage renal disease (ESRD) is very common and affecting almost 10% of the population worldwide. Arterio-venous fistulas (AVFs) become first access options for hemodialysis but AVFs may contribute to maladaptive cardiovascular remodelling.

Methods: We studied the efect of radiocephalic AVFs (RC-AVFs) and brachiocephalic AVFs (BC-AVFs) creation on cardiac structure and function in patients with ESRD. In this study patients with listed for AVF creation underwent echocardiography before and six weeks after the surgery. The primary outcome was changes in left ventricle (LV) volumes and LV ejection fraction. The secondary outcome was determinining which type of fistula increases the likelihood of cardiovascular remodelling more.

Results: Between November 2022 and March 2023, a total of 38 patients (mean age 62 years) who underwent AVFs surgery were included in the study. Out of these patients, 17 received RC-AVFs, while 21 patients received BC-AVFs. Echocardiography revealed a significant increase in left ventricular end-diastolic pressure (LVEDP) in both groups (p=0.02). The increase in LVEDP was found to be significantly higher in the BC-AVFs group compared to the RC-AVFs group (p=0.03). However, there were no significant changes observed in ejection fraction.

Conclusions: AVF creation is a critical treatment method in ESRD .However, high-flow fistulas carry a substantial risk potential in patients with underlying cardiovascular diseases. To avoid an increase in left ventricular pressure (LVP), especially in BC-AVFs, it is possible to create smaller diameter artery and vein anastomoses. This approach can help minimize the risk of elevated LVP associated with AVFs.

ID: 72

Topic:

Cardiovascular Surgery > Peripheral artery disease and treatment

Presentation Type:

Oral Presentation

Doppler Ultrasound Using For Smaller Incision In Post-Traumatic Arteriovenous Fistula

Assoc. Prof. Mustafa Dağlı*

University of Health Sciences, Konya City Hospital

Introduction: Chronic post-traumatic arteriovenous fistula (AVF) is a late complication of vascular injury and can be presented with symptoms of congestive heart failure, venous hypertension and distal ischaemia.We present an unusual case of chronic leg swelling in adult and child caused by post-traumatic AVF.

Case presentations:

Case 1: A 35 year old white-male patient complained of pain and swollen right leg. Arterial pulses distally from the groin were present. His medical history revealed him to have sustained gunshot injury. Angiography showed a large AVF between superficial femoral artery and femoral vein. İn operation we used dopler ultrasonograpy and cutting minimal incision 12 cm . The patient underwent surgical repair of AVF with 8 mm dacron greft for superficial femoral artery and vein under general anaesthesia. Completion angiography confirmed AVF exclusion. Leg swelling healed within a month.

Case 2 : A 12 year old white-male child complained of pain, swollen leg and thrill. His medical history revealed him to have sustained knife injury. Anjiography showed a AVF between tibilais anterior artery and vein. Using doppler ultrasound we cut minimal incision about 4 cm.

Conclusion: Post-traumatic fistula should be obliterated as soon as possible. Untreated fistula results in complications including renin-mediated hypertension and high-output heart failure, venous and/or arterial insufficiency. Smaller incision possible using doppler ultrasound.

References:

- [1] Kalender M, Baysal AN, Dagli M, Gokmengil H. Chronic leg swelling and palpitation as a late complication of post-traumatic arteriovenous fistula: A case report. Trauma Case Rep. 2016 Apr 14;2:16-20. doi: 10.1016/j.tcr.2016.03.004. PMID: 29942834; PMCID: PMC6011858.

Oral Presentation Session

Valvular Heart Diseases: New Approaches, New Ideas, New Opportunities

Date: 05.11.2023 Time: 11:45 – 12:45 Hall: 6

ID: 208

Topic:

Cardiology > Transcatheter mitral valve repair and replacement

Presentation Type:

Oral Presentation

Surgical bio-prosthetic valve fracture for optimising hemodynamics after percutaneous trans catheter mitral valve-in-valve implantation

Assoc. Prof. Attaullah Khan Niazi*
King Edward Medical University

Transcatheter valve-in-valve implantation is an attractive option for treating surgical bio- prosthetic valve dysfunction

– High residual gradient remains a concern, especially for surgical valves with a small true internal dimension

Limited data exists for bio-prosthetic valve fracture in the mitral position
– Present case highlights surgical bioprosthetic valve fracture done to allow full expansion of the

transcatheter valve and optimize hemodynamics

77-year-old male
• Presenting complaints: breathlessness on exertion on walking 1 fight of stairs or greater

since 2017.

• Past medical details:

– Diabetic and hypertensive

– 2008- NSTEMI
• PCIwithstentingofmidLAD

– 2013- NSTEMI
• PCIofproximalLAD

– 2017: worsening of dyspnoea

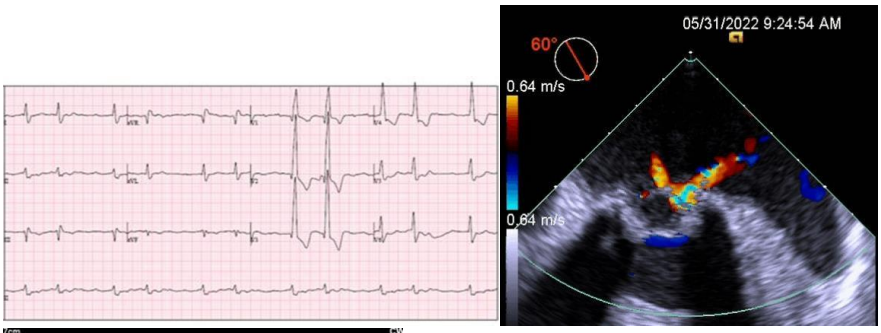
Moderate mitral regurgitation with mild left ventricular systolic dysfunction.

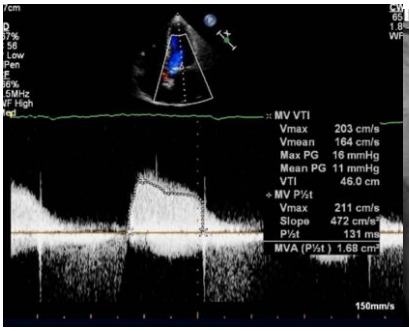
Progressive CAD. CABG (SVG grafts to LAD and LCX-OM) with MVR(Bioprosthetic valve SJM EPIC 25; Tammerfors)

Post operatively, he continued to experience symptoms of breathlessness more on walking uphill. He was able to walk for 1 km maximum from home to work place, on level ground

NT Pro BNP- >3000 pg/ml

• Mean PA pressure- 40mmHg (Cath)





• ECHO – prosthetic valve dysfunction

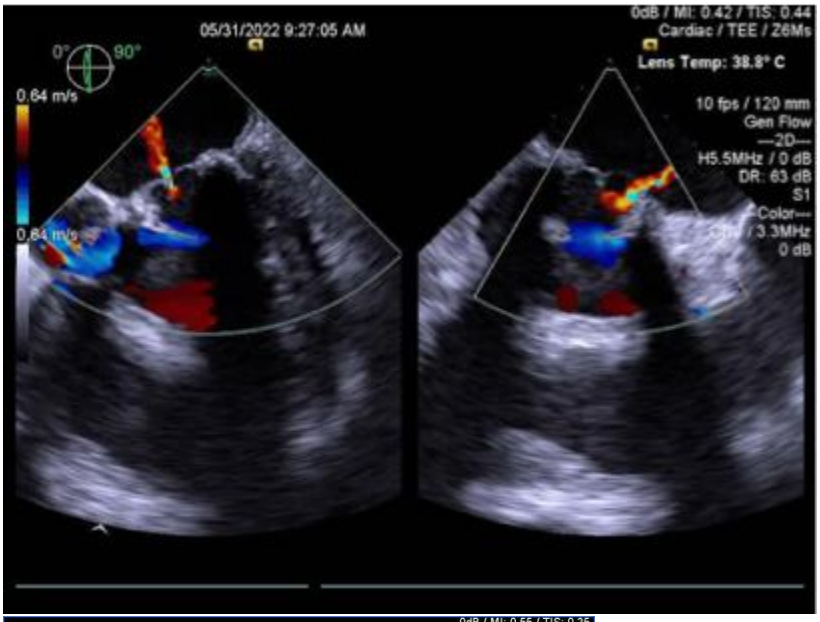
- Bioprosthetic valve thickened & restricted in

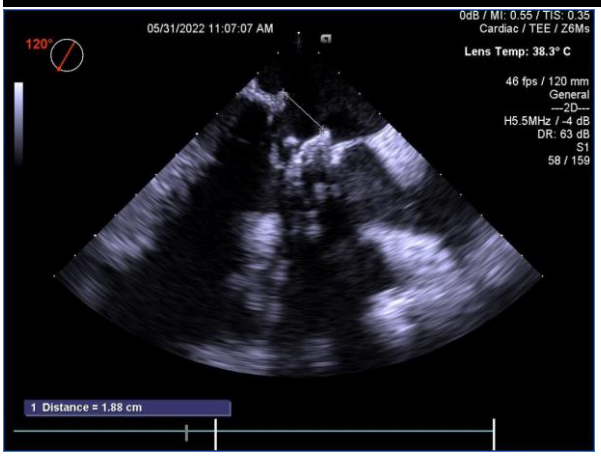
mobility

- Transmitral mean gdt-11mmHg, mitral regurgitation

TEE

TEE

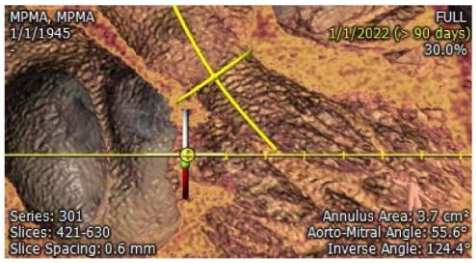




CT parameters

CT parameters

Neo LVOT area Aorto - mitral Angle



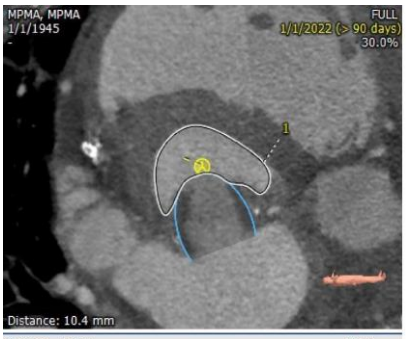
Aorto

-

mitral Angle

Neo LVOT area

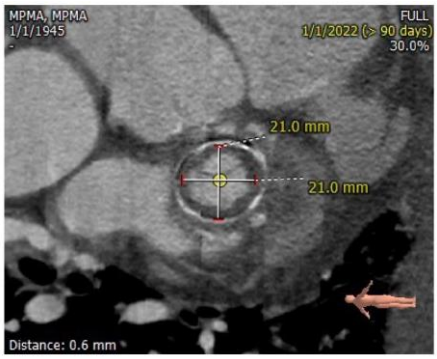
nal dimension Inter



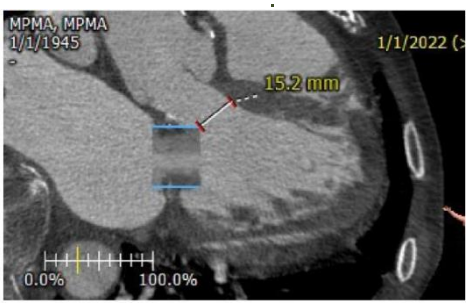
ID	Type	Label	Value
1	Polygon	Area derived Ø	25.9 mm
		Perimeter derived Ø	34.6 mm
		Area	525.1 mm²
		Perimeter	108.6 mm

Inter

nal dimension



Septal



distance

Septal

distance

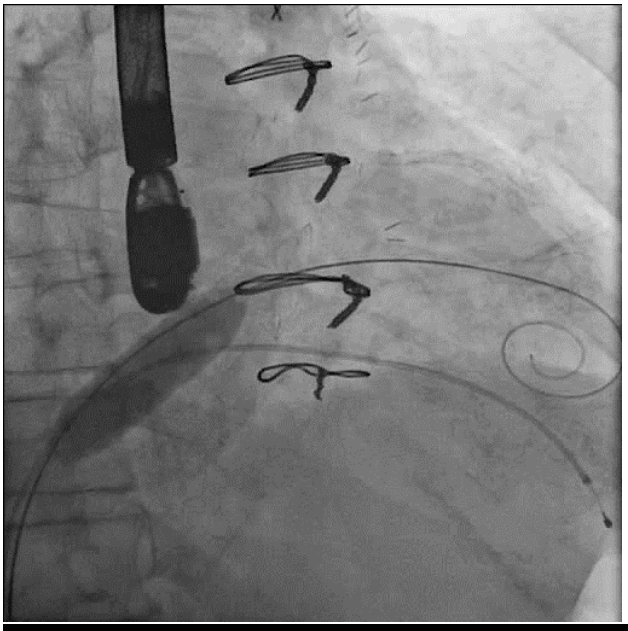
Procedure

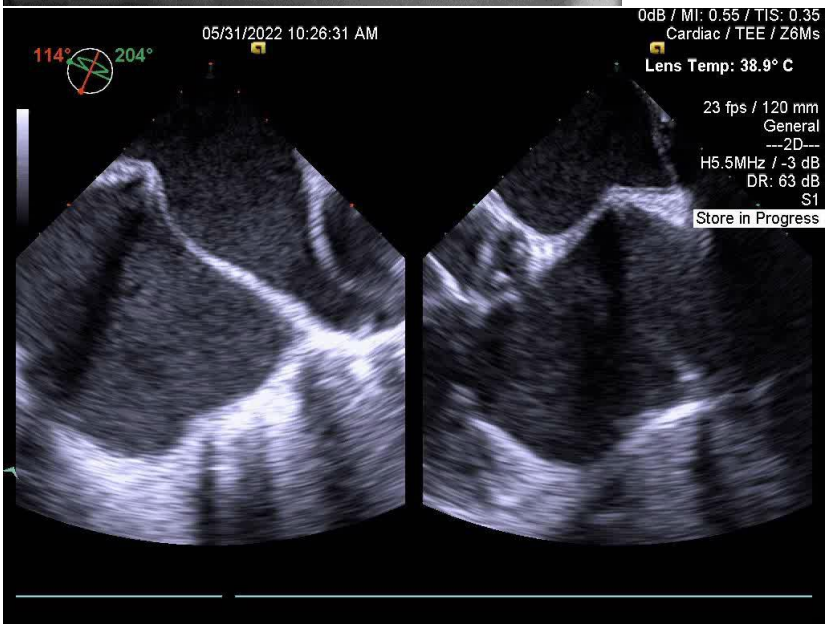
Procedure

• Transcatheter mitral valve in valve implantation • Transfemoral access
• General anesthesia, TEE guidance

Trans septal puncture

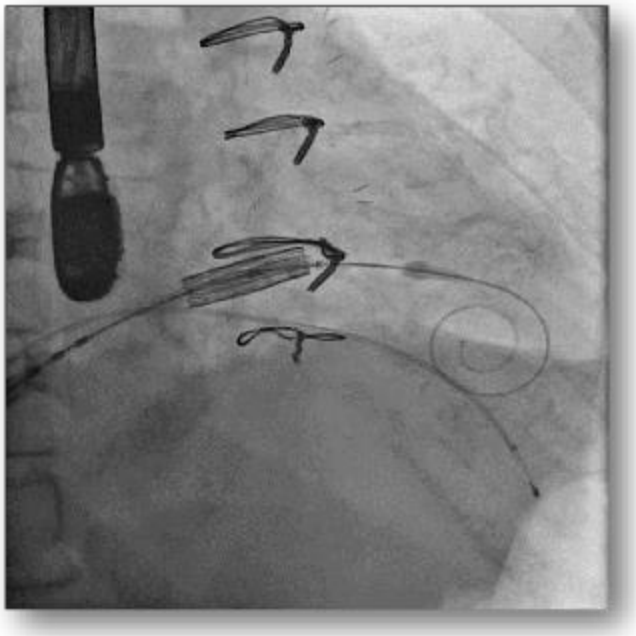
Trans septal puncture

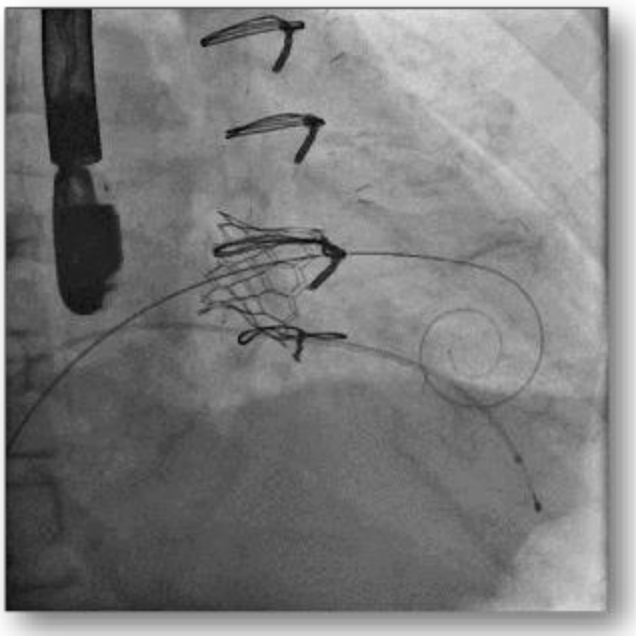




Procedure

Procedure

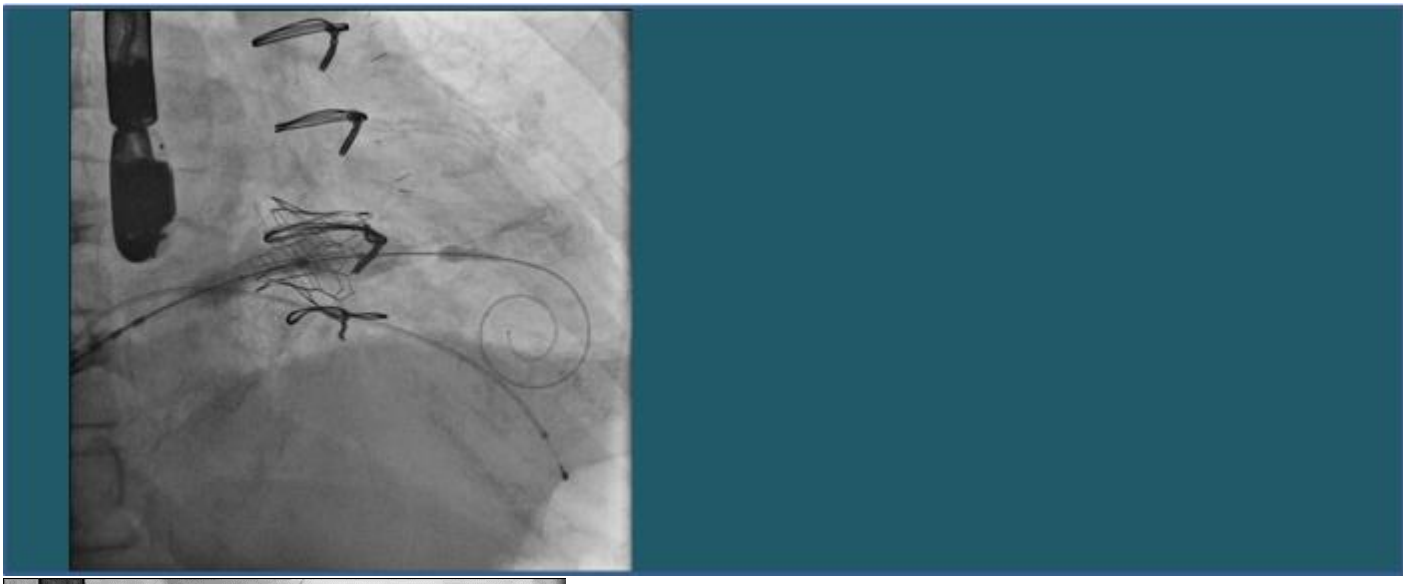


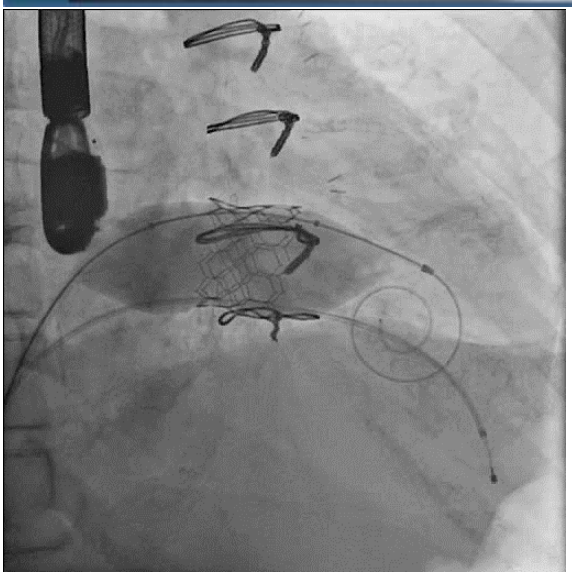


26mm Sapien 3 valve

Surgical valve fracture

Surgical valve fracture

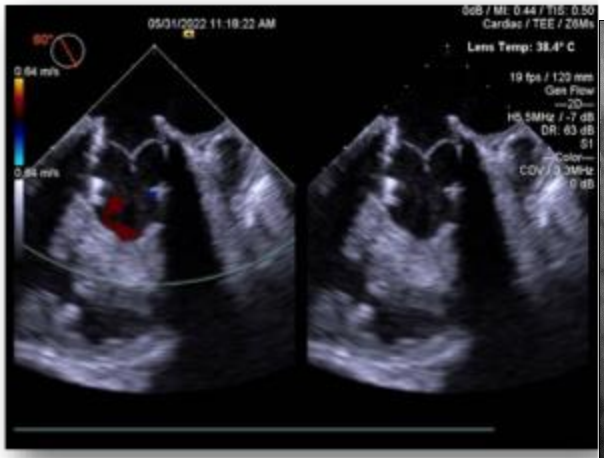


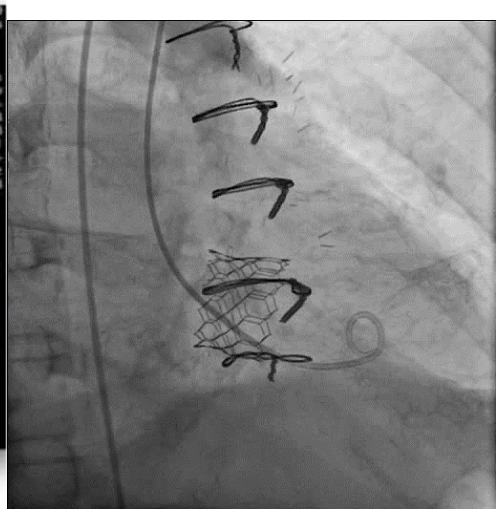


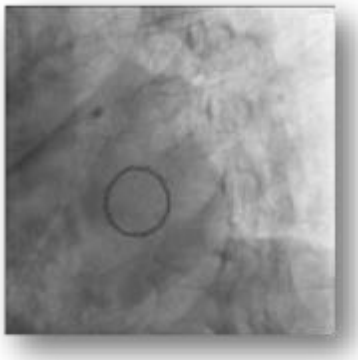
26mm Atlas Gold

Post angiography, fluoroscopy and ECHO

Post angiography, fluoroscopy and ECHO







6 months follow - up

6 months followup

• Significant improvement of his symptoms • Mean mitral gradient- 4mmHg
• No valve thrombosis

Keyword: *mitral valve, structural heart intervention*

ID: 288 - 19th UCCVS - Oral Presentation

Bicaval Valve Implantation in a Patient with Massive Tricuspid Regurgitation

MD Cansu Selcan Akdeniz* , **Assoc. Prof. Begüm Yetiş Sayın** , Prof. Hakan Aksoy , Prof. Ali Oto
Memorial Ankara Hospital , Department of Cardiology

A 61-year-old woman was admitted for symptomatic torrential tricuspid regurgitation (TR). She had aortic and mitral valve replacement in 2011. In addition, she had atrial fibrillation and hypertension as well.

She has been suffering from right heart failure symptoms for a few years. She started having worsening shortness of breath on exertion and abdominal distension. Transthoracic echocardiogram (TEE) showed massive TR with moderate right ventricular (RV) dilatation (RV basal diameter: 47 mm) and mildly impaired RV systolic function (tricuspid annular plane systolic excursion: 15 mm; tricuspid annulus S' velocity: 9 cm/s). Inferior vena cava (IVC) maximal diameter was dilated to 30 mm. Left ventricular size and function were normal. The aortic and mitral valve prosthesis were both functioning well. Despite receiving maximally tolerated medical therapy of furosemide (40 mg once or twice daily) and spironolactone (50 mg once daily) as well as anticoagulation, she remained symptomatic. Since she had history of open valve surgery, catheter based treatment options for tricuspid valve were considered as best for her condition. Transesophageal echocardiograpy was performed and confirmed massive tricuspid regurgitation with a huge gap between anterior-posterior leaflets. Posterior leaflet was almost immobile and considered as the cause of gaps between leaflets which were measured as 2.4 mm P-S and 12 mm A-P. Due to the significant structural distortions of tricuspid valve, triclip was not deemed as a suitable treatment option and we decided to perform transcatheter bicaval valve implantation with the TricValve system.

The patient had markedly elevated RA (mean of 24 mmHg) pressure consistent with the severity of TR. The mean IVC pressure was 22 mmHg. The PA pressure was 35/13mmHg and the RV end-diastolic pressure was 20 mmHg. CT scan demonstrated a SVC valve size of 29 mm and IVC valve size of 41 mm.

The procedure was performed in the cardiac catheterization laboratory under sedation with fluoroscopic and TTE guidance. Post-procedural assesment did not reveal any paravalvular leaks. The IVC valve was well visualised with TTE. The IVC pressure was reduced to a mean of 14 mmHg. The RA pressure remained almost the same even slightly increased as expected.

The patient was followed in CCU for one night and transferred to the cardiology ward the day after. She was hemodynamically stable during her hospitalization and she was discharged in good condition on the day four.

Although long term clinical results are needed, Tricvalve system is promising as a safe and effective treatment modality for patients with severe tricuspid regurgitation.

ID: 78

Topic:

Cardiovascular Surgery > TAVI

Presentation Type:

Oral Presentation

TAVI

MD Bilgehan Kara Çadır* **,** MD Emre Kıvrak , MD Onur Yıldırım , Prof. Sercan Okutucu
Lokman Hekim Üniversitesi

[1]Lokman Hekim Üniversitesi

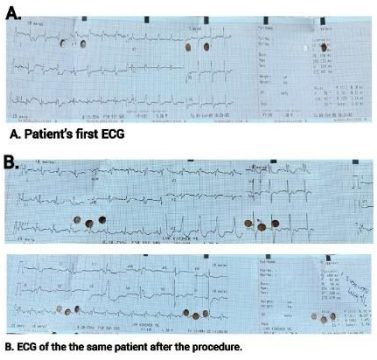


Figure 1

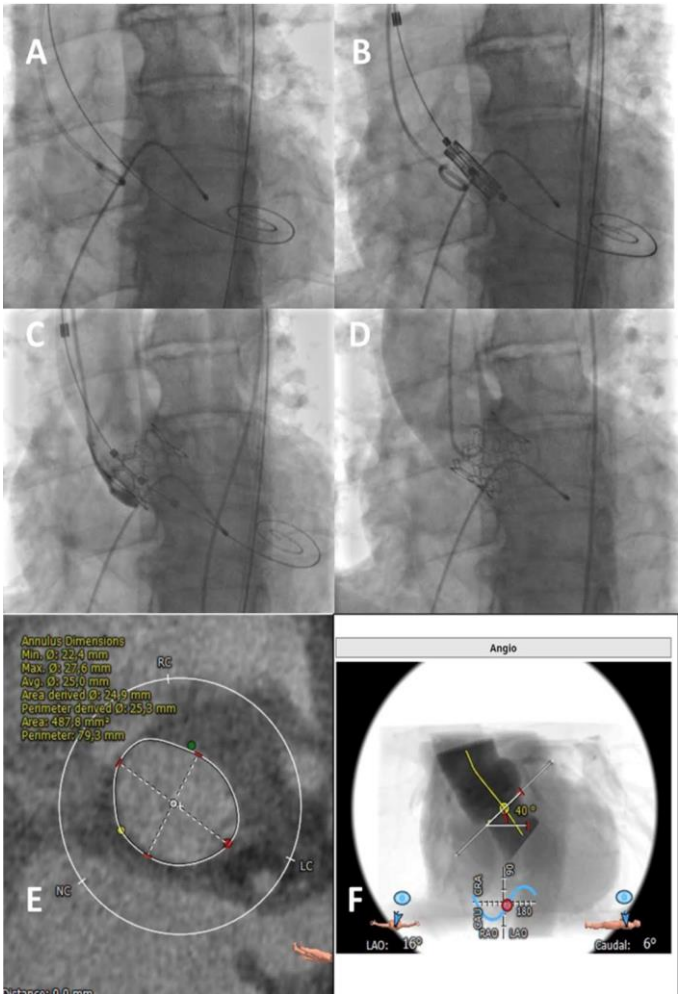


Figure 2

Transcatheter Aortic Valve Implantation in a 60-Years-Old Chronic Lymphocytic Leukemia Patient with a Right Bundle Branch Block

Authors

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Transcatheter Aortic Valve Implantation in a 60-Years-Old Chronic Lymphocytic Leukemia Patient with a Right Bundle Branch Block

Abstract

Aortic stenosis (AS) is a prevalent condition in the elderly population that can have severe consequences. Transcatheter Aortic Valve Implantation (TAVI) has emerged as an effective alternative treatment for elderly individuals with symptomatic severe AS and high surgical risk. However, the efficacy of TAVI in the presence of malignancy remains controversial. This case report presents a TAVI procedure performed on a 60-year-old patient with chronic lymphocytic leukemia (CLL), right bundle branch block (RBBB), and symptomatic severe AS. The patient's condition, comorbidities, and life expectancy were thoroughly evaluated by a multidisciplinary team, leading to the decision to proceed with TAVI. The procedure was performed successfully without complications, and the patient's 30-day outcomes were uneventful.

Keywords: Aortic stenosis, Chronic Lymphocytic Leukemia, Right bundle branch block, transcatheter aortic valve implantation

Introduction

Aortic stenosis (AS) is a common condition in the elderly population that can have life-threatening consequences. Transcatheter Aortic Valve Implantation (TAVI) has become an increasingly popular alternative treatment for elderly individuals with symptomatic severe AS and high surgical risk. Numerous studies have investigated the success of TAVI in frail elderly individuals without significant comorbidities, but the findings regarding its efficacy in the presence of malignancy remain controversial. In this case report, we present a TAVI case managed in a patient with a new diagnosis

of chronic lymphocytic leukemia (CLL), increased risk of permanent pacemaker requirement due to right bundle branch block (RBBB), and symptomatic severe AS.

Case Presentation

A 60-year-old male patient presented to the cardiology outpatient clinic with complaints of chest pain and dyspnea. He had a recent diagnosis of chronic lymphocytic leukemia (CLL) made three weeks prior. The initial electrocardiogram (ECG) revealed RBBB and ST segment depression in leads V4 and V5. Transthoracic echocardiography (TTE) showed myocardial hypertrophy, impaired movement consistent with right bundle branch block, and a peak gradient of 83 mmHg and mean gradient of 48 mmHg across the aortic valve. Aortic valve area of patient was 0.6cm^2. Due to the patient's overall poor condition, concomitant hematological malignancy (CLL), and a white blood cell count of 350,000 x 10^9/L, a consultation was sought from the Hematology Department regarding life expectancy. It was determined that the patient had a high life expectancy and a survival expectation of more than one year. The case was discussed in the Hematology and Cardiology Councils, and a decision to proceed with TAVI was made. Subsequently, the patient was referred to the department of cardiothoracic surgery for operability assessment. Considering the patient's comorbid risk factors, the heart team decided that TAVI was the appropriate treatment option. The patient was informed about the increased risk of pacemaker requirement due to the preexisting RBBB on baseline ECG, and both the patient and their family consented to the procedure. A pre-procedural computed tomography scan measured an aortic annulus perimeter of 79.3 mm and an aortic annulus area of 487.8 mm^2. A 26 mm Myval transcatheter aortic valve was selected for the procedure. Cefazolin antibiotic prophylaxis was administered during the day of procedure(1 gram 30 minutes before and **1** gram intravenously every 8 hours). The transcatheter heart valve was introduced through the right common femoral artery (CFA) after local anesthesia using a 14 Fr Python sheath (Meril Life Sciences Pvt. Ltd., India). Balloon pre-dilatation was not performed due to high risk of pacemaker and less calcification. The device was crimped over the Navigator delivery system (Meril Life Sciences Pvt. Ltd., India). The deployment within the annulus was performed in the tri-coplanar view (Left Anterior Oblique 16°/ Cranial 6°), guided by the dense and light marking bands of the crimped device, a feature characteristic of the Myval, with temporary RV pacing (**Figure 1 and Supplementary Video 1**). There was no aortic regurgitation on final aortography and invasive transvalvular gradient revealed 5 mmHg of gradient. The post-procedural ECG showed no alteration of the conduction (**Figure 2**). No pericardial effusion was observed during the procedure. The patient had an uneventful in-hospital course and was discharged on day 2 with acetylsalycylic acid and clopidogrel. The patient’s 30-day outcomes were uneventful.

Discussion

Aortic stenosis (AS) is a common type of heart valve disease in the elderly population, characterized by degenerative changes in the aortic valve. TAVI has emerged as an effective alternative to surgical aortic valve replacement (SAVR) in high-risk patients with AS, as demonstrated by several clinical studies (1,2). Cancer patients undergoing SAVR may be at increased risk of infection due to immunosupression, while cachexia may impact recovery and mediastinal fusion (3). However, performing surgical procedures in patients with concurrent chronic lymphocytic leukemia (CLL), a condition characterized by malignant proliferation of immunologically impaired lymphocytes, raises concerns about the increased risk of infections associated with these procedures.

The literature on cardiac surgery in patients with hematological malignancies is limited, with a focus primarily on reporting coronary artery bypass grafting procedures (4). Nonetheless, patients with hematological malignancies can undergo cardiac surgery with acceptable outcomes, although the high perioperative morbidity rates should be carefully considered when selecting suitable candidates (4). In high-risk patients, it is reasonable to evaluate alternative treatment options when feasible, taking into account individual indications and patient preferences.

Clinical trials and guidelines related to TAVI often exclude cohorts with limited life expectancy, except for specific cases (2,5). Malignancies, such as calcific aortic stenosis, are commonly found in elderly adults, and many candidates for TAVI have either active or remitted cancer. The impact of active cancer on the prognosis of patients with AS undergoing TAVI remains a Topic: of controversy. One study found that 5.6% of patients undergoing TAVI had active malignancies, and TAVI was safely performed in these patients, followed by appropriate cancer treatment (6). The presence of cancer metastasis was negatively associated with mid-term survival, whereas metastasis-free active malignancy did not significantly affect survival (6). Balloon-expandable valve TAVI has been shown to be a safe and effective technique, with technical feasibility demonstrated in high-risk patients with hematological malignancies (1, 6). Building upon the findings of these existing studies, we performed TAVI using the balloon-expandable valve technique in our patient with CLL, AS, and no active cancer, observing no complications during the acute period.

Aortic valve replacement has been shown to improve the survival of cancer patients with symptomatic aortic stenosis, and TAVI serves as a viable treatment option for inoperable patients or those at high surgical risk (1, 6). In patient selection for TAVI, emphasis should be placed on evaluating patients' frailty and futility. Eligible patients should have a life expectancy of at least 1 year. The final decision regarding treatment modality should be made by a multidisciplinary heart team, considering the individual patient's characteristics and preferences.

Conclusion

TAVI has proven to be an effective treatment option for high-risk elderly patients with severe AS. This case report demonstrates the successful management of TAVI in a patient with CLL, RBBB, and symptomatic severe AS. Despite concerns about performing surgical procedures in patients with hematological malignancies, this case highlights the importance of individualized patient assessment and multidisciplinary decision-making. The findings support the feasibility and safety of TAVI in this patient population, emphasizing the need to consider factors such as life expectancy, comorbidities, and patient preferences when selecting treatment modalities. Further research and clinical studies are warranted to expand our understanding of TAVI outcomes in patients with concurrent hematological malignancies.

References

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Figure Legends

Figure 1. The deployment (A-D) within the annulus (E) was performed in the tri-coplanar view (F) (LAO 16°/ Cranial 6°), guided by the dense and light marking bands of the crimped device (shown with arrows), a feature characteristic of the Myval, with temporary right ventricular pacing.

Figure 2. (A) The initial electrocardiogram (ECG) revealed RBBB and ST segment depression in leads V4 and V5. (B) The post-procedural ECG showed no alteration of the conduction.

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ID: 67

Topic:

Cardiology > PI for SHD-ASD, VSD, PDA closure

Presentation Type:

Oral Presentation

Closure Of Transcatheter Ventricular Septal Defect Using Lifetechtm Konar-MF Occluder In Children Less Than 10 Kilograms: Mid-Term Results, A Tertiary Single Center Experience

MD Kaan Yildiz[* 1] , Prof. Nazmi Narin[2] , Assoc. Prof. Rahmi Ozdemir[2] , MD Sedef Oksuz[1] , MD Sedat Bagli[1] , MD Rasit Aktas[1] , MD Yunus Sezer Bayam[3] , Prof. Cem Karadeniz[2]

[1] Health Sciences University Tepecik Training and Research Hospital, Department of Pediatric Cardiology, Izmir, Turkey

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[3] Health Sciences University Tepecik Training and Research Hospital, Department of Pediatrics, Izmir, Turkey

Background: Transcatheter closure of medium and large VSDs in young children is limited due to the use of over-sized devices that can cause hemodynamic instability and arrhythmia. In this study, it was aimed to retrospectively evaluate the safety and efficacy of the device in the mid-term in children weighing less than 10 kg whose transcatheter VSD was closed only with the Konar MFO device.

Patients and Methods: Among 70 children whose transcatheter VSD was closed between January 2018 and January 2023, 23 patients weighing less than 10 kg were included in the study. Retrospectively, the medical records of all patients were reviewed.

Results: The mean age of the patients was 7.3 (4.5-26) months. 17 of the patients were female, 6 of them were male, F/M: 2.83. The average weight was 6.1 (3.7-9.9) kg. The mean Qp/Qs was 3.3 (1.7-.5.5). The mean defect diameter was LV side: 7.8 mm (5.7-11), RV side: 5.7 mm (3-9.3). According to the device dimensions used, LV side: 8.6 mm (6-12), RV side: 6.6 mm (4-10). Antegrade technique was applied to 15 (65.2%) patients and retrograde technique was applied to 8 (34.8%) patients in the closure procedure. The procedure success rate was 100%. The incidence of death, device embolization, hemolysis, or infective endocarditis was zero.

Conclusion: Perimembranous and muscular VSDs in children under 10 kg can be successfully closed under the management of an experienced operator with the Lifetech Konar MFO device. This is the first study in the literature to evaluate the efficacy and safety of the device in children under 10 kg in whom only Konar-MFO VSD occluder device is used for transcatheter VSD closure.

Keyword: *Ventricular septal defect, transcatheter closure, weight <10kgs, Konar-MFTM VSD occluder (MFO)*

Oral Presentation Session

Cardiovascular Surgical Highlights: Insights from the Experts

Date: 05.11.2023 Time: 11:45 – 12:45 Hall: 7

ID: 110

Topic:

Cardiovascular Surgery > Microcircuits in cardiopulmonary bypass

Presentation Type:

Oral Presentation

Relationship Between Lactic Acid and Sleep Disturbances in Cardiac Surgery

Assoc. Prof. Ahmet Dolapoglu* , MD Nazan Dolapoglu
Balıkesir University Medical School

OBJECTIVE: Normal sleep is important to maintain physical and mental health. Sleep disturbances frequently occur in patients after cardiac surgery and its occurrence may be harmful for postoperative recovery. High blood lactate level indicates presence of poor tissue perfusion and lactic acid level is used as good a marker for perfusion during cardiopulmonary by-pass. İn this study we aim to investigate the relationship between per-operative perfusion and sleep pattern in patients underwent cardiac surgery.

METHODS: A total of 52 patients undergoing cardiac surgery with cardiopulmonary by-pass (either coronary by-pass or valve surgery) were enrolled in this retrospective study. Patients with renal failure, low ejection fraction, previous stroke, history of psychiatric disease and sleep disorder were excluded from the study. Sleep disturbanceh were defined as patients with sleep problem who need medication (such as benzodiazepines, anti-depressant and anti-psychotics with sedative effect and anti-histaminics) for treatment in postoperative period. Prolonged high lactat level was defined as lactat>2mmol/L for 48 hours with the onset of surgery. The patients were grouped according to whether developed postoperative sleep problem or not.

RESULTS: Sleep disturbanches developed in 16 (30.7%) of all patients (Table 1). Patients with sleep problem were older but no significant difference found in statistics. Patients with sleep problem had more common periphreric arterial disease (p=0.046). Cardiopulmonary by-pass and X-Clamp time were longer in sleep problem groups (p=<.0001 and 0.0011 respectively). And accordingly prolonged high lactat level were common seen in patients with postoperative sleep disturbanches (p=<.0001).

CONCLUSIONS: High and prolonged lactat level is a good indicator for poor tissue perfusion during heart surgery using cardiopulmonary by-pass. Our study demonstrated that patients with sleep disturbances after surgery had prolonged high lactat level. Our results need to be confirmed by large multi-center prospective trials.

	Sleep Disturbances (+)		Sleep Disturbances (-)		p
Gender/Female	6 (38)		14 (39)		0.924
Valve	9 (56)		20 (56)		0.962
By-pass	7 (44)		16 (44)		0.962
DM	4 (25)		12 (33)		0.543
HT	6 (38)		6 (17)		0.099
HL	5 (33)		8 (22)		0.406
COPD	2 (13)		5 (14)		0.892
PAD	3 (19)		1 (3)		**0.046**
Smoking	4 (25)		7 (19)		0.651
Arrhythmia	6 (38)		11 (31)		0.622
Perioperative Vasopressor	9 (56)		11 (31)		0.078
Prolonged Lactic Acid	11 (69)		1 (3)		**<.0001**
	mean	SD	mean	SD	p
Age	52.75	5.42	51.31	6.44	0.4094
BMI	22.83	2.89	22.40	1.73	0.5936
LVEF	50.88	4.50	47.75	4.08	**0.0250**
Creatinin	0.96	0.20	1.21	1.49	0.3203
CPB time	73.69	11.25	58.72	7.12	**<.0001**
X-Clamp Time	55.00	11.11	43.58	7.00	**0.0011**

BMI:body mass index, CPB: cardiopulmonary by-pass COPD: chronic obstructive pulmonary disease, DM: diabetes mellitus, HL: hyperlipidemia, HT: hypertension, LVEF: left ventricular ejection fraction, PAD: peripheric arterial disease

ID: 248

Topic:

Cardiovascular Surgery > Perfusion course

Presentation Type:

Oral Presentation

Isolation, Identification and Antibiotic Sensitivity Test of the Microorganism Isolated from operation room and Cardiopulmonary Bypass Circuit System During Open Heart Surgery in Sana'a City, Yemen

MD Abdulrahman Ahmed Mohammed Alalie*
Perfusionist

Abstract

Microbial contamination of cardiopulmonary bypass circuit system during open heart surgery can increase the mortality and morbidity after cardiac surgery. The source of microbial contamination during open heart surgery could be the tube of anesthesia machine, air, instruments and the hands of health workers in open heart surgery operation room.

The aim of the current study was to isolate, identify and determine antibiotic sensitivity test

of the microorganism isolated from operation room and cardiopulmonary bypass circuit system during open heart surgery in Sana'a City, Yemen.

Material and methods

two hundred and ten patients were enrolled in this study. A total of 540 samples were collected in the current study which including 210 crystalloid prime solution samples, 210 samples from Blood from line of oxygenator, 30 swab samples from anesthesia machine, 30 swab samples from surgical instrument, 30 swab samples from health care worker hands in operation room after washing and 30 air samples from air in the operation room. The Identification of Isolated bacteria, yeasts and fungi and antibiotic sensitivity test by disc diffusion method were carried according to The Clinical & Laboratory Standards Institute (CLSI).

Results

Among the 420 samples collected from crystalloid solution and from CPB machine during operation samples, 12 (5.71%) and 6 (2.86%) samples were respectively showed positive growth of microorganisms. Out of 30 samples which were collected from anesthesia machine tube and from the air of operation room, 11 (36.67%) and 27 (90.00%) respectively, were positive culture. 2 positive samples (13.33%) which was collected from instruments after open heart surgery. 4 samples (13.33%) from the hands of open-heart surgery workers were positive. The most isolated bacteria and fungus isolated were Staphylococcus epidermidis, S. aureus S. saprophyticus, Lactobacillus spp. Pseudomonas aeruginosa and Bacillus subtills. Aspergillus carbonarius, Candida guillirmondii and Geotrichum candidum. Most of the bacterial pathogens were sensitive to Linezolid, Vancomycin and Cephalothin.

Most bacterial isolates showed considerable resistance to antibacterial agents. Pseudomonas aeruginosa was resistant to Cefadroxil and Sulphonamide.

Conclusion

ID: 12

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

Medical Malpractice Through the Eyes of a Doctor of Laws Physician

Prof. Hasan Tahsin Keçeligil*

Ondokuz Mayıs University (Medical School and Faculty of Law)

OBJECTIVE: Due to the nature of the job, the responsibilities and obligations of physicians and healthcare professionals are above and far beyond all professions. Because the field of study of the medical profession is directly the "human body" and medical practices are closely related to the "right to life", hich is the highest of rights. Patient rights and the right to health from which it originates are essentially an integral part of the right to life.
METHODS: In recent years, on the one hand, the reactions of patients and their relatives to the harms caused by the interventions of physicians have increased, on the other hand, the expectations of patients and their relatives from medicine and physicians have increased exaggeratedly. All these have led to a reinterpretation of medical interventions by emphasizing the right to a healthy life. This situation simultaneously brought up the responsibility of physicians arising from medical practise.
RESULTS: In medical interventions, a harmful outcome may occur at any time because no medical intervention is zero risk. Even if the utmost care and attention is paid, the negative consequences that occur are considered as normal deviations and risks of medical interventions and are called "complications" within the "permissible risk" by the physicians.
CONCLUSIONS: One of the most important fundamental issues of medical law is the distinction between medical malpractise and complications. In this paper, the consepts of medical malpractises and complications will be examined in the light of judicial decisions.

ID: 181

Topic:

Cardiovascular Surgery > Mitral valve surgery

Presentation Type:

Oral Presentation

Management of Infective Endocarditis After Hadj Visit in Patient with Coronary Anomay and Acromegaly

MD Volkan Burak Taban[*] [1] **,** Assoc. Prof. Özgür Altınbaş[2] , Prof. Yüksel Dereli[3]

[1] *Şırnak State Hospital*

[2] *Gaziantep University*

[3] *Konya Necmettin Erbakan University*

OBJECTIVE: Surgeons may across to challenging clinical situations in cardiovascular medicine. Patients may have not only one manifestation but also multiple disorders that affect various systems. Therefore, exact systemic evaluation head to nail has an important role for satisfactorial outcomes. Despite the importance of anamnesis and physical examinations, it is important to support the findings with laboratory and imaging methods and take cautions with consultations before and after operation.

METHODS: A 64-year-old man admitted to the hospital with the complaints of myalgia and fever for two days. It is learned that he visited Saudi Arabia for hadj and come back two days ago. He was unresponsive to the antibiotherapy and referred to our center. Physical examination revealed big hands and chin and new onset heart murmur was detected with conjunctival haemorrhages. According to the TTE there was flail mitrale with severe mitral regurgitation and possible vegetation. EF was 50%. TEE confirmed the vegetation. Metisilin resistance coagulase negative streptococcus growth was detected in two of three blood cultures and vancomycine was started by infectious diseases department. After the desicion of operation, coronary angiography was performed. Although there was no pathology on CAG, dual RCA from different ostiums was seen. In addition, LAD and Cx originated from different ostiums. At last he was consultated to the endocrinology and hypophysis adenoma secreting growth hormone was determined. Operation was suggested under cortisol treatment.

RESULTS: Mitral valve replacement was performed by using 33 no biological valve. Duration of intensive care stay was three days. He was discharged on postoperative 10th day with antibiotherapy revised by infectious diseases department and endocrinology department visit was suggested.

CONCLUSIONS: Although rarely seen with the incidence of 3-10/100,000, infective endocarditis can be life-threatining disease if left untreated. Travels to the crowded and sporadic regions, idiopathic and persistant fever, new onset heart murmur, ophtalmologic and rheumatologic findings are important clues for this disease. In addition to echocardiography and blood cultures, patients must be evaluated for other systemic manifestations. Detailed anamnesis and physical examination with multidisciplinar workup provide beter clinical outcomes.

ID: 20

Topic:

Cardiovascular Surgery > Risk management in cardiovascular diseases

Presentation Type:

Oral Presentation

A Retrospective Multicenter Experience: Does Packing the Surgical Field Help to Stop Bleeding After Cardiac Surgery

Assoc. Prof. Ahmed Ahmed*
Ain Shams University, Cairo, Egypt

Background: Intractable bleeding after cardiac surgery is a well-documented complication. When conservative measures fail to control bleeding, re-exploration is required, and, in some cases, chest packing may be needed. Methods: The study included 148 patients admitted to eight cardiac surgery centers in Egypt with severe postoperative bleeding. All patients underwent chest re-exploration and chest packing to control postoperative bleeding. Results: The mean age was 62.7 ± 5.6 years. Their mean BMI was 27.1 ± 3.9 kg/m2. One-hundred-ten (74.3%) of included patients were hypertensive, while 49 (33.1%) patients were diabetic. Twenty-seven (18.2%) patients had initially had a triple valve replacement. Sepsis was prevalent among 31 (20.9%) of included patients. Twenty (13.5%) patients died. Conclusion: Intractable bleeding is a well-documented complication following cardiac surgery. Chest re-exploration is required in certain situations when the traditional conservative options fail to stop bleeding. Chest packing is a modality that can be considered to control bleeding in certain situations.

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Keyword: *Post operative bleeding*

ID: 4

Topic:

Cardiovascular Surgery > Microcircuits in cardiopulmonary bypass

Presentation Type:

Oral Presentation

Variability in the Physiologic Response to Fluid Bolus in Cardiac Patients Following Cardiac Surgery

MD Nadide Ors Yıldırım[*] [1] **, MD Tayfun Özdem[2]**

[1] *Department of Anesthesiology and Reanimation, Gulhane Training and Research Hospital, University of Health Sciences, Ankara, Turkey*

[2] *Department of Cardiovascular Surgery, Gulhane Training and Research Hospital, University of Health Sciences, Ankara, Turkey.*

Background: In cardiac patients who experience shock caused by low cardiac output syndrome following cardiopulmonary bypass, it is common to administer fluid boluses. Low cardiac output syndrome is characterized by symptoms such as low blood pressure, rapid heart rate, inadequate blood flow to peripheral tissues, reduced urine output, and metabolic acidosis. Regardless of the underlying cause of shock, it is important to ensure sufficient intravascular volume to maintain preload, aiming to enhance cardiac output, optimize organ perfusion, and deliver oxygen to tissues. Monitoring an increase in mean arterial pressure, along with the resolution of rapid heart rate and improvement in peripheral tissue perfusion, is often used as clinical indicators of improved cardiac output. Our study aims to describe the changes in cardiac index, mean arterial pressure, and their relationship to other measures of cardiovascular performance.

Objective: Our study aims to elucidate alterations in the cardiac index, mean arterial pressure, and their correlation with other markers of cardiovascular function.

Metod: In our study, we conducted a prospective analysis of hemodynamic information obtained from cardiac patients admitted to the cardiac intensive care unit. These patients received a fluid bolus (10mL.kg^{-1} of Ringers-Lactate over 30 min) within 12 hours of undergoing cardiac surgery to address shock and/or inadequate tissue perfusion. Cardiac index responders and mean arterial pressure responders were defined as CI ≥10% and mean arterial pressure ≥10%, respectively. After administering the fluid bolus, we examined the venous-return gradient, properties of arterial load, and any alterations in the requirement for vasopressor support.

Results: A group of fifty cardiac patients, aged between 44 and 76 years, were administered a fluid bolus. Among them, the rates of responsiveness to changes in cardiac index and mean arterial pressure were 31% and 59% respectively. There was no significant correlation observed between changes in mean arterial pressure and cardiac index (correlation coefficient r = 0.029, p = 0.68). Interestingly, despite similar values for mean systemic filling pressure - central venous pressure and the number of patients who responded to changes in cardiac index after the fluid bolus, there were no significant changes in arterial load parameters among those who did not respond to changes in mean arterial pressure. Out of the total, thirty-four patients (68%) experienced a change in the Vasoactive-Inotrope Score following the fluid bolus, and of these, 63% required a higher level of vasoactive support.

Conclusions: The response of mean arterial pressure to fluid bolus in patients in the cardiac surgery ICU was found to be unpredictable, and there was a weak correlation between responsiveness in

cardiac index and mean arterial pressure. Given that arterial hypotension often prompts the administration of fluids, and changes in blood pressure are commonly used to monitor changes in cardiac output, we recommend exercising caution and adopting an individualized approach when considering repeat fluid boluses solely based on the absence of mean arterial pressure response to the initial fluid administration. This is because decreased arterial tone can still occur even if there is an increase in cardiac index, highlighting the potential implications.

Keyword: *cardiac output, fluids, mean arterial pressure, shock*

ID: 124

Topic:

Cardiovascular Surgery > Adult congenital heart disease

Presentation Type:

Oral Presentation

Surgery Of Subvalvular Aortic Stenosis Symptomatic On Dextrocardia; Case Report.

Assoc. Prof. Redha Lakehal* **,** Prof. Radouane Boukarroucha
Faculty of medecine Constantine 03 Algeria

Introduction: Dexrtocardia is a congenital malformation in which the heart is place in half right side of chest, oriented apex to the right (1 for 10000 birth) .With or without inversion of organs (situ in vertus). The goal of this presentation is to show the presence of this malformation.

Methods: We report the observation of a child 09 year old with a congenital heart disease type subvalvular aortic stenosis symptomatic on dextrocardia .Physical examination: systolic murmur 5/6 in home aortic. X ray pulmonary :CTI at 0,46 and dextrocardia.ECG : RSR + HLV .Echocardiography : sub aortic membrane ,left ventricle :45/27 mm ,left atrium :55 mm ;mean gradient aorta- left ventricle : 79 mmhg .It was operated under cardio-pulmonary bypass and exploration reveled subaortic membrane .It has benefit an resection of the membrane under valvular with conservation of the aortic cusps.

Results: The immediate postoperative course was simple.

Conclusion: Congenital heart malformation very rare. The diagnosis is based on echocardiography .The treatment based on surgery.

ID: 253

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

An Uncommon Cause of Gastrointestinal Bleeding in a Pediatric Patient with Liver Injury: A Case Report on Hemobilia

MD Mohammed Altalla* **,** MD Eman Elayan
Ministry of Health

Background: Hemobilia is a rare condition characterized by bleeding from the biliary tract, with iatrogenic injury being the leading cause. The classic presentation, known as Quincke's triad, includes jaundice, right upper quadrant abdominal pain, and upper gastrointestinal hemorrhage. However, these findings are present in only 22-35% of cases.
Objectives: To highlight the importance of considering hemobilia as a differential diagnosis in patients with a history of abdominal trauma and symptoms suggestive of gastrointestinal bleeding.
Methods: We present a case of a 19-month-old male patient who sustained blunt abdominal trauma resulting in a grade IV liver injury. The patient was managed conservatively and discharged. Ten days following the trauma, the patient returned with complaints of black tarry stool and yellowish discoloration of the sclera. A diagnosis of hemobilia was made after a CT scan revealed bloody content in the biliary tree. The patient was referred for embolization of the aneurysm.
Results: The patient was successfully managed with embolization of the aneurysm. The presentation of hemobilia depends on the cause, and the intensity of the symptoms may vary depending on the quantity and swiftness of hemorrhage within the biliary tract. As the initial bleed stops, the blood that entered the biliary tract clots, causing biliary obstruction and subsequent right upper quadrant pain.
Conclusion: Hemobilia should be considered as a differential diagnosis in patients with a history of abdominal trauma and symptoms suggestive of gastrointestinal bleeding. A high index of suspicion and familiarity with the characteristics of hemobilia across imaging modalities can lead to timely diagnosis and management, especially in rare cases such as the one presented.

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Keyword: *hemobilia, biliary tract, Quincke's triad, abdominal trauma*

ID: 284

Topic:

Cardiovascular Surgery > VAD and heart TX

Presentation Type:

Oral Presentation

Coronary Artery Bypass Grafting After PCI in A Heart Transplant Patient

MD Barış Avşar* **,** MD Alperen İşeri , Prof. Sema Güneri , Prof. Öztekin Oto
Dokuz Eylül University, İzmir, Turkey

OBJECTİVE: The patient, who had a heart transplant 24 years ago, had CABG surgery due to transplant coronary artery disease (TCAD), which occurred last year. We defend the superiority of LIMA-LAD bypass over stent based on the patient who underwent PCI 8 months before CABG.

METHODS: A 44-year-old man, who had undergone orthotopic heart transplantation for dilated cardiomyopathy in 1999, 23 years after the transplant, he applied to another university hospital with back and headache. LAD PCI was applied to the patient who underwent CPR after cardiac arrest. CABG was planned for the patient who applied to us with ongoing back pain 8 months after coronary angiography, as severe stenosis was detected in the LAD in-stent and RCA in the control coronary angiography.

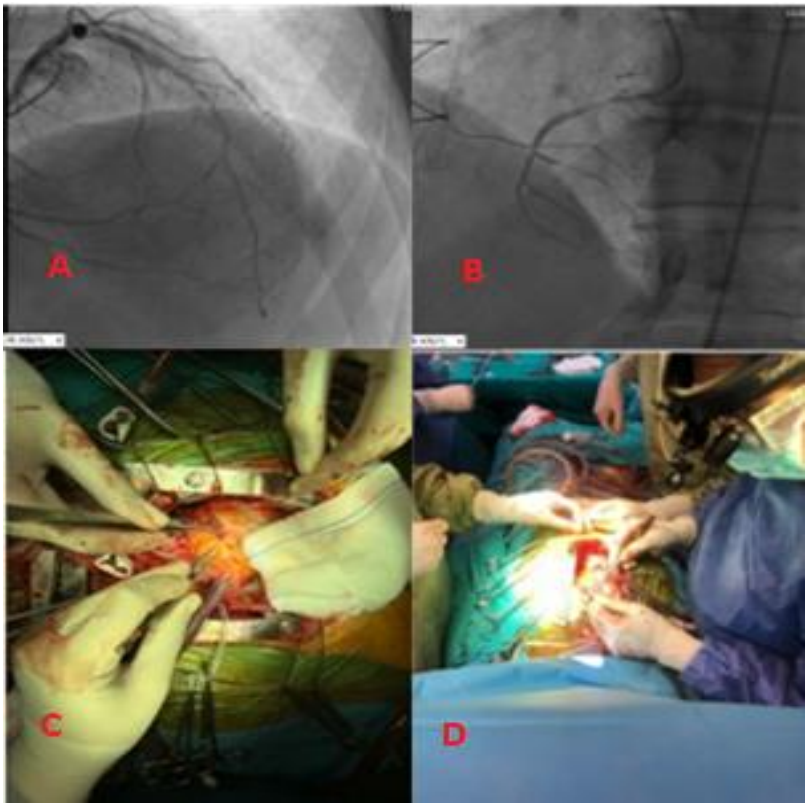

Figure-1: (A) LAD %80 stenosis in stent (B) Non-dominant RCA proximal long segment %80 stenosis

(C) LIMA-LAD anastomosis (D) Peripheral cannulation and median sternotomy

We performed peripheral cannulation and CPB was initiated, then the heart was exposed again through median sternotomy. LIMA was prepared as a graft. All adhesions surrounding the heart were dissected, exposing the aorta, right atrium, LAD, and RCA. The LAD was carefully examined and digitally palpated. The pericardial fat surrounding the vessel was tense and accumulated in an inflammatory reaction, but there was no calcium deposition. Since the RCA was non-dominant and thin, it was not suitable for bypass. LIMA was anastomosed to the LAD without any problems.

RESULTS: No complications developed. 650 cc of drainage occurred in the first 24 hours post-op. The patient, who was in good hemodynamic condition, was extubated at the 9th postoperative hour. After surgery, the patient's symptoms disappeared. His preoperative immunosuppressive regimen included tacrolimus 1 mg twice a day, mycophenolate mofetil 2000 mg once a day. Postoperatively, 4 mg twice a day Methylprednisolone treatment was added.

CONCLUSIONS: PCI in patients with TCAV has been associated with greater restenosis rates compared to PCI in patients with native CAD[1]. It has been shown that both CABG and PCI are feasible methods for revascularization in TCAV patients, with PCI being associated with lower mortality and no difference in cardiac mortality during the same follow-up period [2]. PTCA reportedly has been performed in 1.8% to 4.7% of patients with TCAD.[3,5] The primary angiographic success rate has been reported to be excellent, ranging from 84% to 100%, but the restenosis rate within a year is significant (42% to 67%)[3,4,5]. We think that CABG is superior to PCI in patients with Transplant coronary artery disease (TCAD). We believe that the LAD-LIMA anastomosis will provide longer clearance than the stent. Further studies are needed to delineate evidence-based guidelines to tailor the appropriate therapy, CABG or PCI, to the appropriate patient with TCAV.

References:

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Keyword: *Heart transplant, Transplant coronary artery disease, Coronary artery bypass grafting*

Oral Presentation Session

Expected and Unexpected in Complex Coronary Interventions

Date: 05.11.2023 Time: 13:00 – 14:00 Hall: 6

ID: 214

Topic:

Cardiology > Percutaneous coronary interventions

Presentation Type:

Oral Presentation

Left Main Coronary Artery Aortic Dissection During Percutaneous Intervention: Make Sure the Procedure Is Finished!

MD Büşra Tozlu* **,** MD Bayram Bağırtan , Assoc. Prof. Kanber Öcal Karabay
Şehit Prof. Dr. İlhan Varank Sancaktepe Eğitim ve Araştırma Hastanesi, İstanbul,Türkiye

Introduction: Dissection involving ascending aorta and left main coronary (LMCA) is a rare and potentially fetal complication of coronary interventions. In this case report, we present a LMCA dissection involving ascending aorta treated with stenting.

Case: A 62-year-old female patient with previously diagnosed diabetes and hypertension presented with chest pain during exertion. Coronary angiography showed a long, calcific 80% stenosis in the midportion of left anterior descending artery (LAD), 40% stenosis in the obtuse margin 1 ostium and 60% stenosis in the proximal right coronary artery (RCA). After predilation with a 2.0x15 mm balloon to the LAD lesion 2,5x33 mm with drug releasestent was implanted. Postdilatation was performed. During the control injection at the end of the procedure, the patient developed chest pain and hypotension and a dissection line was observed in the LMCA involving ascending aorta (Figure 1). A 4.0x16 mm and 4.0x16 mm drug-eluting stents and a 4.5x12 mm bare metal stent were inserted in the LMCA. Final angiogram showed TIMI-3 flow. During the follow-up of the patient in the intensive care unit, the next day, chest pain and ST depression in the inferior leads on the ECG were detected. Coronary angiography revealed that the LMCA stents were open and the left system flow was TIMI 3. Aortography revealed no dissection flap in the ascending aorta. 3.0x16mm and 3.0x24 mm stents successfully implanted to the proximal RCA. Post-procedure ECG displayed improved ST depression. She was discharged two days later.

Conclusion: Iatrogenic LMCA and aortic dissection can result in serious mortality and morbidity if not recognized and treated quickly in coronary interventions. Various factors may increase the risk, such as the size of atherosclerosis in the LMCA, inappropriate catheter selection, deep intubation, vigorous manipulation of the guide catheter, strong injection of contrast material (hydrodissection), use of rigid or hydrophilic guidewires. Prompt diagnosis and appropriate treatment are essential.

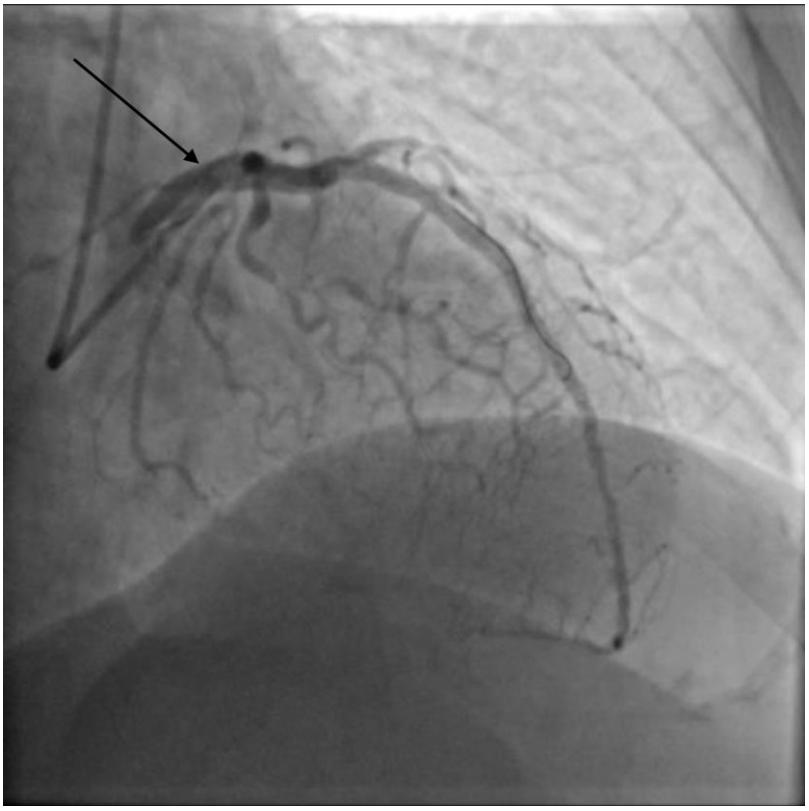


Fig1. Dissection line

Keywords: aortdissectioncoronarydissectiondissection

ID: 39

Topic:

Cardiology > Percutaneous coronary interventions

Presentation Type:

Oral Presentation

Should LMCA PCI Be More Valuable Than Other Coronary Lesions In Case Of Multivessel Inoperable High Risk Patients

MD Cuma Süleymanoğlu[*] [1] **,** Assoc. Prof. Şaban Keleşoğlu[2] , Prof. Nihat Kalay[3]

[1] *Osmaniye Devlet Hastanesi*

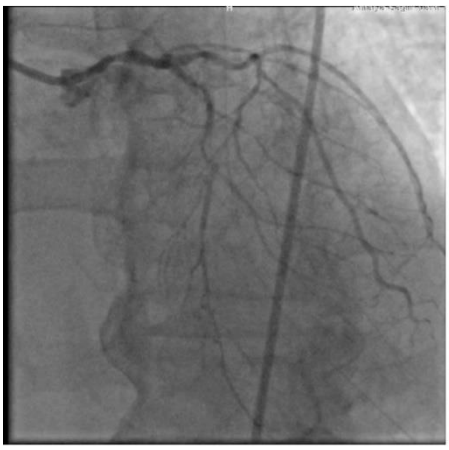
[2] *Erciyes university*

[3] *Erciyes University*

PCI for LMCA disease was considered an alternative to CABG in those with hemodynamic instability or who are at high surgical risk.

67 y.o male presented due to typical chest pain, the patient has a history of uncontrolled type 2 DM and CKD, on admission the patient diagnosed with hypertensive acute pulmonary edema. ECG showed diffuse ST segment depression between V1-V6, poor R prognosis on the anterior and minimal ST segment elevation on the lateral leads. Laboratory findings revealed high kidney function tests,CRP and elevated hsT. We decided to stabilize the patient then doing CAG to exclude ACS. The patient went on diuretics, nitrate infusion, acetylsalicylic acid and also supported by NIMV to maintain the respiratory distress. The CAG revealed multivessel disease in each of RCA, LCX, LAD and severe osteal LMCA stenosis,by ECHO EF was 20%, moderate mitral insufficiency and globally affected left ventricle wall motions, the council decided that the patient has very high CABG risk and the only LMCA PCI will be the suitable decision. We engaged by 7F 3.5 JL guiding catheter, wiring both LAD and LCX and using Bumpe wire technique to prevent deep engagement, predilate with 3.5*12 NC balloon then implant 4.5*15 DES and postdilate with 5.0*12 NC balloon. At the 6.month control feeling better,NYHA class 1 and surprisingly EF near 50%.

LMCA disease represents the highest risk lesion subset of CAD because of the large amount of jeopardized myocardium, which is associated with significant high risk of mobidity and mortality. LMCA lesions frequently combined with concomitant multivessel disease. Optimal revascularization strategy is crucial for the management of significant LMCA disease. Traditionally CABG has been the gold standard revascularization method of these lesions while PCI for LMCA was considered as alternative to CABG in high selected patients.



Caption

Keywords: Left main coronary arteryPercutaneous Coronary Interventionejection fraction reduced heart failurecoronary artery bypass surgery

ID: 42

Topic:

Cardiology > PI for SHD-Transcatheter aortic valve replacement

Presentation Type:

Oral Presentation

Approach To Iatrogenic Right Coronary Air Embolism During TAVI Procedure

MD Gülden Güven*
İstanbul

A 79-year-old male patient, who was followed up with known advanced aortic stenosis and had frequent outpatient clinic visits due to increasing dyspnea in recent years, was admitted to the cardiology service. As a result of the examinations, in transthoracic echocardiography on the aortic valve, max grade: 60 mmHg mean grade: 34 mmHg ava:0.72 cm2, mitral regurgitation moderate-advanced, left ventricular concentric hypertrophy, tricuspid regurgitation moderate pabs: 70 mmHg, left ventricular systolic function within normal limits ef was measured as 55%. Agaston score was determined as 1878 in peroperative coronary CT angiography. Considering the additional diseases, TAVI procedure was decided. Coronary angiography performed during TAVI procedure revealed 30-50% rca mid 60-70% stenosis with lmca plate and lad plate cx mid. Two proglides were placed in the right femoral artery. Left femoral artery and vein. 6f sheats were placed. Temporary pacing lead was placed from the left femoral vein. Aortic valve with al2 diagnostic catheter and flat tip gw. No 29 myvall valve was implanted. The inside of the valve was postdilated with a 29 mm balloon. At the same time, normal right/left ventricular systolic functions were observed on the TT. No effusion was observed. Trace paravalvular month was observed in the imaging with the control pump. The patient had hypotension/bradycardia after the pump injection. In the control tte, severe contraction defect was observed in the right ventricle. With the right diagnostic catheter, it was observed that the flow was gone in the right system starting from the RCA MID cut. Floppy wire was sent. The mid region was dilated with 2.0X20/ 2.5X15 balloons. The severity of the lesion was observed to be the same in the mid region. An air bubble was detected after Timi 1 flow. Aspiration was performed with a thrombus aspiration catheter. 3.0X37 mm DES 18 ATM was implanted in the mid region. . It was posited with a 3.5X18 NC. All 3 flows were provided. After rca percutaneous intervention, the patient's control transthoracic echocardiography showed improvement in right ventricular contraction. The patient was extubated on the evening of the post-operative procedure. Orientation and cooperation were normal in the follow-ups. General condition was stable. Polyclinic follow-ups continue. Keywords: AGASTON SCORE, ADVANCED AORTIC stenosis, TAVI

ID: 79

Topic:

Cardiology > Coronary stents and advances in stent technology

Presentation Type:

Oral Presentation

No-Reflow Complicating Chronic Total Occlusion Coronary Revascularization

MD Cuma Süleymanoğlu[* 1] , Assoc. Prof. Şaban Keleşoğlu[2] , Prof. Nihat Kalay[2]
[1] *Osmaniye Devlet Hastanesi*
[2] *Erciyes University*

No-reflow phenomenon can be a serious complication during PCI ; it is difficult to predict and prevent, this phenomenon in CTO recanalization sesions is rare, but it is important to diagnose and identify usefull manegment strategies.

62 years old male patient complicating of effort angina despite full course of antianginal therapy . MPS reveled the viability of the anterior wall myocardium , the previous angiography revealed instent total occlusion of the proximal segment of the LAD , insignificant stenosis of both LCX and RCA . Antegrade approach of the LAD CTO segment and crossing with escalating wire technique , the tip injection reveled intraluminal cross but distal LAD vasculare bed was very abrasive .After Exchange with extra support wire and predilatation , unexpected no-reflow with TIMI 0 flow was observed , intracoronary Nitroglycerin, Adenosine and Diltiazem were useless . More aggresive balloon dilatation was also useless ; so we decided to use guideliner through injection technique which we frequently use in the acute cases to diagnose what is the main cause . 5,5F guideliner introduced beyond the CTO segment and intraluminal flushing suggested that inflammation and endothelial trauma should be the main cause rather than mechanical causes . proximal stent deployment and optimization of it , just after 10 minute TIMI 3 flow maintained .

Functional de-recruitmant which is phenomenon describes no-reflow in the case of CTO procedures must be in mind , although the most important cause such as embolization of thrombus or plaque debris must be excluded .

References:

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Keyword: *CTO, NO-REFLOW, PERCUTANEOUS CORONARY İNTERVENTİON*

ID: 156

Topic:

Cardiology > Percutaneous coronary interventions

Presentation Type:

Oral Presentation

Resting heart rate is related to poor coronary collateral formation in patients with chronic total occlusion

Assoc. Prof. Samet Yılmaz*
Pamukkale University

Introduction: Heart rate is an important marker of increased inflammatory status in body. The relationship between the resting heart rate and increased prevelance of coronary artery disease (CAD) is well known. In this study our aim was to investigate the affect of the heart rate in coronary collateral circulation (CCC) in patients with chronic total occlusions.

Material and Methods: The patients were divided into two groups, with poor CCC and good CCC, according to the Rentrop Classification. One hundred and eleven patients had poor CCC, and 108 patients had good CCC. Resting heart rate was calculated from surface electrocardiogram after 10 minutes of resting. Survival status of the patients were gathered from national data bases.

Results: A total of 219 patients were divided in to two groups according to their CCC. Mean age of the patients were 67.9±10.7 and there was not any significant difference between groups. Basic demographic features and comorbidities were similar between groups. The mean resting heart rate was 79±13.9 in poor CCC group and 74.3±10.5 in well CCC (p=0.05). During follow up of 31 months (0-39), 27% of patients in poor CCC and 16.7% of patients in well CCC died (p=0.064). In multivariate backward logistic regression analyses low resting heart rate, high ejection fraction, presence of multivessel (CAD) and presence of CTO in right coronary artery were found related to development of well CCC.

Conclusion: Resting heart rate is related to development CCC. Increased heart rate was found to be a risk factor for poor CCC.

ID: 166

Topic:

Cardiology > Percutaneous coronary interventions

Presentation Type:

Oral Presentation

The Effect of Stent Type and Stent Diameter on Long-Term Clinical Outcomes in Large-Diameter Coronary Arteries

MD Gökhan Gök[*] [1] , Assoc. Prof. Murat Akçay[2] , Assoc. Prof. Ufuk Yıldırım[2] , Assoc. Prof. Metin Çoksevim[2] , Prof. Korhan Soylu[2] , Prof. Mahmut Şahin[2]

[1] Clinic of Cardiology, Terme State Hospital, Samsun, Turkey

[2] Department of Cardiology, Ondokuz Mayıs University School of Medicine, Samsun, Turkey.

Objective: The aim of our study is to reveal the effect of the strategies of using a 4 mm diameter bare metal stent (BMS), 4 mm diameter drug eluting stent (DES) and 3 mm diameter DES with 4 mm diameter balloon postdilation strategies on long-term clinical outcomes and endpoints in the stenotic coronary arteries with a diameter of 4.0 – 4.4 mm.

Methods: In our study, patients who had coronary revascularization between January 2014 and July 2020 were retrospectively screened. The patients who had a 4 mm diameter BMS, a 4 mm diameter DES and a 3 mm diameter DES were selected among these patients. Among these patients, the patients in which the stent was expanded with a diameter of 4.0 - 4.4 mm were included in the study. The study included 350 patients with the following characteristics: patients who had a 4.0 mm diameter BMS (n = 134, Group I), patients who had a 4 mm diameter DES (n = 107, Group II) and patients who had a 3 mm diameter DES and who underwent a 4 mm diameter non-compliant (NC) balloon post-dilatation (n=109, Group III). Primary endpoints were determined to be target lesion revascularization, cardiac mortality and MI associated with the target vessel. Our secondary endpoint was all-cause mortality.

Results: There was no difference observed between the groups in terms of the essential characteristics of the groups, risk factors, distribution of acute coronary syndrome, vessels intervened and medical treatments. Stent length was the highest in group II, while it was the shortest in group III. There was no significant difference between the groups in terms of endpoints, target lesion revascularization (TLR) rates, cardiac death rates, target vessel-related MI rates and all-cause mortality rates.

Conclusions: In percutaneous coronary interventions, single stent interventions carried out on lesions that do not require bifurcation, chronic total occlusions (CTO) or multiple stent administration, when there is a vessel in the range of 4 – 4.4 mm, there is no significant difference in terms of TLR, target vessel associated MI, cardiac mortality and all-cause mortality in terms of inserting a 4 mm diameter DES, a 4 mm diameter BMS or a 3 mm diameter DES and postdilating with a 4 mm diameter balloon.

Oral Presentation Session

Tips and Tricks in Mitral Valve Surgery

Date: 05.11.2023 Time: 13:00 – 14:00 Hall: 7

ID: 3

Topic:

Cardiovascular Surgery > Mitral valve surgery

Presentation Type:

Oral Presentation

Prevent Secondary Pulmonary Stenosis By Left Ventricular Vent Technique Fixed in The Pericardium

MD Mehmet Gül* , MD Ferruh Elbir , **Assoc. Prof. Mehmet Erin Tüysüz**
SBÜ Mersin Şehir Eğitim ve Araştıma Hastanesi

Objective:

Left ventricular ventilation system is used for decompression in mitral valve surgery to prevent ventricular distension and non-ischemic myocardial damage. The left ventricle can be vented directly from the left ventricular apex, the left atrial appendage, the right upper pulmonary vein, and its junction with the left atrium. Nowadays, a multi-hole cannula is inserted through the right superior pulmonary vein or where it joins with the left atrium, and it is advanced to the left atrium, if desired, to the left ventricle by passing through the mitral valve. Sutures placed here may cause pulmonary vein stenosis (PVS). Diagnosis of PVS can be difficult due to non-specific symptomatology. Primary PVS is most commonly associated with congenital heart disease and developmental pathologies, including total abnormal pulmonary venous return, septal defects, and transposition of the great vessels. However, acquired PVS often develops secondary to neoplasms, inflammatory conditions, atrial fibrillation (AF) ablation, and cardiopulmonary bypass vent.

Methods:

We developed a new technique to prevent PVS complications related to vent sutures in mitral valve surgery. No suture was placed in the pulmonary vein for the vent in cases where left atriotomy was performed. Instead, a hole was made in the area of the pericardium that was hung with silk. The vent was passed through this hole. By fixing the vent in the pericardium, the exposure difficulty in the surgical field was overcome by using the vent freely.

Results:

This technique; It provides advantages in terms of reducing the use of surgical sutures, ease of positioning the ventricle, simplicity and preventing pulmonary stenosis, which is a complication of the vent used in mitral valve surgery.

Conclusions:

In mitral valve surgery, in addition to the stenosis caused by the purse sutures placed in the right upper pulmonary vein, we see that additional sutures placed to stop the bleeding after the vent cannula is pulled increase the degree and frequency of the stenosis. This situation reveals the importance of the vent technique we have developed.

References:

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Keyword: *pulmonary stenosis, venting, mitral valve*

ID: 143

Topic:

Cardiovascular Surgery > Diagnosis and treatment of valvular heart disease

Presentation Type:

Oral Presentation

Pulmonary Arterial Hypertension And Mitral Surgery

Assoc. Prof. Redha Lakehal* **,** Prof. Radouane Boukarroucha
Faculty of medicine Constantine 03 Algeria

Objectives: Rheumatic heart diseases (mitral stenosis +++) 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: GroupA: 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 5 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 outcome has been improved by developing cardiopulmonary bypass, myocardial protection and anesthetic technique.

ID: 27

Topic:

Cardiovascular Surgery > Heart valve repair

Presentation Type:

Oral Presentation

Reduced Goal Directed Anticoagulation For Degenerative Mitral Regurgitation

MD Maroua Eid[*] [1] **,** Prof. Olivier Fouquet[1] , Prof. Rineau Emmanuel[2] , Prof. Christophe Baufreton[1]

[1] *Department of cardiac surgery - University Hospital of Angers, France*

[2] *Department of anesthesiology and intensive care - University Hospital of Angers, France*

BACKGROUND

Cardiac surgery exposes patients to bleeding and transfusion, therefore increasing morbi-mortality. Transfusion rate after mitral valve repair is 35% according to the last report based on the STS database. Reduced goal directed anticoagulation (RGDA) was routinely used to minimize the risks of bleeding and transfusion but has been rarely evaluated after surgery for degenerative mitral regurgitation (DMR).

This study aims to determine risk factors f bleeding and transfusion after DMR surgery using RGDA and evaluate long-term impact of bleeding and transfusion on survival after DMR surgery.

METHODS

This is a monocentric study including patients undergoing surgery for DMR between 2009 and 2019. Patients included were aged 18-year-old or more at the time of surgery, for whom mitral valve repair or replacement for severe mitral regurgitation type II (according to Carpentier's classification) was performed, with or without concomitant surgery. Mitral surgery was performed using RGDA with targeted Activated Clotting Time (ACT) at 350 seconds and optimized ECC. Primary endpoint was the analysis of predictive factors for immediate bleeding, defined by the universal definition of perioperative bleeding (UDPB).

Univeriate analysis was performed using Chi2-test and T-test (when applicable). Survival was analysed using Kaplan-Meier curves. Multivariate analysis using logistic regression and Cox model was performed to analyse predictive factors of bleeding and transfusion.

RESULTS

399 patients were included, 29.3% were female. Mean age was 65.5 year-old. Pre operative anemia was present overall in 14.3% of the patients.

Mitral valve repair was performed in 93.2% of the patients. No major complications were reported. 10-years survival was 71.2% and freedom from reoperation represented 97.1% of patients at 10 years.

Median post-operative blood loss at 12H was 170ml [130-248]. 87.7% of the patients presented UDPB score of 0, reflecting an insignificant post operative bleeding. 76.2% of patient did not receive any transfusion. Multivariate analysis showed that pre operative anti platelet therapy (p=0.001), residual MR (p=0.007) as main predictive of bleeding according to UDPB scoring. Pre operative

cardiac failure (p=0.015), post operative AKI (p<0.001), pre operative anemia (p=0.006), re exploration for bleeding (p=0.006) were the main predictors for any allogenic transfusion.

CONCLUSION

After successful mitral valve repair with optimized RGDA, blood loss was limited and transfusion rate was lower than in previous reported studies (23.8%)

Preoperative anemia and bleeding, were found independent predictors of death at long term

RGDA was found a safe approach of optimized cardiopulmonary bypass even for DMR

References:

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Keyword: *Mitral valve repair, Reduced goad directed anticoagulation (RGDA), Degenerative mitral regurgitation (DMR), Bleeding, Transfusion*

ID: 227

Topic:

Cardiovascular Surgery > Surgical treatment of AF

Presentation Type:

Oral Presentation

Clinical Outcome Analysis of Patients with Persistent Atrial Fibrillation Undergoing Mitral Valve Surgery: Radiofrequency vs Cryoballoon Catheter Ablation

MD Ebubekir Sönmez[1] **, MD Izatullah Jalalzai[* 1] ,** Assoc. Prof. Abdurrahim Çolak[1] , Assoc. Prof. Uğur Kaya[1] , MD Hakan Usta[1] , Prof. Munacettin Ceviz[2]

[1] Ataturk University Department of Cardiovascular Surgery

[2] Buhara Hospital Erzurum

Objective: Alternative energy sources such as cryoablation and radiofrequency ablation are effective in converting atrial fibrillation to sinus rhythm in patients with mitral valve replacement and their complication rates are lower. The effects of cryoablation and radiofrequency ablation were studied postoperative in patients with atrial fibrillation who underwent mitral valve surgery in our clinic between 2014 and 2020.

Methods: In 96 patients with mitral valve replacement and atrial fibrillation who underwent the Cox maze I procedure Cryothermal (n=48; 54.5%) and radiofrequency (n=40; 46.5%) energy was used. 48 patients, including 25 women and 15 males, got radiofrequency treatment. 48 patients, including 28 women and 20 men, underwent cryoablation. Atrial fibrillation had been present in every patient for at least six months previous to surgery Patients were contacted for follow-up assessments between week one to six months after being released from the hospital. It was found that the energy source used, left atrial diameter, left ventricular ejection percent, and body mass index all have a causative association with the recurrence of atrial fibrillation.

Results: Patients who had radiofrequency or cryoablation had sinus rhythm maintenance rates of 80% and 85% at postoperative discharge and 71% and 79% at six months following surgery, respectively. Although there was no significant difference, atrial fibrillation recurrence was seen at a lower rate in the cryoablation group. Atrial fibrillation recurrence rate was 2.8 times higher in patients with left atrial diameter over 52. The rate of atrial fibrillation recurrence was 3.5 higher in those with a body mass index above 25. The rate of atrial fibrillation recurrence was 3.9 times higher in patients with a left ventricular ejection fraction below 40%. A causal relationship between the recurrence of atrial fibrillation and the factors studied has been established. **Conclusion:** The surgical management of atrial fibrillation with thermal ablation techniques is beneficial. In our study, atrial fibrillation can be reverted to sinus rhythm more effectively using cryoablation than radiofrequency ablation, while there is no discernible difference between the two. The impact of demographic factors on the recurrence of atrial fibrillation is evident in this study.

ID: 82

Topic:

Cardiovascular Surgery > Mitral valve surgery

Presentation Type:

Oral Presentation

Comparison of Clinical Outcomes Between Del Nido Cardioplegia and Microplegia Among Patients Undergoing Elective Mitral Valve Replacement

Assoc. Prof. Özgür Altınbaş* **,** MD Erhan Hafız , MD Işık Betil Kutlu , Prof. Mehmet Adnan Celkan
Gaziantep University

OBJECTIVE: Cardioplegia solutions are used to protect the myocardium from ischemic injury caused by cardiopulmonary bypass. Various kinds of cardioplegia solutions were introduced to cardiac surgery. In this study we aimed to compare the effects of del Nido cardioplegia and microplegia on intra-operative and postoperative process among patients underwent elective mitral valve replacement.

METHODS: Between 2018-2023, a total of 120 patients who underwent elective mitral valve surgery via sternotomy by using del Nido cardiplegia or microplegia were included to the study. Patients were divided into two groups; group 1 (del Nido, n=64) and group 2 (microplegia, n=56). Preoperative characteristics, intra-operative and postoperative clinical data were compared statistically.

RESULTS: There were no statistically significant differences in terms of preoperative characteristics between two groups. Duration of cross clamp, cardiopulmonary bypass and intensive care stay were found to be statistically significantly lower in del Nido group.

CONCLUSIONS: Either del Nido or microplegia solutions can be used safely in mitral valve replacement operations, however del Nido has some advantages on intra-operative process such as lowering the cross clamp and cardiopulmonary bypass time. Additionally, patients who operated by using del Nido cardioplegia has shortened intensive care stay.

ID: 205

Topic:

Cardiovascular Surgery > Mitral valve surgery

Presentation Type:

Oral Presentation

Adjustable Pericardial Lock, A Novel Technique Ensuring the Proper Length of Neochordae in Mitral Valve Repair

Prof. Ahmad Ali Amirghofran* **,** MD Mohammad Rafati Navaei , MD Alireza Arzhangzadeh , MD Sajad Amirghofran

Shiraz University of Medical Sciences, Shiraz, Iran

Background :

Artificial chordae implantation has become the most applied method for mitral valve repair. Choosing the proper length of the neochords is the most crucial point in this technique. In order to give the possibility of reversibility and corrections, the authors developed a novel technique in which the lengths of the neochords are determined at the end of the repair by moving a small pericardial lock along the neochords while the shape and competence of the valve is tested. In this simple reproducible technique, the length of the neochords remains adjustable until the very last moment of the repair and is fixed only when the final water test confirms ideal configuration.

Methods:

Between 2017 and 2023 , 123 patients with severe degenerative MR underwent MV repair with pericardial lock technique. 83(67.4%) had pure posterior leaflet prolapse , 24(19.5%) had pure anterior leaflet prolapse and in 17(13.8%) Both leaflets were involved.

Minimally invasive approach was used in 106(86.1%) patients. Determining the number and location of the necessary neochords was made after the initial classic valve analysis. The neochords were passed through appropriate papillary muscles and then left alone until the final step, after placing the suitable annuloplasty ring. After passing through the leaflet edges, the neochords were passed twice through a small 2 x 4 mm piece of pericardium. These pericardial locks can move along the neochord with moderate resistance which offers the possibility of adjustment to find the best suitable configuration of the leaflet confirmed by water tests.

Results:

The median follow up time was 34.3 months. The mean number of neochords used for each patient was 2.57 ±0.99 (1-6). Most patient received neochords on P2(82), followed by A2(36), p3(32), A3(26), p1(24), and A1(10).

There was no mortality in patients. One patient was reoperated and repaired 8 months after surgery for severe MR due to anterior leaflet perforation at the site of annuloplasty suture. There was one mild MR and one Moderate MR in the early echocardiography, both with fibroelastic deficiency and small anterior leaflets. Significant MR(moderate or more) was seen in 6(4.8%)patients during follow up while 25 (20.3%) had mild MR and 82 (66.6%) had no or trivial MR.

Conclusion:

The pericardial lock technique is simple and reproducible with the advantage of secure fixation, and the possibility of correction of neochord length. Adjustability and reversibility until the last stage of the repair , increases the confidence and security of the surgeon and at the same time guaranties the most proper configuration and geometry of the valve.

Keyword: *Mitral valve surgery, Minimally invasive mitral valve surgery, Mitral valve repair, Minimally invasive mitral valve repair*

ID: 81

Topic:

Cardiovascular Surgery > Mitral valve surgery

Presentation Type:

Oral Presentation

Comparison of Ejection Fraction and Pulmonary Artery Pressure Values Among Patinets Underwent Isolated Mitral Valve Replacement by using either Mechanical or Bioprosthetic Valve

MD Büşra Temel Yüksel[1] , **Assoc. Prof. Özgür Altınbaş[* 2]** , Assoc. Prof. Mehmet Işık[1]

[1] Konya Necmettin Erbakan University

[2] Gaziantep University

OBJECTIVE: There are three main conditions that affect the mitral valve; stenosis, regurgitation and prolapsus. Interventions can be performed via medical or surgical procedures or both, and followed with different modalities. Here, we aimed to compare the ejection fraction and pulmonary artery pressure values in patients operated due to isolated mitral valve disease with mechanical or bioprosthetic valve.

METHODS: Between 2018 and 2022, a total of 148 patients were operated by using bioprosthetic (n=23) or mechanical (n=125) valve due to isolated mitral disease. Preoperative and postoperative ejection fraction and pulmonary artery pressure values were evaluated between the groups.

RESULTS: 67.9% of the patients were female and 32.1% of them were male. Mean age was 56.7 years (22-84). Rates of rheumatologic and degenerative diseases were 56% and %44 respectively. Mechanical valve was used in 83.7% of the patients and bioprosthetic valve was used in 16.3% of the patients. Excitus rate was 8%. Statistically significant increase in ejection fraction and decrease in pulmonary artery pressure values were detected in patinets operated by using mechanical valve (Table 1).

CONCLUSIONS: Although several factors are associated with postoperative outcomes in mitral valve replacement, mechanical valves have better effects on cardiac and pulmonary healing than bioprosthetic valves. Advanced age in patients with bioprosthetic valve is the probable reason of this clinical outcome.

Table 1. Comparison of pre and postoperative echocardiography findings in association with type of the valve

ECHOCARDIOGRAPHY FINDINGS

Parameter	Unit	Valve	PREOPERATIVE	POSTOPERATIVE	p
			Median (min-max)		
EF	%	Bioprothesis	60 (30-65)	55 (20-60)	0,08
		Mechanical	60 (30-70)	55 (25-65)	**<0,001**
PAP	mmHg	Bioprothesis	43,5 (30-75)	32 (25-47)	0,07
		Mechanical	41 (25-90)	34 (22-93)	**<0,001**

ID: 252

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

Long-term Outcomes of Cox-Maze IV Operation in Patients Undergoing More Than One Primary Operation

Assoc. Prof. Taylan Adademir* **,** Prof. Fuat Büyükbayrak , Prof. Kaan Kırali
University of Health Sciences Koşuyolu High Specialization Education And Research Hospital

Background: The Cox-Maze IV procedure (CMP-IV) is considered the gold-standard surgical treatment for Atrial Fibrillation. Although this procedure adds some time to cross-clamp and cardiopulmonary bypass durations, it is not a significant concern when combined with a single primary operation such as isolated mitral valve surgery, aortic valve surgery, or coronary bypass surgery. Numerous studies have consistently shown excellent long-term outcomes with the combination of one primary operation and the Cox-Maze procedure.However, in developing countries, patients often require multiple primary operations in addition to the Cox-Maze procedure. This results in the Cox-Maze operation being performed as the third or subsequent procedure, potentially due to late referral or different underlying causes, such as rheumatic origin. Surgeons may hesitate to include the Cox-Maze procedure due to the added complexity and increased operative time, causing patients to miss their opportunity for effective treatment of atrial fibrillation. There is limited research available demonstrating the outcomes in this specific patient group.The aim of this study is to present the long-term outcomes of patients who underwent the Cox-Maze procedure as a third or subsequent procedure.

Methods: Between November 2018 and January 2023, prospective data were collected from 34 patients who underwent concomitant CMP-IV surgery, with a minimum follow-up duration of six months. Freedom from atrial tachyarrhythmia (ATA) was assessed at 6 months, 1 year, and 2 years after surgery using 24-hour Holter ECG.

Results: Among the patients, CMP-IV was the second procedure in 8 (23.5%) cases, the third procedure in 17 (50.0%) cases, the fourth procedure in 8 (23.5%) cases, and the fifth procedure in 1 (3.0%) case. One patient died 33 months after surgery due to intracranial hemorrhage. Three patients (8.8%) required permanent pacemakers (PP), and a total of 3 (8.8%) patients needed medical (2 patients) or DC cardioversion (1 patient) during the follow-up period. All 6 patients who required a PP or secondary intervention had undergone more than one procedure in addition to CMP-IV. At 6 months, freedom from AF was observed in 32 out of 34 patients (94.1%), at 1 year it was 25 out of 27 patients (92.6%), and at 2 years it was 19 out of 21 patients (90.5%). For patients who had the Cox-Maze procedure as a third or subsequent procedure, freedom from AF was observed in 24 out of 26 patients (92.3%) at 6 months, 18 out of 20 patients (90.0%) at 1 year, and 15 out of 17 patients (88.2%) at two years.

Conclusion: The CMP-IV procedure demonstrates an acceptable long-term success rate for patients who required multiple primary operations, with additional secondary interventions and the need for permanent pacing.

ID: 267

Topic:

Cardiovascular Surgery > Surgical treatment of AF

Presentation Type:

Oral Presentation

Surgical Treatment Of Persistent Atrial Fibrillation: Comparison Balloon Cryoablation And Thoracoscopic Ablation

MD Viktor Vaykin* **,** MD Michail Riazanov , Prof. Alishir Gamzaev , MD Anton Maximov , MD Dmitrii Zhiltsov , MD George Bolshuhin , MD Alexander Shamatolsky

B. A. Korolev Specialized Clinical Cardiac Surgery Hospital, Nizhny Novgorod, The Russian Federation

Objective: The tendency to increase the number of cases of persistent atrial fibrillation and the unsatisfactory results of its conservative treatment force us to pay attention to surgical methods of treatment. What operation is better to offer them? The aim of the study was to compare in-hospital and mid-term results of balloon cryoablation and thoracoscopic epicardial ablation in persistent atrial fibrillation treatment.

Methods: Two groups of patients were studied. The first group (G1) included 91 patients who underwent balloon cryoablation, the second one (G2) included 143 patients who underwent thoracoscopic ablation. General characteristics: age, sex, BMI did not significantly differ in both groups. G1 did not include patients with a duration of persistent AF more than 8 months and with left atrial diameter>4.5 cm. G2 had no restrictions on the timing of the occurrence of AF and the size of left atrium. 24-Holter ECG monitoring was performed after 3, 6, and 12 months and annually thereafter.

Results: Two patients from G1 and one from G2 were discharged with AF, the rest with sinus rhythm. In-hospital stay was 3±1 days in G1 and 6±2 days in G2. In G1 one patient (1,1%) had cardiac tamponade that required pericardial puncture and 4 (4,4%) patients had hematomas of the lower extremities treated conservatively. Among the most significant complications in G2 were 2 (1,4%) cases of sinoatrial block that required pacemaker implantation, 3 (2,1%) relaxation of the right dome of the diaphragm and 26 (18,2%) cases of atrial flutter, stopped by catheter ablation of the cavatricuspid isthmus. In G1 sinus rhythm after 3, 6, 12 months was observed in 72 (79,1%), 67 (73,6%), 52 (57,1%) patients accordingly. After thoracoscopic ablation 132 (92,3%), 125 (87,4%), 119 (83,2%) patients had a sinus rhythm after 3, 6 and 12 months, respectively. Perioperative and follow-up mortality was 0 in each group.

Conclusion: The number of complications in both groups is small and they did not significantly affect the rehabilitation of patients. Thoracoscopic ablation showed higher efficacy in the treatment of persistent AF, however balloon cryoablation provides acceptable medium-term results, less surgical trauma and hospital stay.

Oral Presentation Session

Perspectives in the diseases of the Peripheral Arteries and Aorta

Date: 05.11.2023 Time: 14:00 – 15:30 Hall: 6

ID: 239

Topic:

Cardiology > Stem cell therapy

Presentation Type:

Oral Presentation

Leg Ischemia And Stem Cell Administration

Assoc. Prof. Mustafa Dağlı*
Konya City Hospital

Leg ischemia and stem cell administration

The main pathology in peripheral arterial disease is endothelial dysfunction.
It has been shown that vascular stem cells in peripheral blood have the ability to repair damaged endothelial cells.
Although the studies carried out so far have shown that stem cell therapy in peripheral arterial patients offers a glimmer of hope.
It would be right to say that we are at the very beginning of the road.

Our aim is to present the short-term results of stem cell therapy applied to 6 patients in our clinic for critical leg ischemia to contribute to the literature.

For the diagnosis of peripheral arterial disease, more than 50% stenosis in imaging methods or an ankle arm index of <0.9 is sufficient.
The most important risk factors for PAH are smoking, diabetes mellitus, hypertension and hyperlipidemia.
The fact that peripheral artery patients have increased the risk of stroke and myocardial infarction by 6 times in the studies carried out shows us how sensitive and risky the patient group is, the mortality rate of these patients is 20% within 6 months.

Depending on the location and degree of stenosis of patients with PAH, some have pain at rest, while others have normal blood flow and no symptoms at rest. During exercise, occlusive lesions do not allow adequate flow to the muscles of that area, so the metabolic needs of the muscles can be met, but these cell types may have limited therapeutic effect.

Since adult stem cells are collected from the patient, they do not cause an immune response. Intramuscular administration of cells in patients with peripheral artery disease is minimally invasive and easy to perform, but for easier access of transplanted cells to vascular development, systemic administration to the femoral artery or iliac artery can be used instead of intramuscular injections. Bioimmune imaging offers the advantage of performing high-throughput and non-invasive monitoring of cell survival.
When combined with functional analysis such as laser Doppler blood perfusion or histological analysis of neovascularization,

Together these techniques may allow researchers to evaluate the therapeutic effect of cell transplantation on recovery from peripheral artery ischemia.

In our clinic, stem cells were applied to 7 patients due to below-knee ischemia by a single physician. 5 patients were amputated below the knee at 3-month follow-up. The follow-up of 2 patients continues and the progression of ischemia was stopped.

Conclusion:

Although stem cell therapy is not routinely used in the treatment of peripheral arterial disease, it gives a chance to patients who do not have a chance for revascularization and has promising results.

Although it has made a breakthrough in stem cell therapy with developing technology and innovations, its use in vascular diseases is unfortunately still limited. A certain period of time is needed for stem cell therapy to enter routine clinical use and to replace existing revascularization modalities.

ID: 229

Topic:

Cardiology > Peripheral arterial diseases

Presentation Type:

Oral Presentation

A Diagnostic Dilemma: Vasospasm-Induced Acute Lower Limb Ischemia Mistaken for Embolism - A Case Report

MD Sewar Elejla[1] , MD Abdulwhhab Abu Alamrain[1] **, MD Mohanad Alhaddad**[* 2]

[1] Alquds university, Jerusalem, Palestine

[2] Ministry of health, Gaza, Palestine

Background: Acute limb ischemia (ALI) is a serious condition that requires proper diagnosis and management at the appropriate time to save the limb and decrease the risk of its loss. Vasospasm is an uncommon cause of ALI, unlike thromboembolic events which are the most common cause. Thus unfamiliarity with this condition makes it more challenging to diagnose and manage.

Methods: Here we report a case of vasospasm-induced acute lower limb ischemia (VALI) in 50 years old male patient who presented with leg pain and coldness. The patient is a known case of hypertension, atrial fibrillation, and rheumatic heart disease uncompliant to his medications. Lower limb examination showed pallor, coldness, and tenderness without any palpable pulsations.

Results: The diagnosis was clinically mistaken for acute embolic left lower limb ischemia and intraoperative angiography confirmed vasospasm without intraarterial embolism. The case was managed successfully with vasodilators and discharged 7 days later after the complete resolution of his symptoms.

Conclusion: VALI should be considered as a possible diagnosis for suspected ALI cases which helps in early and accurate diagnosis and thus reduces misdiagnosis, complications, and unnecessary interventions and improve patients care.

Keyword: *Vasospasm, Acute limb ischemia, Angiography, Peripheral vascular disease*

ID: 221

Topic:

Cardiology > Diseases of aorta

Presentation Type:

Oral Presentation

Percutaneous Management of Coarctation of the Aorta in Adult Patients: A Single-Centre Experience

MD Murat Sürücü* **,** Prof. Ahmet Çelebi

1. Department of Pediatric Cardiology, Dr. Siyami Ersek Thoracic and Cardiovascular Surgery Training & Research Hospital, Istanbul, Turkey

Objective

Native aortic coarctation (NaCoA) is a relatively common congenital heart defect. Recoarctation of the aorta (ReCoA) refers to recurrent obstruction after an initially successful percutaneous dilatation or surgical repair, with reported rates ranging from 5% to 50%. Percutaneous management with stent implantation is a widely accepted treatment modality for both NaCoA and ReCoA in adult patients. The aim of this study was to describe results of percutaneous management of both NaCoA and ReCoA in adult patients.

Methods

Data of all patients who underwent percutaneous stent implantation of aortic coarctation between January 2012 and June 2023 were analyzed and 80 adult patients were included in the study. Coarctation of the aorta was defined as a systolic upper-to lower limb blood pressure gradient ≥20 mmHg and/or significant obstruction on echocardiography or other imaging techniques (CT, MRI, conventional angiography). Balloon expandable stent (covered or bare) implantation was performed all patients. Balloon diameter was typically based on the size of the descending aorta at the level of the diaphragm. Stent length was selected so as to completely cover the stenotic area. Successful dilatation was defined as a residual PPG < 20 mmHg. Demographic characteristics, echocardiography, angiocardiography findings, early and mid-term follow-up results, need for re-intervention, and complications were evaluated. The patients were evaluated before discharge and 1 month, 3 months, and 6 months after the procedure and at 6-month intervals thereafter.

Results

Eighty adult patients (51 males, 29 females) underwent percutaneous stent implantation of CoA in the Pediatric Cardiology department of our hospital between 2012 and 2023. There were 66 patients with NaCoA and 14 patients with ReCoA (after surgery in 8, previous balloon angioplasty in 6 patients). The median age and weight were 25 (18-54) years and 68 (43-100) kg, respectively. The median diameter at the narrowest part of the coarctation was 6 mm, the median peak-to-peak pressure was 44 (range 15–113) mmHg before the procedure and 1 (range 0–18) mmHg after the procedure. The mean diameter of the balloons used for stent implantation was 16.1 ± 3.2 (range 10–26 mm), the median stent length was 43 mm (range 16–57 mm). Bare stent was used in 42 patients and covered stent was used in 38 patients. The majority of patients (n=54) were treated with Cheatham-Platinum (CP) stent. Other stents utilized included AndraStent® XL/XXL stent (n=22), Optimus XL/XXL stent (n=4). In three patients with interrupted aortic arch, an angiography was

performed simultaneously using the right radial artery and femoral artery, revealing an atretic segment. Subsequently, the atretic segment was crossed using a CTO wire, and after a staged balloon angioplasty, stent implantation was applied via the femoral artery. In six patients with subatretic coarctation, pre-stent implantation, small size non-compliant balloons were used for balloon angioplasty to facilitate the retrograde passage of a long sheath.

In the early postoperative period, major complications were seen in four patients, including cerebrovascular infarction in three patients and iliac artery dissection in one patient. The patient with iliac artery dissection died due to acute intra-abdominal bleeding.

The median follow-up duration was 28 (range 1 – 108 months). It was observed that hypertension persisted in 46 patients, improved in 20 patients (not require medication). Data of 13 patients could not be accessed because they did not continue to be followed up.

Conclusions

Stent implantation for native and re -coarctation is performed safely in adults, with a high degree of immediate procedural success.

Keyword: *Aortic coarctation, Stent, Cardiac catheterization, Adult patient*

ID: 86

Topic:

Cardiology > Peripheral arterial diseases

Presentation Type:

Oral Presentation

Successful PTA and Stent Implantation to Acute Superior Mesenteric Artery Occlusion

MD Beytullah Kulac[* 1] , Assoc. Prof. Emrah Sevgili[2] , MD Süleyman Sönmez[3] , MD Eshat Doğan[2] , Prof. Hüseyin Uyarel[2]

[1] Istanbul Suleiman the Magnificent Training and Research Hospital Department Of Cardiology Istanbul,Turkey

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A 52-year-old male patient has bile HT (+). In the physical examination of the patient, who applied to the emergency room with the 112 ambulance with severe widespread abdominal pain, no intra-abdominal perfuration was observed. In the general surgery consultation, a conc. note was written that the abdomen is comfortable, oral food intake is available, and there is gas discharge. Since appendectomy was not observed in the USG of the entire bar, contrast CT of the whole abdomen was requested. After the CT, it was observed that the SMA was occluded. Diagnostic angiography decision was taken for the patient. A 6F sheat was placed in the left brachial artery of the patient from Cath.Lab. using the seldinger technique. A 6F JR 4.0 Diagnostic catheter and 0.05x260 cm hydrolic guide wire were placed on the ostium of the SMA lesion. Total occlusion of the SMA ostium was observed in the angiogram. The catheter was then ecxhanged with a 6F Desnition Sheat Catheter. It was rebounded with a 0.014x260 cm guide wire and descended distally. First, proximal and ostium predilatation was performed with a 3.5x40 mm Peripheral balloon. Thrombectomy was performed with 6F Thrombus Aspiration Catheter after widespread thrombus was seen. As the lesions were from proximal to distal after thrombectomy, 7*37mm (2 pieces) and 7*27 mm balloon expandable peripheral stents were implanted, respectively, from distal to proximal the stenosis in the ostium was opened by performing POT whit a stent ballon A control angiogramwas performed again.Upon observing that the trombi had descended distally,heparin infusion was started and fe was taken to the ICU.On the post op 2 nd day,ASA 300 mg 1*1 and Ticahrelor 90 mg 1*1 weretarted and he was dischared.

References:

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Keyword: *Acute Mesemteric Ischemia, Acute Abdomen, SMA Occlusion*

Oral Presentation Session

Peripheral Vein Diseases: From Prevention to Therapeutic Modalities

Date: 05.11.2023 Time: 14:15 – 15:15 Hall: 7

ID: 159

Topic:

Cardiovascular Surgery > Varices & DVT

Presentation Type:

Oral Presentation

Does Complete Blood Count Have A Role In The Prediction Of Deep Vein Thrombosis?

MD Osman Fehmi Beyazal*

İstanbul Başakşehir Çam and Sakura City Hospital

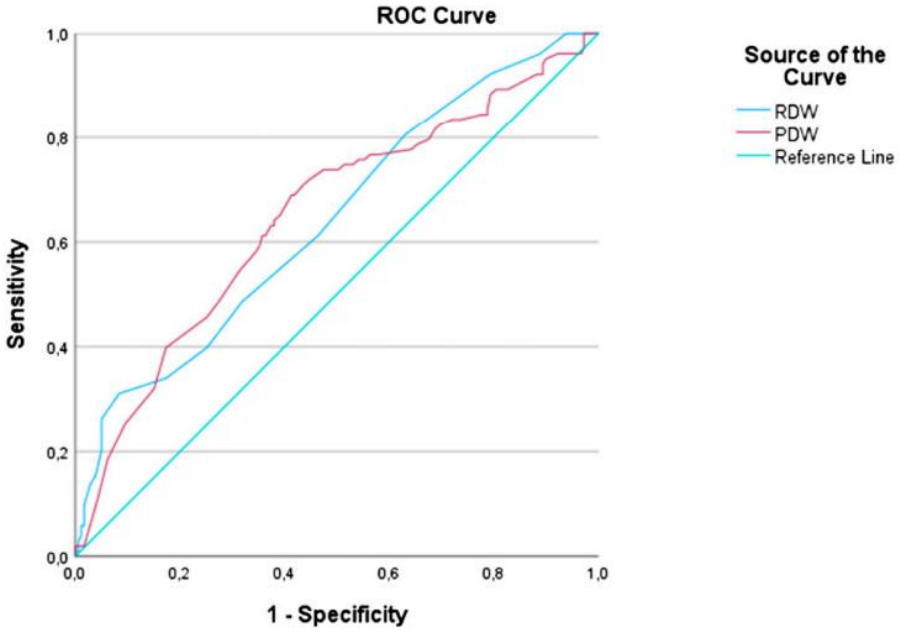

Figure 2. The ROC curve of RDW and PDW. ROC: receiver operating characteristic, RDW: red cell distribution width, PDW: platelet distribution width.

Background

The aim of this study is to evaluate the importance of complete blood count parameters for predicting deep vein thrombosis.

Methods

It was planned as a retrospective case-control study in which 1527 patients between January 2022 and September 2022 were evaluated. After the eligibility criteria, systematic sampling was performed and analyzed in the case group (103) and the control group (179) patients. The predictive significance of hemoglobin (Hb), neutrophil/lymphocyte ratio (NLR), platelet/lymphocyte ratio (PLR),

mean platelet volume (MPV), platelet (PLT), MPV/PLT, monocytes, lymphocytes, eosinophils, red cell distribution width (RDW), lymphocyte/monocyte ratio (LMR) and platelet distribution width (PDW) parameters for the development of deep vein thrombosis (DVT) was investigated. Then, logistic regression analysis was performed with these parameters to analyze the predictive value. The cut-off point was determined by performing Receiver Operator Characteristic (ROC) analysis for the statistically significant parameters.

Results

Neutrophil, RDW, PDW, NLR, and MPV/platelet values were statistically higher in the DVT group compared to the control group. Lymphocyte, PLT, and LMR values were statistically lower in the DVT group compared to the control group. There was no statistical difference between the two groups in terms of neutrophils, monocytes, eosinophils, Hb, MPV, and PLR values. RDW and PDW values were statistically significant for DVT prediction ($p<0.001$, OR=1.183 and $p<0.001$, OR=1.304, respectively). According to ROC analysis, 45.5 fL for RDW and 14.3 fL for PDW were determined as the cut-off point for DVT prediction.

Conclusion

In conclusion, we found RDW and PDW to be significant in terms of DVT prediction in our study. We found the NLR and MPV/PLT to be higher in the DVT group, and the LMR to be lower in the DVT group, but we found that there was no statistically significant predictive value. We found no difference between the two groups in terms of PLR, Hb, monocytes, and eosinophils. CBC can be used as an inexpensive and easily accessible test that has predictive significance for DVT. In addition, these findings need to be supported by prospective studies in the future.

Keyword: *Deep vein thrombosis, Complete blood count, Red cell distribution width, Platelet distribution width*

ID: 8

Topic:

Cardiovascular Surgery > Varices & DVT

Presentation Type:

Oral Presentation

A Retrospective Randomised Trial On Ablation Therapy Using Cyanoacrylate Glue And Radiofrequency For Refluxing Great Saphenous Veins

MD İzatullah Jalalzai* , Assoc. Prof. Eyupserhat Çalık , Assoc. Prof. Abdurrahim Çolak , Assoc. Prof. Uğur Kaya , Assoc. Prof. Ümit Arslan

Atatürk Üniversity research Hospital Department of Cardiovascular surgery

OBJECTIVE: Endovenous cyanoacrylate ablation and endovenous radiofrequency ablation are two modern techniques for the treatment of clinically symptomatic venous insufficiency. The outcomes of a retrospective comparison study comparing endovenous radio frequency (RF) ablation and cyanoacrylate glue for the treatment of ineffective great saphenous veins are presented.

METHODS: A total of 610 subjects were treated with cyanoacrylate ablation or endovenous radiofrequency ablation between April 2018 and April 2022. The preprocedural, procedural, postprocedural, and follow-up data were recorded and compared. Results: There were 308 procedures in cyanoacrylate ablation group (CAA) and 302 in endovenous radiofrequency ablation group (EVRA). Operative time was 11 ± 3.4 minutes in the CAA and 30 ± 8.8 minutes in the EVRA (< 0.001). All procedures in both groups were successful, and the target vein segments were fully occluded at the end of the procedure. Periprocedural pain was less in the CAA (< 0.001).

RESULTS: Enduration, ecchymosis, and paresthesia rates were significantly higher in the EVRA (< 0.001). The mean length of follow-up was 6 months (range 6–8). The 3 and 6 months closure rates were 98.1% and 96.6% for EVRA and 97.6% and 96.1% for CAA respectively. In both groups, the Venous Clinical Severity Score and Chronic Venous Insufficiency Quality of Life Questionnaire with declined significantly with no difference between groups.

Conclusions: High occlusion rates are the outcome of managing inefficient great saphenous veins with endovenous cyanoacrylate ablation and radiofrequency ablation. Endovenous cyanoacrylate ablation procedure does not require tumescent anesthesia and compression stockings and is quick and easy with little post-procedural pain.

Keywords: Chronic venous insufficiency, varicose veins, ablation, cyanoacrylate, radiofrequency

ID: 135

Topic:

Cardiovascular Surgery > Varices & DVT

Presentation Type:

Oral Presentation

Our management modalities for small saphenous vein incompetency

MD Mert Can Dinççağ , MD Elif Tuzdelen , MD Timuçin Sabuncu , MD Ahmet Aydın , **Prof. Recep Oktay Peker***

Hacettepe University Hospitals Cardiovascular Surgery Department

Our management modalities for small saphenous vein incompetency

Aim or Objective: To investigate the results and complications of our treatment modalities for small saphenous vein (SSV) incompetence.

Introduction: Although superficial venous disease has frequently been associated with great saphenous vein (GSV) incompetence,small saphenous vein (SSV) reflux is responsible for ~15% of all varicose vein disease.[1]Symptomatic small saphenous axis incompetence is significant and can result in a greater disease-specific quality of life(QOL) impairment than incompetence in the GSV axis,when controlling for clinical disease severity.[2] There was no uniformity in the surgical treatment of SSVs among vascular surgeons.SSV surgery is considered more challenging and is associated with higher recurrence and complication rates[1]. We aimed to investigate our management modalities and experience in small saphenous vein incompetence.

Methods:33 patients in our hospital who had received either small saphenous vein (SSV) radiofrequency thermal ablation(RFTA),cyanoacrylate glue closure or SSV ligation surgery between January 2020-May 2023 were retrospectively recruited to the study.25 of the patients had isolated unilateral, primary saphenopopliteal junction incompetence and 8 of the patients had both safenofemoral and safenopopliteal junction incompetence.

Results: Pain,swelling and tenderness,itching,burning,discoloration of the legs were the main symptoms.The average age of the patients was 47,96 years.RFTA+miniflebectomy/sclerotherapy in 22 patients,RFTA was performed in 2 patients,cyanoacrylate glue(Venablock) in 2 patients(1 with miniphlebectomy),ligation+RFTA+miniflebectomy/sclerotherapy in 4 patients and ligation with miniflebectomy in 2 patients,ligation with limited striping in 1 patient.In postoperative 7th day control all the patients were cosmetically in good condition.2 patients had thrombophlebitis treated with antibiotics and enoxaparin use for 6 weeks.3 patients had edema resolved with compression therapy and flavonoids.Neural deficits were seen in two patients who underwent RFTA.One patient had neuralgic pain at the postoperative 2nd week resolved with gabapentins in a month.The other patient had temporary dorsiflexion deficit secondary to peroneal nerve thermal injury.This patient need physiotherapy and gabapentin use. Symptoms completely healed at 6 months.

Discussion: Several authors have described nerve complications after thermal ablation of the SSV.[3]Effective mapping of the sural nerve(SN) give us the opportunity to develop new strategies to approach and protect the SN.SSV insufficiency management is still a challenging procedure[4].

AVARAGE AGE(YEARS)	47,9
GENDER	
Female	20
Male	13
METHOD	
RFTA+Miniflebectomy/Sclerotherapy	22
RFTA	2
Cyanoacrylate Glue(Venablock)	2
Ligation+RFTA+ Miniflebectomy/Sclerotherapy	4
Ligation+Stripping	1
Ligation+Miniflebectomy	2
COMPLICATION	
Thromboflebitis	2
Edema	3
Neural Deficit	2
Neuralgic Pain	1
Dorsiflexion Deficit	1

Preoperative and postoperative compare of one patient

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Keyword: *radiofrequency ablation, small saphenous vein, surgical ablation, venous insufficiency*

ID: 195

Topic:

Cardiovascular Surgery > Vascular surgery and vascular access

Presentation Type:

Oral Presentation

Dacron Graft Interposition From Femoral to Iliac Vein for Iatrogenic Venous Hypertension Coused by Ligation of Left Iliac Vein After Uncontrolled Bleeding and Exanguining; a Case Report

Assoc. Prof. Huseyin Demirtas , Assoc. Prof. Abdullah Ozer **, MD Mehmet Burak Gulcan*** **,** MD Issa Shıde , MD Hacı Delibas , Prof. Gursel Levent Oktar
Gazi University Hospital, Department of Cardiovascular Surgery

OBJECTİVE

Our study is about iatrogenic iliac vein injury. Ligation was performed by general surgery team after uncontrolled exanguining. Afterwards, swelling occured in the leg on the affected side. Then we were consulted as the vascular surgery team. Fig.1

METHODS

There is only one patient in this case. We reached this case after consultation in the intensive care unit in the postoperative period. We assesed patient and we thought that the reason for the clinic

might be a ligated major vein. Ultrasound report also supported our thinking. Then we suggested reoperation for fixing venous flow.

RESULTS

Reoperation acomplished. We noticed that the external iliac vein was ligated during the operation. Interposition was performed with a 10 mm dacron graft from the femoral vein to the common iliac vein. Venous flow was seen well in the operation. Swelling and tension in the affected leg reduces after surgery. We observed significant improvement in clinical and life comfort.

CONCLUSİON

We argue that interposition with apropriate size and type of grafts is an effective treatment to ensure the continuity of venous flow. In our opinion, timely consultation to an experienced and competent vascular surgery team in iatrogenic vascular injuries is life saving and the most beneficial approach to the patient. Because otherwise, reoperations are required. Furthermore, reoperations to restore arterial and venous flow are more difficult than repairing the vessel for the first time. Reoperations are also associated with more expensive cost, higher risk of infection, greater exposure to aneshesia and adversely affect the patient's life comfort and psychology. therefore timely consultation to vascular surgery team is crucial. The aim of our study is to draw attention to this fact.

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Keyword: *vein injury, iliac vein, referral and consultation, reoperation, iliac vein injury*

ID: 269

Topic:

Cardiovascular Surgery > Varicose veins

Presentation Type:

Oral Presentation

Are The Vein Diameter And The Treatment Distance Related To Postoperative Obstruction? - Japanese Multi-Center Experience

MD Takahiro Imai*

Department of Vascular Surgery, Nishinokyo Hospital, Nara, Japan

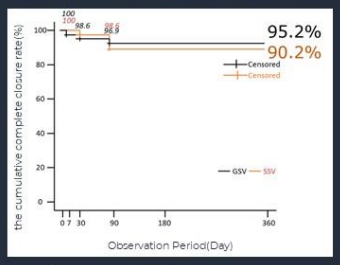
BACKGROUND: Most of the studies on postoperative closure rate of targeted veins treated with CAC using NBCA have reported results of GSV alone or without distinguishing between GSV and SSV, and there are few reports on the results of SSV alone. Therefore, it has been said that it is important to evaluate the postoperative closure rate of SSV alone in order to establish high-quality evidence.

METHODS: We included 143 legs of 125 patients who underwent CAC with VenaSeal™ at 12 centers in Japan from December 2019 to June 2020 for the diagnosis of primary varicose veins. The targeted vessels were 72 GSV and 71 SSV. The observation period was one year, and the intervals were at preoperative, immediate postoperative, 7 days postoperative, 30 days postoperative, 90 days postoperative, and one year postoperative. The study point was closure rate of SSV and evaluated by postoperative ultrasonography, and occlusion was defined as the closure of the target vein segment and the absence of an opening more than 5 cm from the starting point of treatment.

RESULTS: In this research, the postoperative closure rate of the target vein was 95.0% for GSV and 90.2% for SSV, indicating that there was no difference in the 1-year postoperative closure rate between the GSV and SSV groups (P=0.491). The results of ROC analysis showed that AUC=0.686 and P=0.139, and that the maximum vein diameter could not be used as an index to significantly discriminate whether occlusion was possible. Multiple logistic regression analysis showed that neither of the two factors, maximum vein diameter nor treatment length, was significant for successful or unsuccessful occlusion (P > 0.05).

CONCLUSIONS: Although the closure rate of SSV is lower than that of GSV, preoperative vein diameter and treatment length are not factors related to postoperative occlusion.

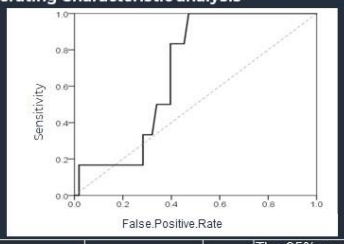
The Closure rate in two groups, GSV and SSV - the Kaplan-Meier method



Comparison of preoperative diameters in the SSV, closed and patent group

Mann-Whitney U test	Wilcoxon W	Z	p-value
100.0	1531.0	-1.480	0.144

The preoperative cutoff value of vein diameter for SSV occlusion - Receiver Operating Characteristic analysis



Area Under the Curve: AUC	Standard Error a	p-value	The 95% confidence interval	
			Lower limit	Upper Limit
0.686	0.079	0.139	0.530	0.841

Analysis of factors affecting SSV occlusion - Multiple logistic regression analysis

Variable	Odds ratio	95% CI	P-value
Maximum diameter (SSV)	1.24	0.88 - 1.76	0.224
Length (SSV)	1.04	0.90 - 1.20	0.607
CI : Confidence Interval -2LL = 37.1 , Model χ^2 = 1.7, df = 2 , P=0.423 C-statistics = 0.66 Percentage of correct classifications = 90%			

References:

- [1] Morrison N, Gibson K, Vasquez M, et al. Five-year extension study of patients from a randomized clinical trial (VeClose) comparing cyanoacrylate closure versus radiofrequency ablation for the treatment of incompetent great saphenous veins. J Vasc Surg Venous Lymphat Disord 2020; 8: 978-989.
- [2] Hirokawa M, Satokawa H, Makoto Mo, et al. Cyanoacrylate Glue Closure for Varicose Veins: Concensus Guidlines of the Japanese Society of Phlebology. Jpn J Phlebol 2020; 31(3): 141-152.
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Keyword: *varicose veins, cyanoacrylate closure (CAC), closure rate*

Oral Presentation Session

Cardiology and Cardiovascular Surgery Nursing Course

Oral Presentations in Cardiovascular Nursing

Date: 05.11.2023 Time: 15:30 – 16:30 Hall: 5

ID: 7

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

Developing A Care Protocol For The Postoperative Care Of Patients With Open Heart Surgery

Assoc. Prof. Aylin Durmaz Edeer[1] , MD Eda Ayten Kankaya[2] **, MD Nihal Müezzinler Evsine**[* 3]

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[3] *Nurse, MD, Dokuz Eylul University Research and Practice Hospital Cardiovascular Surgery*

Objective: Care protocols are a regular series of care to be implemented to improve the clinical course of patients. By ensuring that “best practices” are translated into evidence-based care protocols, they minimize practice differences and delays in treatment and improve patient outcomes. The postoperative period is the most critical period for patients undergoing open heart surgery. When the literature is examined, it is seen that the studies on care protocols are limited in our country; It has been determined that there is no validated care protocol for the post-operative care of patients with open heart surgery. The aim of our study is to establish a post-operative pain and respiratory-related care protocol for patients who have undergone open heart surgery and to examine its effects on patient outcomes.

Method: The study is of quasi-experimental type; control group data is collected. It is carried out in the Department of Cardiovascular Surgery of Dokuz Eylul University Hospital. Data are collected with open heart surgery patients on the 2nd postoperative day using the patient file and Nurse Observation Forms. In order to determine patient characteristics, the Patient Identification Form developed by the researchers is used. The data collection process continues.

Results: It has been discussed over 26 patients included in the study so far. The mean age of the patients is 61 years. 61.5% of the patients were male and 53.8% underwent coronary bypass surgery. 23.1% of the patients are 1st degree obese. 42.3% of the patients had hypertension and 46.2% had coronary artery disease. The mean pain score of the patients was 1.03±2.42; Pharmacological intervention was performed in 3 of 5 patients with pain. The average of spirometry values is 711± 297 cc.

Conclusion: The spirometric values of the patients in the study were not at the desired level. The spirometric values of the patients need to be improved and nurses will be trained at the interventional stage.

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- [1] Macedo, T. A., de Barros e Silva, P. G., Machado, A. S., Ramos, D. L., Souza, S. F., Okada, M. Y., ... & Furlan, V. (2019). Clinical-care protocol for preventing mediastinitis after coronary artery bypass graft surgery: A quality improvement initiative from a private hospital. Journal of cardiac surgery, 34(5), 274-278. Halwag, M. I. A. E. A., Doghiem, M. A., Moustafa, M. A., & Sorour, H. O. A. (2021). Postoperative care of cardiac surgery patients: A protocolized approach towards enhanced recov

Keyword: *open heart surgery, care protocol, nursing, pain, spirometric exercise*

ID: 6

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

Understanding The Experiences Of Caregivers Of Pediatric Cardiac Surgery Patients: A Qualitative Study

MD Eda Ayten Kankaya[1] , MD Nihal Müezzinler Evsine[2] , MD Gülçin Cengiz[2] **, MD Selver Öztürk İşçi*** [3]

[1] *Assistant Professor Doctor, Phd, Dokuz Eylul University Faculty of Nursing Department of Surgical Nursing*

[2] *Nurse, MD, Dokuz Eylul University Research and Practice Hospital Cardiovascular Surgery*

[3] *Nurse, Dokuz Eylul University Research and Practice Hospital Cardiovascular Surgery*

OBJECTIVE: Families of children with congenital heart disease experience various difficulties. Family caregiving experiences can be influenced by the cultural beliefs and health systems of each cultural context. Therefore, a deep understanding of how families manage their caregiving challenges is required to help them provide quality care. The aim of this study is to explore the behaviors of caregivers of pediatric cardiac surgery patients.

METHODS: This research is a qualitative research in the phenomenology desig. The research is carried out in the cardiovascular surgery clinic of a university hospital. Caregivers of children with congenital heart disease were included in the study. Data were collected face-to-face through individual in-depth interviews. Concepts and main themes were created through inductive content analysis from the written interviews. The data collection phase of the research continues.

RESULTS: So far, 5 caregivers have been included in the study. 3 of the caregivers were mothers and 2 of them were fathers. The age range was between 29-48 years. The age of the children ranged from 6 months to 17 years. It was determined that caregivers experienced various difficulties in the preoperative, intraoperative and postoperative period. The psychological difficulties they experienced in the pre-operative period were combined under the theme. Caregivers experience hope, disapproval, anxiety about the surgery, and social isolation in the preoperative period. While waiting for his/her recovery from the operation, they experience psychological difficulties such as helplessness, uncertainty, exhaustion, and fear of death. The themes in the post-operative period are psychological difficulties, financial difficulties, difficulty in managing postoperative care, lack of knowledge and concerns about the future of the child.

CONCLUSION: Families of children with congenital heart disease experience various psychological, social and financial difficulties both before and after the operation. It is thought that improving health policies and providing psychological support to patient relatives are important in solving the difficulties experienced by families.

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- [1] Knight Lozano, R., May, S., Clarkson, C., & Sarjeant, R. (2021). Caregiver experiences of paediatric inpatient cardiac services: A qualitative systematic review. European Journal of Cardiovascular Nursing, 20(2), 147-159. Maneekunwong, K., Srichantaranit, A., & Thampanichawat, W. (2021). Factors influencing caregivers' uncertainty of children

undergoing cardiac surgery in Bangkok, Thailand. Journal of Health Research, 36(5), 919-928.
Dalir, Z., Manzari, Z. S., Kareshki, H., & Heydari, A. (2021)

Keyword: *nursing, congenital heart disease, surgery, caregiver*

ID: 41

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

Perioperative Care For Lower Extremity Vascular Bypasses According To Enhanced Recovery After Surgery 2023

MD Eda Ayten Kankaya[1] , **MD Güler Özlü[* 2]**

[1] Assistant Professor Doctor, Department of Surgical Nursing, Dokuz Eylul University Faculty of Nursing

[2] Nurse, Dokuz Eylul University Hospital , Cardiovascular Surgery Clinic

Aim: ERAS (Enhanced Recovery After Surgery) includes more than 20 evidence-based practices to be applied in the perioperative period to improve postoperative outcomes. Vascular surgery patients, specifically patients with peripheral artery disease present unique challenges due to their advanced age, frailty, and multiple comorbidities compared with the general population**.**

Methods: The aim of this review was to present the current developments in the perioperative care of patients undergoing peripheral bypass surgery and to increase the knowledge level of nurses, in line with the recommendations of The Society for Vascular Surgery and Enhanced Recovery After Surgery (ERAS) published in 2023.

Results: Guideline recommendations were preoperative, during, and after surgery. In the preoperative period, nutritional screening is recommended. It was emphasized that comorbidities of all patients should be evaluated before revascularization. In patients without diabetes, oral carbohydrate loading is indicated as a recommendation with a high level of evidence. Antihyperglycemic treatment should be initiated in patients with high HbA1c levels. It is recommended that aspirin use be continued in the perioperative period. It is stated that a multimodal approach is important in postoperative pain control. It was emphasized that the blood sugar level should be 180 and below. As a training method, it is recommended to give discharge etiquette both in writing and verbally, and it is stated that follow-up phone calls should be made 24-48 hours after discharge. Clinical follow-up with both the surgeon and primary care service is recommended at least once within 30 days of surgery.

Conclusion: It has been reported that a multidisciplinary team approach is required to implement best perioperative practices for patients undergoing lower extremity vascular bypass surgery. It was emphasized that there is a need for studies of high methodological quality and that there is a need for studies especially on preadmission optimization, prehabilitation, preoperative carbohydrate loading in diabetics, pre-anesthetic sedatives and analgesia, early mobility protocols, and post-discharge education.

References:

- [1] McGinigle, K. L., Spangler, E. L., Ayyash, K., Arya, S., Settembrini, A. M., Thomas, M. M., ... & de Boer, H. D. (2023). A framework for perioperative care for lower extremity vascular bypasses: A Consensus Statement by the Enhanced Recovery after Surgery (ERAS®) Society and Society for Vascular Surgery. Journal of Vascular Surgery, 77(5), 1295-1315.

Keyword: *nursing care, perioperative, ERAS, care*

ID: 220

Topic:

Cardiology > PI for SHD-Transcatheter aortic valve replacement

Presentation Type:

Oral Presentation

New Management Approach in Transcatheter Valve Implantation Process: Valve Coordinators

MD Ugur Ugrak*

Health Sciences University Gulhane Health Vocational High School

Introduction

With the development of technology and knowledge, the number of TAVI interventions applied to patients in catheter laboratories and its application area has gradually increased. The TAVI process, which is a complex process, is coordinated and managed by the heart team. Many studies in the literature have introduced the heart team concept, and its participants have been expressed. In recent publications, the concepts of coordinator nurse and technician as part of the heart team have started to come to the fore. The publications show similarities in the scope of the participants, and the personnel and areas of expertise required by the heart team differ in each case due to the unique characteristics of each patient. In addition, considering that the TAVI procedure requires a different approach and material portfolio for each patient, it is clear that each patient should be managed as a unique project. This study aims to reveal the managerial practice called Valve Coordinator, which is not implemented in Türkiye, but applied in many European countries and in the USA based on the above reasons.

Literature Review

The managerial approach called TAVI, Valve or structural heart disease coordinator in literature, is used in this study valve coordinator in this study. We can define the concept of Valve coordinator as a job description that aims to effectively and efficiently manage the entire TAVI process, requiring complex, different areas of expertise and much additional medical equipment. Although this job description, VALVE coordinator, seems to us as a new concept, it is a health service task branch in developed countries for years. The health professional organizes all TAVI diagnosis, treatment, and follow-up processes. There are many postings on job posting sites for Valve coordinators. The most important feature expected from the Valve coordinator is the catheter laboratory experience. It is usually performed by experienced nurses and technicians in this field. Examining the duties of the Valve coordinator has been revealed as three stages in the literature.

- Pre-procedural responsibilities,
- Post-procedure responsibilities.

The valve coordinator basically undertakes the following tasks while following the entire,

- Communication with referring physicians
- Patient admission coordination
- Optimizing and standardizing the diagnosis
- Planning the diagnostic process

· Frailty assessment (for TAVI)

· Evaluation of patient expectations

· Patient assessment and risk stratification support

· Coordination of Heart Team meetings

· Early discharge evaluation

· Organizing internal logistics

· Programming of post-intervention diagnostic studies

· Coordination of follow-up examinations.

Pre-procedural responsibilities of the valve coordinators are listed below.;

- Performing comprehensive patient assessments and screenings to determine TAVI candidacy.
- Coordinating and scheduling necessary diagnostic tests and evaluations, such as echocardiograms, CT scans, and angiograms.
- Arranging pre-procedural communication with cardiologists, surgeons, anesthesiologists and other relevant specialists.
- Inform patients and their families about the procedure and address any concerns or questions.
- Obtaining patient consent

Procedure day responsibilities of the valve coordinator are basically listed below. ;

- Ensure that the patient is adequately prepared for the TAVI procedure, such as fasting and medication instructions.
- Coordinating patient logistics such as scheduling appointments, transportation and admission to TAVI centre.
- Collaborating with the TAVI team to ensure the availability of necessary equipment and supplies .
- Providing emotional support and reassurance to patients and their families before the procedure.

And finally, the post-procedural responsibilities of the valve coordinator.

- Coordinating post-operative care, and monitoring patients in the cardiac care unit or step-down unit.
- • Scheduling and facilitating post-procedure appointments, follow-up visits, and required testing.
- To assess and address post-operative complications or concerns in close collaboration with the TAVI team.
- To provide continuous education and support in the healing process of patients and their families.

Valve coordinators are examined, it emerges as a profession that manages all stages of the process and monitors it from a single source. With this aspect, it is thought that it can be more effective by considering the holistic part of the case. In addition, when examined in the literature, the valve coordinator system successfully carries out this process effectively and increases patient satisfaction. Many positive effects of personnel empowerment in health services have been identified in the management process. In this context, it is considered that the empowerment of nurses and technicians in the TAVI management process will contribute positively. In addition, it has been determined that physicians can spare more time for their patients, thanks to the management of the TAVI process as a coordinator.

Conclusion

Based on the literature findings, implementing TAVI coordination process management in a pilot hospital (with high valve volume) within the scope of a project at the national level and its dissemination according to the results can be considered a health policy. However, standard workflow diagrams and control charts should be prepared for each process. The most critical problems to be encountered in practice;

- Insufficient support from management
- Quantity of health workforce (up to 3 people)
- Health workforce quality.

References:

- [1] Lachell, A. and L. Henry, Transcatheter Aortic Valve Replacement Options for Severe Aortic Stenosis in High-Risk Patients. Journal of Cardiovascular Nursing, 2015. 30(3).
- [2] Cebrián, M.G., Bernal, J. V., Arambarri, E. B., Poyo, R. C., Colominas, M. T., Rey, C. N., ... & Barriuso, E. C. , Consensus document on the figure of the TAVI nurse in the haemodynamic working group of the Spanish Association of Nursing in Cardiology. Enfermería en cardiología: revista científica e informativa de la Asociación Española de Enfermería en Cardiología, 2022. 29(86): p. 12-21.
- [3] Bohmann, K., et al., The COORDINATE Pilot Study: Impact of a Transcatheter Aortic Valve Coordinator Program on Hospital and Patient Outcomes. Journal of Clinical Medicine, 2022. 11(5): p. 1205.
- [4] Chopra, M., et al., Simplification and optimization of transcatheter aortic valve implantation – fast-track course without compromising safety and efficacy. BMC Cardiovascular Disorders, 2018. 18(1): p. 231.
- [5] Costa, G., M. Fukutomi, and L. Sondergaard, The role of the Heart Team in the planning of aortic valve replacement. EuroIntervention, 2019. 15(12): p. e1027-e1029.

Keyword: *Health Managment, TAVI, TAVI Coordinator*

Oral Presentation Session

Surgical Strategies in the Diseases of Aorta: A Learning Experience

Date: 05.11.2023 Time: 15:30 – 16:30 Hall: 6

ID: 49

Topic:

Cardiovascular Surgery > Thoracic aortic aneurysm and dissection

Presentation Type:

Oral Presentation

A New Path: Right Vertical Infra-Axillary Mini-Thoracotomy For Bentall Procedure

MD Ahmet Arif Aglar* **,** MD Ahmet Yavuz Balci
Medistate Kavacık Hastanesi, Kalp ve Damar Cerrahisi Kliniği, İstanbul

OBJECTIVE: Minimally invasive surgery of the ascending aorta has been becoming increasingly popular. For this purpose, the most frequently used incisions are mini-sternotomy and right anterior mini-thoracotomy. We report a new approach that can be safely performed in ascending aorta and/or aortic root pathologies through right infra-axillary vertical mini-thoracotomy.

METHODS: While implementing this approach, it was taken into account that our first patient did not have active endocarditis and had not undergone cardiac surgery before. He had dialysis dependent chronic kidney disease and his predicted mortality rate by EuroSCORE II was 5.27 %. The infra-axillary mini-thoracotomy was performed through a 8-cm vertical skin incision centering the right fourth intercostal space on the anterior axillary line.

RESULTS: The patient was 63 years old. He was undergone the Bentall procedure using an aortic valve bioprosthesis implanted in 30 mm - Dacron tube graft. Cardiopulmonary bypass time and median cross-clamp time were 106 minutes and 169 minutes, respectively. No morbidity or complication was observed.

CONCLUSIONS: The Bentall procedure with a minimally invasive approach using a right vertical infra-axillary mini-thoracotomy can be a safe alternative to the standard in selected patients presenting with ascending aortic and/or complex aortic root pathologies.

References:

- [1] Harky A, Al-Adhami A, Chan JSK, Wong CHM, Bashir M. Minimally Invasive Versus Conventional Aortic Root Replacement - A Systematic Review and Meta-Analysis. Heart Lung

Circ. 2019 Dec;28(12):1841-1851. doi: 10.1016/j.hlc.2018.10.023. Epub 2018 Nov 17. PMID: 30473416.

Keyword: *Bentall, Mini-thoracothomy, aortic root*

ID: 89

Topic:

Cardiovascular Surgery > Thoracic and thoracoabdominal aortic dissections and aneurisms

Presentation Type:

Oral Presentation

Innominate Artery Cannulation For Thoracic Aortic Surgery: A Safe Alternative

Assoc. Prof. Ahmed Ahmed*
Ain Shams University, Cairo, Egypt

Background: Innominate artery cannulation for conducting cardiopulmonary bypass has been proposed as an alternative cannulation site in surgeries involving proximal thoracic aorta. Evaluate Innominate artery cannulation as a safe reliable route for conducting cardiopulmonary bypass during proximal Thoracic Aortic surgery. Methods: Between January 2010 and October 2016, 30 adult patients had Innominate artery cannulation for surgeries involving the proximal thoracic aorta in a single center. Operations performed were 26 (86.7%) Ascending Aortic replacements of which 6 patients (23%) had concomitant Aortic valve replacement and 5 patients (19.2%) had concomitant coronary artery bypass grafts, 3 patients (10%) had Modified Bentall's procedure and one patient (3.3%) had Aortic valve replacement and endarterectomy of the Ascending Aorta for Porcelain Aorta. Deep hypothermic circulatory arrest was used in 6 patients (20%) without antegrade or retrograde cerebral perfusion, redo surgery was performed in 2 patients (6.7%). Data was collected retrospectively. Results: Age range (49e74)years,mean59.4years± 7.9, 23 patients (76.6%) were males. Size 20 French cannulas were used for arterial inflow during cardiopulmonary bypass reaching a mean Maximal blood flow of 2.82 l/m2 ± 0.4. 2 patients (6.7%) were re-explored for bleeding not related to cannulation site, none had Innominate artery dissection, right arm ischemia or permanent stroke, 1 patient (3.3%) had transient disturbed conscious level for 24 h. Mortality occurred in 1 patient (3.3%). Conclusions: Direct Innominate artery cannulation is safe and provides satisfactory blood inflow throughout cardiopulmonary bypass in patients undergoing proximal Thoracic Aortic surgery.

References:

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J.G.T. Augoustides, H. Harris, A. Pochettino Direct innominate artery cannulation in acute type A dissection and severe thoracic aortic atheroma J Cardiothorac Vasc Anesth, 21 (5) (2007), pp. 727-729
G. Amir, G. Frenkel, G. Shukrun, O. Gogia, O. Bachar, E. Bruckheimer, et al. Direct innominate artery cannulation for antegrade cerebral perfusion in neonates undergoing arch reconstruction Ann Thorac Surg, 95 (3) (2013), pp. 956-961

Keyword: *Innominate artery, Thoracic Aortic surgery*

ID: 120

Topic:

Cardiovascular Surgery > Thoracic and thoracoabdominal aortic dissections and aneurisms

Presentation Type:

Oral Presentation

Rupture Of Aneurysm Aortic Isthmus In The Left Pleural: Case Report

Assoc. Prof. Redha Lakehal* **,** Prof. Radouane Boukarroucha
Faculty Of Medecine Constantine 03 Algeria

Introduction: The aorta is the largest artery in your body, and it carries blood away from your heart to all the parts of your body. An aneurysm is an abnormal widening or ballooning of a portion of an artery due to weakness in the wall of the blood vessel. A thoracic aortic aneurysm occurs in the part of the body's largest artery (the aorta) that passes through the chest.The aneurysm of the descending thoracic aorta is a fatal disease that requires surgery when the diameter reaches 60 cm. This is the limit beyond which the risk of rupture exceeds the risk of surgical mortality. The break comes to 50% risk of operative mortality. The more liberal use of CT allowed emerged from obscurity aneurysm the thoracic aorta, and diagnosed much more frequently today. However, the surgical treatment of thoracic aortic aneurysms will be performed only in specialized centers, the replacement of the aneurysm with a Dacron tube which is connected both healthy part of the aorta.

Methods: We report the case of a man 88 year old. No history, presenting an aneurysm ruptured aortic isthmus in the left pleura, an incidental finding during an chest X-ray, realized after a patient fall of his own height, showing a white lung left, with enlargement of the upper mediastinum and confirmed by angiochest CT. Chest X ray: Showing a white lung left, with enlargement of the upper mediastinum. Angiochest CT: False aneurysm of isthm aortic and hemochest. Biology : Hematocrit < 20% despite transfusion of 10 units of blood and kidney test is disturbed.

Results: The patient died after few days because it was surgically inoperable and in transportable to endovascular center, located 800 Km from our hospital.

Conclusion: This is a serious complication that caused little death. Progression of endovascular techniques changed the prognosis of these patients

ID: 234

Topic:

Cardiovascular Surgery > Thoracic and thoracoabdominal aortic dissections and aneurisms

Presentation Type:

Oral Presentation

Evaluation Of Patients Which Was Applied With Current Inverter Stents

Assoc. Prof. Mustafa Dağlı*
Konya City Hospital

Aneurysm treatment is provided by changing the flow dynamics within the aneurysm lumen in the treatment with endovascular aneurysmatic thoracic and abdominal aorta flow-diverting stent applications. Thanks to the porous structure of the current converter stent, the flow is preserved in the side branches. Although it is more common with current converter applications, some complications can be seen after endovascular aneurysm treatment. In our study, it was observed that aneurysms treated with current converter application were evaluated before and after the procedure.

period evaluations. In order to contribute to the literature, 4 flow translation stents applied in our clinic and the second flow translation stent application in one patient, which was placed in the aneurysmatic newly dissected abdomial aorta in the control, were presented to contribute to the literature.

ID: 179

Topic:

Cardiovascular Surgery > EVAR & TEVAR

Presentation Type:

Oral Presentation

A Case Report: Development of Aortaesophageal Fistula Due to Fishbone Ingestion and Role of Thoracic Endovascular Aneurysm Repair in Treatment

MD Huseyin Demirtas[* 1] , Assoc. Prof. Abdullah Ozer[1] , **MD Elif Simsek[1]** , MD Eda Nur Yigiter[1] , Prof. Ibrahim Koray Akkan[2]

[1] *Gazi University Faculty of Medicine Department of Cardiovascular Surgery*

[2] *Gazi University Faculty of Medicine Department of Interventional Radiology*

Aorto-esophageal fistula (AEF) is an abnormal connection between the aorta and the esophagus.

Dubreuil, a French warship surgeon, reported the first case of AEF in the literature in 1818, after a soldier swallowed a piece of a beef rib.

The most common causes of AEF include injury secondary to aortic/esophageal surgery, primary aortic aneurysm, foreign body, and malignancy.

The clinical triad of AEF is chest pain, sentinel arterial bleeding, and blood loss due to massive bleeding after a symptom-free period (Chiari triad).

Patients may apply to the clinic with complaints of chest pain, difficulty in swallowing, hematemesis, massive gastrointestinal bleeding.

AEF due to foreign body is a rare but life-threatening condition.

The prognosis of AEF has improved in recent years, with the developments in endovascular treatment methods.

A 39-year-old male patient with no known comorbidity was admitted to the emergency service with complaints

of hematemesis and back pain after swallowing a fish bone while eating. Thorax CT was taken when the patient's hemoglobin level decreased. An appearance thought to belong to a linear hyperdense foreign body was observed at the level of the esophagus T3 vertebra corpus at 1 o'clock position at thorax ct. A perforation and an aortoesophageal fistula were detected in the esophagus due to foreign body. After the development of pseudoaneurysm secondary to trauma in the aortic arch, "thoracic endovascular aneurysm repair" was applied to the patient and a stent was placed in the esophagus.

After recurrent upper GI bleeding, an endoscopy was performed and found a recurrent fistula developed in the esophagus, and total esophagectomy was performed, and jejunostomy was opened.

A few months later, tracheoesophageal fistula was detected in the patient during imaging due to prolonged cough complaints and pharyngostomy was opened for salivary drainage.

A type-3 endoleak was detected in the angiography approximately 2 months after the pharyngostomy. A new stent-graft was placed to the patient starting from the level of the left subclavian artery separation. There was no decrease in hemoglobin in the post-op follow-up of the patient.

He was discharged on the 2nd post-op day after he had no additional problems.

Aorta Esophageal Fistula is still an entite with high mortality today. With less invasive endovascular methods compared to open surgery, survival rates have increased in the post-op period.

Successful management of these cases is possible with the endovascular stent method, which is applied to the selected patient group admitted to the emergency department in competent centers.

ID: 223

Topic:

Cardiovascular Surgery > EVAR & TEVAR

Presentation Type:

Oral Presentation

The First Thoracic Endovascular Aneurysm Repair (TEVAR) Case Series in Gaza: Challenges in a War Zone Area

MD Ayman Ayman H K Alserr[1] , MD Mohammed Altalla[1] **, MD Sewar Elejla[* 2] ,** MD Baraa Alhaj[1] , MD Haythem Alasmar[1] , MD Faten Braika[1] , MD Yousef Salma[1]

[1] Ministry of health, Gaza, Palestine

[2] Alquds university, Jerusalem, Palestine

Background: TEVAR is a minimally invasive technique applied for the management of different thoracic aortic pathologies. We represent the first three TEVAR cases that were performed in Gaza, highlighting the accompanying challenges and how it was faced including shortness of resources and experience.

Methods: Three consecutive cases of thoracic aortic dissection, transection, and aneurysm were treated with thoracic endograft.

Results: Satisfactory intraoperative results and short-term follow-up of the cases, apart from a type II Endoleak of one case, which has been managed conservatively.

Conclusion: TEVAR is a feasible intervention in areas of instability and can be widely expanded with more training and funding

Keyword: *War Zone, TEVAR, Gaza, Challenges, Aortic aneurysm*

ID: 25

Topic:

Cardiovascular Surgery > Thoracic and thoracoabdominal aortic dissections and aneurisms

Presentation Type:

Oral Presentation

Extra anatomical ascending-descending aortic bypass in complex aortic coarctation; retrocaval, posterior pericardial.

MD Ayhan Müdüroğlu*
Ministry of Health Bursa City Hospital

Case: 39 years old male. He has had hypertension for 20 years. He had been using antihypertensive drugs (Metoprolol, amlodipine, valsartan, spiranolactone, hydrochlorthiazide, indapamide) for 10 years. He had a complaint of rapid fatigue. Femoral and distal pulses were not palpable. The diagnoses of ascending aortic aneurysm, aortic regurgitation and aortic coarctation were made. The patient underwent Bentall procedure and retrocaval, posterior pericardial ascending-descendant aortic bypass. The patient, who was followed up without any problems, was discharged on the 6th postoperative day with Beloc zoc 50 mg 1x1 and Coumadin (INR 2.5-3). Third year CT angiography control was okay.

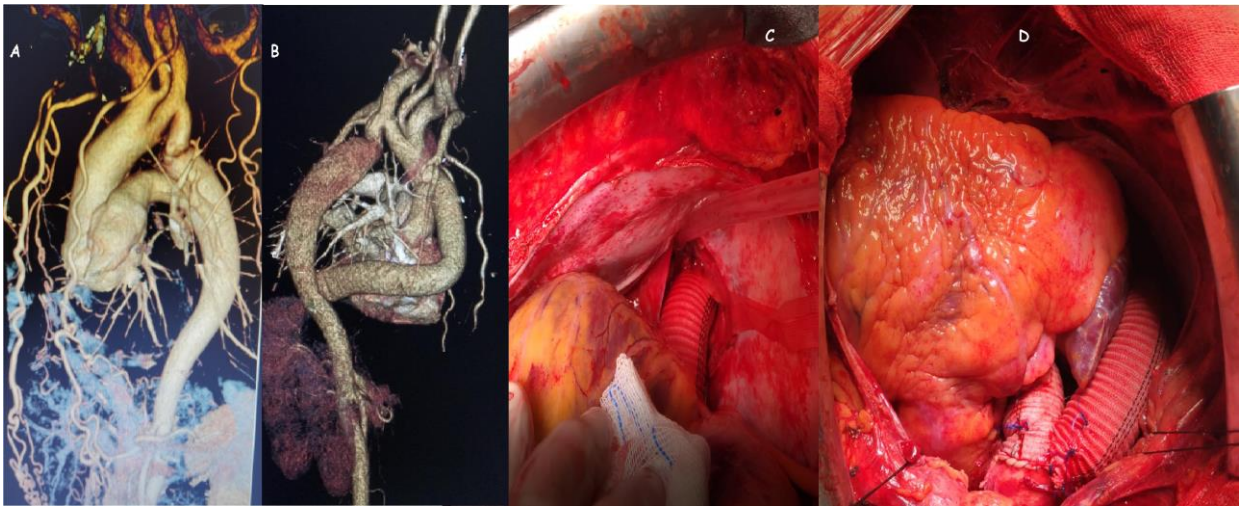
Aortic coarctation accounts for 5-8% of congenital heart diseases. In adults, in the coarctation, fatigue, hypertension, and widespread collaterals can be seen.[1,2] Heart failure, stroke, aortic dissection or rupture, and hypertensive cardiovascular sequelae may develop in aortic coarctation. These may cause early or late mortality and morbidity.[3] In the presence of additional diseases such as recoarctation, long segment stenosis, arcus hypoplasia, concomitant cardiac pathologies, aortic aneurysm/pseudoaneurysm, it is called "complex coarctation".[1,3]

Simple, short-segment coarctations are treated with in situ repair via endovascular or left thoracotomy. The best option for alternative surgical interventions in complex patients is still controversial.[3] In the past, two-stage surgery was performed.[4] This created complications, costs and psychological problems in every operation. Surgical adhesions in recoarctations, excessive mobilization of the aorta increases the risk of injury in large collaterals. These risks are minimized with a posterior pericardial approach.[3]

Siderys performed ascendan-infrarenal and Wukasch ascendan-supraceliac aortic bypass by sternotomy and laparotomy in 1974, and Edie performed this in a single session by performing a sternotomy and left thoracotomy to bypass the ascending-descending aorta in 1975.[3,5] However, a second incision was needed and a longer graft was used.[3,5] Vijayanagar described bypass from the ascending aorta to the descending aorta in a single session, through a single sternotomy incision with a posterior pericardial approach in 1980.[3,4] Studies showed that the consumption of antihypertensive drugs required for adequate blood pressure control decreased.[3] Kanter et al. modified this and performed surgery without using CPB.[5]

In conclusion, in cases where short, simple, collateral is not abundant and additional cardiac

intervention is not required, the first option can be repaired in situ with balloon angioplasty or left thoracotomy. However, in the presence of additional cardiac intervention, extensive collateral, excessive adhesions and anatomical changes caused by recoarctation, retrocardiac ascending-descending aortic bypass is successful in providing easy, safe and satisfactory results.



A, CT angiography, preoperative ascending aortic aneurysm, coarctation, and widespread and wide collaterals. B, CT angiography, postoperative posterior pericardial ascending-descending aortic bypass. C, intraoperative distal anastomosis. D, Intraoperative proximal anastomosis.

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Oral Presentation Session

Surgery or Percutaneous Transcatheter Interventions for the Peripheral Arteries: A Life-Long Dilemma

Date: 05.11.2023 Time: 15:30 – 16:30 Hall: 7

ID: 236

Topic:

Cardiovascular Surgery > Endovascular surgery

Presentation Type:

Oral Presentation

In Peripheral Artery Disease; Endovascular treatment? Open surgery?

Assoc. Prof. Mustafa Dağlı*
Konya City Hospital

Developments in the field of medicine are focused on maximizing the quality of life of patients.

Treatment plans in which current knowledge and experiences are interpreted in accordance with the conditions of the patient;

Medical treatment, Endovascular treatment, Surgical treatment.

The purpose of medical treatment; The first goal at this stage is to improve existing symptoms.
The recommended drug therapy is supported by exercises.
The daily and weekly schedule improves the patient's quality of life and comfort.
During this process, additional suggestions are made for patients who smoke to give up this habit.
Drug treatment is prepared in accordance with the patient's condition and is checked at regular intervals.

The aim of endovascular treatment; This process, in which high success is achieved, is primarily aimed at the patient's recovery without the need for surgical intervention.
This treatment, which does not involve any risk, has a high success rate.

The purpose of surgical treatment; It is aimed to solve the problems by taking into account the commonly used methods.
At this stage, the patient's other health problems, peripheral artery problems and the degree of the disease are taken into account, and the best decision is made together with the patient himself and his family. The success rate of surgical treatment is quite high.

When the procedures performed by a single experienced physician in our clinic are evaluated; I argue that patients should always be evaluated before surgical operation, if there is a chance for endovascular treatment, first of all.
In the past, interventional treatments for leg artery occlusion consisted entirely of surgical operations. However, over time, intravenous (endovascular) treatments have come to the fore. Endovascular treatments are performed by anesthetizing the inguinal region without the need for patients to receive general or spinal anesthesia. These treatments are usually performed through the needle hole in the inguinal artery, without making large skin incisions in arterial operations. Endovascular treatments are performed in an angiography unit. The basis of the treatment is to pass

through the severe stenosis or occlusion in the leg arteries with a suitable wire first and then expand that area by inflating a balloon. When necessary, stents of suitable diameter can be placed in the relevant areas in the form of a metal cage, which are expanded in the vessel and maintain their shape.

In our clinic, endovascular treatment was applied to a few patients who underwent embolectomy and then peripheral bypass operation by other physicians, and who were occluded in the early period, and successful results were obtained. Therefore, atherectomy, balloon angioplasty and stenting of the native vessel increase the chance of success.

In particular, placing the stent proximal to the SFA was seen as the key to success. Our aim is to contribute to the literature.

ID: 233

Topic:

Cardiovascular Surgery > Endovascular surgery

Presentation Type:

Oral Presentation

Percutaneous transluminal angioplasty procedures to the celiac artery that we have performed in the last year

MD Murat Muzaffer GÜÇLÜ* **,** MD Engin UYGUL , Prof. Mustafa Kemal DEMİRAĞ , Prof. Hasan Tahsin KEÇELİGİL

Ondokuz Mayıs Üniversitesi Kalp Damar Cerrahi Anabilim Dalı

Patients who presented to the Gastroenterology department of our center in the last year with unbearable abdominal pain, especially after meals, and weight loss were referred to us. These patients were imaged by computed tomography angiography. A total of six patients were found to have celiac artery stenosis. Of these, three patients developed stenosis due to median arcuate ligament syndrome and three patients developed stenosis due to atherosclerosis. Percutaneous transluminal angioplasty was decided to be the treatment modality for these six patients. Three patients with median arcuate ligament syndrome and two patients with atherosclerosis were first predilatated with sirolimus-coated balloon. Then a stent was placed to provide optimal patency. In one patient, only sirolimus-coated balloon was applied due to anatomical difficulty. In the first three months of follow-up, clinical improvement was observed in all six patients. Restenosis occurred in one patient six months after the procedure. As far as we have observed so far, interventional methods may be a solution for this rare disease in addition to surgical and medical treatment.

References:

Endovascular recanalization of total occlusions of the mesenteric and celiac arteries journal of vascular sugery Volume 55, Issue 6, June 2012, Pages 1674-1681
Median arcuate ligament syndrome J Vasc Surg . 2020 Jun;71(6):2170-2176. doi: 10.1016/j.jvs.2019.11.012.

Keyword: *çölyak arter darlığı, celiac artery stenosis, endovascular treatment*

ID: 206

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

Endovascular, Hybrid & Surgical Approach Treating Recurrent Brachial Artery Embolism, Adjunctive Tissue Plasminogen Activator Infusion

Assoc. Prof. Attaullah Khan Niazi*
King Edward Medical University Lahore

Acute ischemia of an upper extremity occurs less frequently than vascular events of the leg and accounts for 15%-32% of all cases. Embolectomy provides prompt and effective treatment in the majority of cases. Recurrence of embolism and failed reperfusion can result in poor outcomes, even extremity loss. Adjunctive managements become important in this patient group. In this report, we present percutaneous intraarterial drip tissue plasminogen activator infusion to rescue the extremity in a patient who experienced thromboembolism an additional six times following embolectomy

Acute arterial embolism can be treated with conventional thromboembolectomy in the majority of cases. Recurrence of thromboembolic events has a poor prognosis, even limb loss. Acute embolism was found to be responsible in ap- proximately 1% of upper limb amputations in the United states, we were able to rescue the extremity without any adverse events.

In conclusion, conventional embolectomy remains the gold standard in patients with acute arterial ischemia, but it may not be sufficient in patients with distal embolism. Percutane- ous catheter-directed intraarterial thrombolytic therapy may be helpful in selected patient groups.

ID: 97

Topic:

Cardiovascular Surgery > Diagnosis and treatment of valvular heart disease

Presentation Type:

Oral Presentation

Peculiarities Of Surgical Tactics In Takayasu Arteritis Of Extracranial Vessels

Prof. Abdurasul Yulbarisov*

Republican Specialized Center of Surgical Angioneurology Tashkent. Uzbekistan

Irnazarov A.A., Yulbarisov A.A., Ahmatov O.M., Nurmatov D.Kh., Djalilov A.A., Nosirjonov B.T., Aripova F.M.

Republican Specialized Center of Surgical Angioneurology

Tashkent. Uzbekistan

Purpose of the study. To analyze the surgical treatment of NAA patients who underwent surgery for lesions of the brachiocephalic arteries.

Material and methods. A retrospective analysis of the surgical treatment of 66 patients with NAA who were hospitalized at the Republican Center for Surgical Angioneurology and at the Department of Vascular Surgery of the Multidisciplinary Clinic of the Tashkent Medical Academy in the period 2019-2022 was carried out.

The patients were divided according to the classification of chronic cerebrovascular insufficiency by A.V. Pokrovsky (1979): I degree - 4 (6%), II degree - 20 (30.3%), III degree - 24 (36.4%), IV degree - 18 (27.3%) patients.

Group 1 - open interventions on extracranial vessels - 28 patients: bifurcation aorto-carotid bypass grafting - 8 patients, common carotid artery replacement - 12 patients, subclavian carotid bypass grafting - 8 patients.

Group 2 - endovascular interventions - 20 patients: angioplasty of the vertebral artery (VA) - 6 cases, angioplasty and stenting of the VA - 2 patients, angioplasty of the common carotid artery (CCA) - 4, angioplasty of the subclavian artery (SCA) and brachiocephalic trunk - 2 cases, angioplasty and stenting of the CCA - 6 patients.

Group 3 - hybrid interventions - 18 patients: CCA stenting + endarterectomy (EAE) from the CCA and internal carotid artery (ICA) with allo patch - 8 cases, CCA prosthetics + RCA angioplasty - 4 patients, CCA prosthetics + angioplasty and RCA stenting - 6.

Results. In the early postoperative period, operated patients in group 1 had hyperperfusion syndrome - 1 case, ICA thrombosis followed by ischemic stroke - 1 case. In group 3, 1 patient had bleeding from the site of the allo patch. There were no lethal outcomes. During the follow-up period from 6 months to 5 years, ischemic stroke was observed in 2 patients from group 2, in 1 patient with a subsequent death, in addition, restenosis developed in 1 patient on the side of the intervention, the observation of the rest of the patients continues.

Conclusion. Thus, our experience of surgical treatment of patients with NAA with multivessel lesions showed that the choice of tactics should be determined individually, while the main principle is the staged correction of circulatory disorders.

ID: 40

Topic:

Cardiovascular Surgery > Vascular surgery and vascular access

Presentation Type:

Oral Presentation

A Rare Case and Literature Review of Stuck Guidewire with Hickman Catheter in Puncture Site On Neck

MD Volkan Burak Taban*

Cardiovascular Surgery, Şırnak State Hospital, Şırnak, Turkey

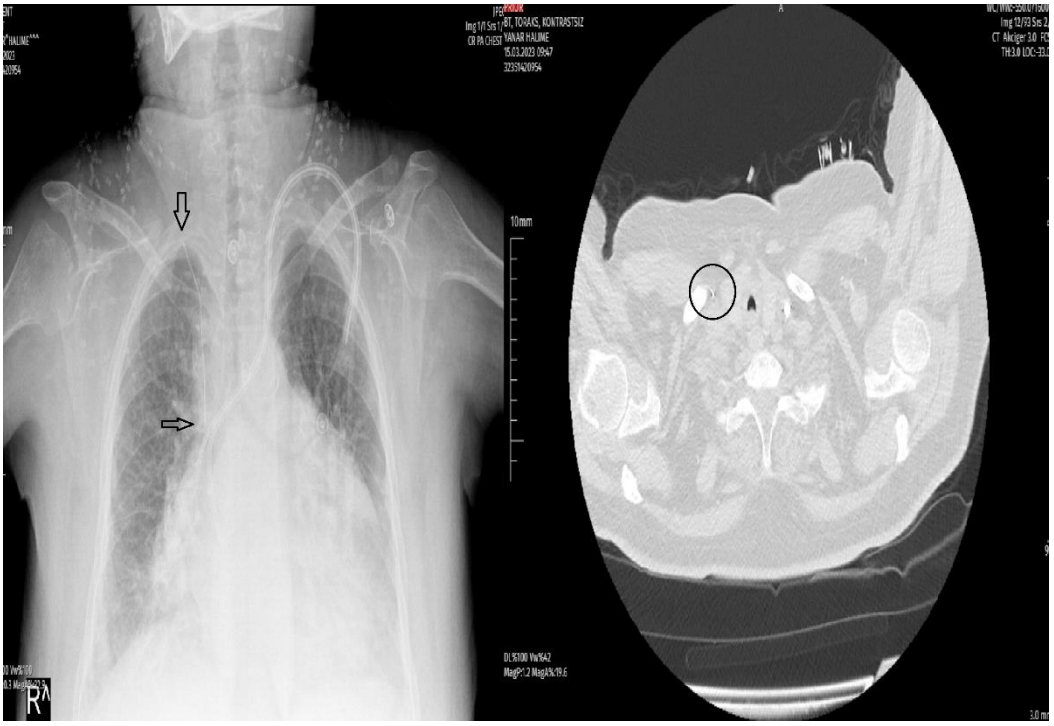
INTRODUCTION:

In people with Chronic Kidney Disease (CKD) who require hemodialysis, Hickman catheters are placed using the Seldinger technique[1, 2]. Even though technological evolutions we continue to see mechanical wire complications. In literature, over %15 of patients who receive central and huge venous catheters have complications and mechanical complications are reported to in %5 to %19 of patients[3]. Guidewire connected complications occur when force is applied to the guidewire and that include knotting of the straight part, kinking with an acute angle, separation of spiral and core wire, fragmentation of the core wire and embolization[4].

CASE DESCRIPTION:

A 66-years-old female patient who has Chronic Kidney Disease (CDK) and after Hickman catheter's complication admitted in Şırnak Hospital on 16/5/2023 in cardiovascular surgery department. Her medical history include hypertension, diabetes mellitus, chronic ischemic heart disease and CDK. She had been diagnosed as having end-stage renal failure approximately 10 years ago and that time she had been applied unsuccessful Hickman Catheter for dialysis treatment. Moreover she know catheter guidewire stuck inside and were unsuccessful but she had not complaint.

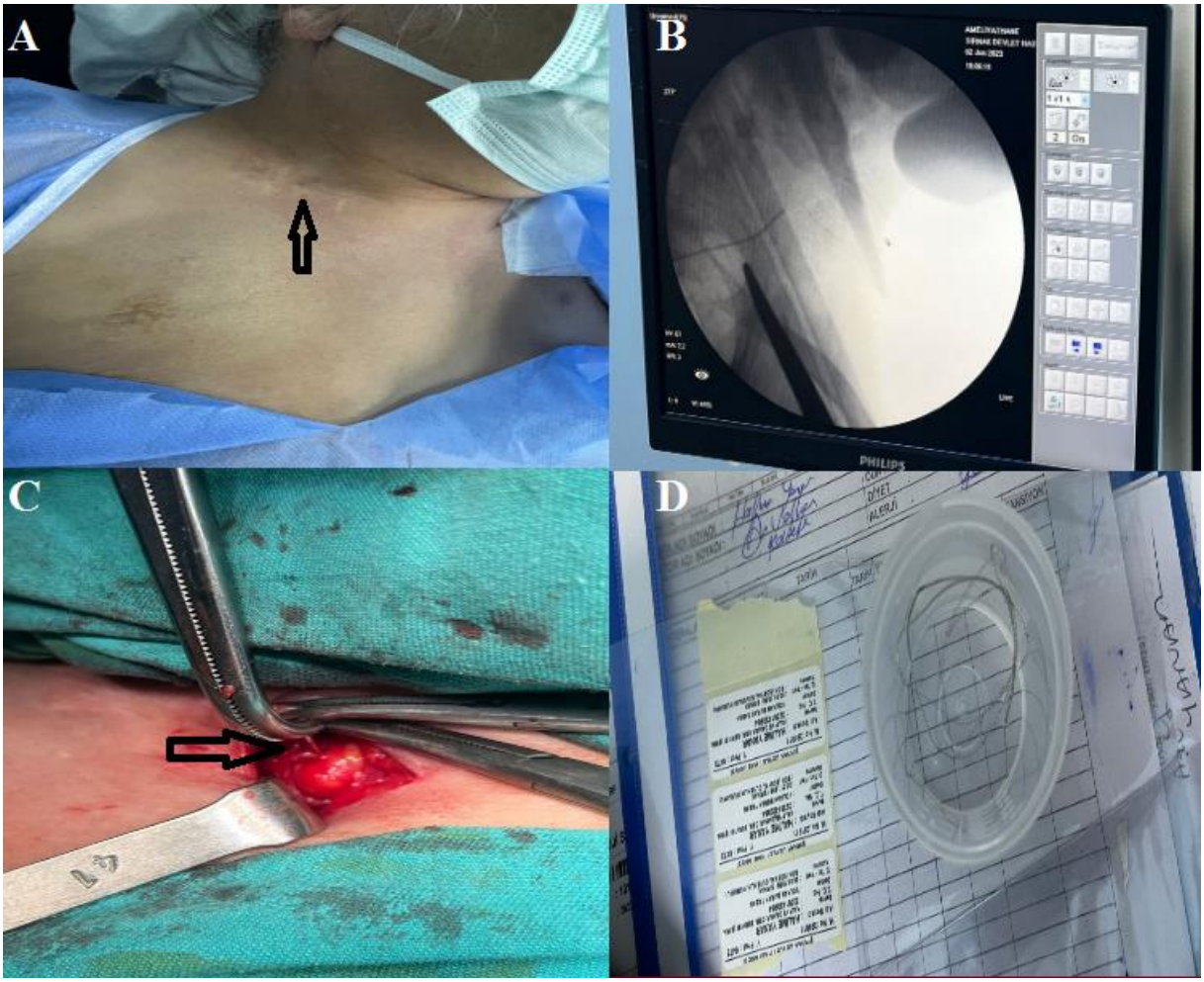
A Chest x-ray and computer tomography (CT) scan showed the presence of old guidewire, however it was seen that the wire was half (Figure1). It was understood that the wire was attempted to be removed, but it was not successful.



TREATMENT:

Under fluoroscopy guidance, incision was made by marking the location with surgical instruments. Wire was reached after exploration, then the wire was removed(Fig. 2B-2C).

Place where the wire got stuck was the catheter puncture site. In fact, puncture site is sutured in normal procedure.(Fig. 2A). However, in this case, the wire was probably sutured there and the guidewire got stuck also there. It was understood that the wire was trying to be removed but tear off on puncture site because of there was sutured. It explains why wire was left unfinished.



DISCUSSION:

Stuck of guidewire of Hickman catheter is rare. It is necessary to optimal attention to the catheter and its materials while suturing the puncture site. Such cases are rare in the literature, the primary method used by clinics is manual extraction[5].

The diagnosis is easy by chest x-ray and CT but it is doesn't give an opinion about where it is stuck. Fluoroscopy could give us ideas with by various surgical manipulations. Open surgery is usable when guidewire is find in normal position as stuck and its manuel removal isn't possible

References:

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- [4] 4. Onan, B., K. Oz, and I.S.J.T.j.o.v.a. Onan, Knotted Seldinger guidewire as a complication of Hickman catheter implantation. 2010. 11(2): p. 171-172.

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Keyword: *Chronic Kidney Disease, Hickman Catheter, Stuck, Fluoroscopy, Guidewire, Hemodialiysis*

Oral Presentation Session

Coronary Bypass Surgery: Refinement of Techniques, Improvement of Outcomes

Date: 06.11.2023 Time: 08:00 – 09:15 Hall: 7

ID: 105

Topic:

Cardiovascular Surgery > Diagnosis and treatment of valvular heart disease

Presentation Type:

Oral Presentation

Role Of Preoperative Neutrophil To Lymphocytes Count As A Predictor Of Post Operative Atrial Fibrillation After Off Pump CABG

MD Bijay Sah*
Bsmmu, Bangladesh

Background: Atrial fibrillation is frequently seen in patients underwent off pump coronary artery bypass graft. Neutrophilia and lymphopenia may be strongly associated with developing atrial fibrillation by both electrical and structural remodeling of the atrium due to atrial fibrosis and oxidative stress also plays an important pathological role. The aim of this study is to investigate the association of neutrophil to lymphocyte ratio with postoperative atrial fibrillation in the patients who underwent off pump coronary artery bypass grafting.

Methods: This comparative cross sectional study was carried out in department of cardiac surgery, Bangabandhu Sheikh Mujib Medical University, Dhaka. Total 70 patients were selected for this study, divided into two groups. Among them, 35 patients with preoperative neutrophil to lymphocyte ratio level ≥ 2.63 were in group A and 35 patients with preoperative neutrophil to lymphocyte ratio level < 2.63 were in group B. The data was collected by semi structured questionnaire and reviewing medical records. The continuous data was evaluated by independent t-test and categorical data by chi-square test, where quantitative as mean & SD and qualitative as frequency & percentage. Prediction was reviewed using logistic regression analysis. P value ≤ 0.05 was significant for data analysis which was summarized in tables & charts. Ethical approval was taken from the institutional review board of Bangabandhu Sheikh Mujib Medical University.

Results: The Mean ± SD age was 52.71±11.49 in group A and 51.91±10.04 in group B. There were 28 (80%) male in group A and 34 (97.1%) male in group B and also 31 (88.6%) patients in group A had hypertension where as 24 (68.6%) patients in group B had hypertension which was statistically significant. Postoperative atrial fibrillation occurred in 28 (80%) of patients in group A whereas only 2 (5.7%) patients in group B which was statistically significant. In the logistic regression model, Neutrophil to lymphocyte ratio was found to be an independent predictor for new onset of postoperative atrial fibrillation development with 70% sensitivity, 87.5% specificity, OR 5.649, 95% CI 2.353 – 13.562, p=0.001
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Conclusion: This study showed that there is association between the preoperative neutrophil to lymphocyte ratio as a predictor of new onset of postoperative atrial fibrillation after off-pump coronary artery bypass graft.

ID: 34

Topic:

Cardiovascular Surgery > Microcircuits in cardiopulmonary bypass

Presentation Type:

Oral Presentation

Is It Possible To Perform CABG with Low ACT Values with Minimized Extracorporeal Systems?

MD Mustafa Mert Özgür* **,** Prof. Kaan Kırali
Kosuyolu Yüksek İhtisas Egitim ve Arastirma Hastanesi

Introduction: One of the important advantages of MiECC systems is that they work with low ACT values. In the literature, it is seen that perfusion is achieved with act values of approximately 350s in isolated coronary artery bypass surgery. In this study, we report our experience of working with Type 1 MiECC at lower act values.

Methods : Patients who underwent coronary bypass surgery with type 1 miecc between February 2021 and May 2023 and were operated with a maximum act value of 300s and below were analyzed retrospectively.

Results: The mean age of 38 patients who were operated on was 61.9 ±9.4 years and 63.1 % of these patients were male patients. Mean perfusion and cross clamp time was 89.6 ±22.04 minutes and 49.4 ±18.2 minutes respectively. Mean maxiumum ACT was 273.1 ±24.8 sec. There was no mortality, CVA, or any case of pump dysfunction or clotting.

Discussion: This study showed that coronary bypass surgery could be performed safely with low ACT values with total closed perfusion systems like Type 1 Miecc. This feature may help us to perform CABG relatively high risk patients for anticoagulation safely.

Keyword: *miecc, cabg, low act*

ID: 123

Topic:

Cardiovascular Surgery > Adult congenital heart disease

Presentation Type:

Oral Presentation

Surgery Of Fistula Corocamerale From Left Coronary Draining Into Left Atrium: Case Report

Assoc. Prof. Redha Lakehal* **,** Prof. Radouane Boukarroucha
Faculty Of Medecine Constantine 03 Algeria

Introduction: This is abnormal communication between a coronary artery and a heart cavity. Rare disorder. Incidence increased with the development of coronary angiography. The diagnosis is based on angiography and coroscanner. The treatment is essentially based on surgery. The aim of our work is to remind of this affection for suitable support.

Methods: We report the observation of a woman 58-year-old, history of cholecystectomy and hypothyroidism with chest discomfort for a few months. includind angiography to objective one mega left common core fistulisant in left atria confirms by a coroscanner. which has objective fistula corocamerale between the left atrium and the left coronary artery with a fistulous 07 cm in long and 06 mm in diameter more or less mega left coronary artery.

Echocardiography: fistula corocamerale from left coronary drining in the left atrium. ECG was normal. The patient was in dyspnea grade // of NYHA. Clinical examination was unremarkable. The patient was operated under cardiopulmonary bypass which to reveals a mega left coronary artery, the hole outlet at the level of the left atrium and the hole inlet at the level of the left coronary artery anevrysmale. It benefits from closure of the drainage hole outlet at the left atrium; removal of the fistulous journey and closure of the hole inlet of with anevrysmorraphie of the left coronary artery.

Results: The suites immediate post operating were unremarkable with disappearance of the fistula during an coronarography of control.

Conclusion: Coronary cameral fistula is a rare clinical entity; it can be symptomatic or no. The treatment can be done by embolization, but surgery still keeps its place especially for large or multiple fistulas.

ID: 251

Topic:

Cardiovascular Surgery > Coronary artery disease - CABG surgery

Presentation Type:

Oral Presentation

Does Gender Influence Long-Term Outcomes in Coronary Artery Bypass Surgery? Unraveling the Hidden Impact

Assoc. Prof. Taylan Adademir , MD Fatih Yiğit , MD İrem Turp* **,** Prof. Fuat Büyükbayrak
University of Health Sciences Koşuyolu High Specialization Education And Research Hospital

Background: Numerous studies including our previous series have consistently shown an increased mortality rate among women compared to men following isolated coronary artery bypass graft (CABG) surgery. While the impact of gender on early mortality rates is widely acknowledged, conflicting findings exist regarding its effects on long-term outcomes. This study aims to elucidate the influence of gender on both early and long-term mortality rates following isolated CABG surgery.

Methods: All patients who underwent isolated CABG surgery at our hospital between July 2011 and August 2013 were included in this study. Early mortality referred to deaths within the first 30 days or during hospitalization, while deaths occurring beyond this period were classified as long-term mortality. Long-term mortality data were obtained through the mortality reporting system. Patients were grouped according to gender, and mortality rates were analyzed in three categories: overall, early-stage, and long-term mortality, using Kaplan-Meier analysis.

Results: A total of 1867 patients were included in this study, with 22.2% (n=414) being female. The mean age of female patients was 62.3 ± 10.6 years, which was significantly higher than that of male patients (59.7 ± 9.9 years) ($p<0.001$). The mean follow-up duration was 116.1 ± 6.8 months. During this period, a total of 604 patients (32.4%) died, with 154 (25.5%) of them being female. There was a statistically significant difference in overall mortality rates based on gender (Table 1) ($p<0.05$), with a higher mortality rate observed in females (37.3% vs 31.1%).

In light of these findings, patients were further analyzed based on early and late mortality outcomes. Of the 72 patients who experienced early mortality, 26 (36.1%) were female. Early mortality rates were significantly higher in female patients compared to males (6.3% vs 3.2%) ($p<0.05$). However, the mean age of female patients who died early was similar to that of male patients (mean age of males: 67.74 ± 9.99 years, mean age of females: 68.04 ± 9.66 years) ($p>0.05$).

After excluding patients with early mortality, a total of 1795 patients were followed for an average of 116.1±6.8 months. During the follow-up period, 532 patients (29.6%) died. The mortality rate was 33.1% (n=128) in females and 28.8% (n=404) in males. There was no statistically significant difference in long-term mortality between females and males ($p>0.05$). However, as seen in Table 2, the Kaplan-Meier curve shows a divergence in favor of males starting from the 72nd month.

Conclusion: These findings suggest that once early-stage mortality cases are removed from the analysis, there is no statistically significant disparity in long-term mortality rates between genders. Nonetheless, the Kaplan-Meier curve demonstrates a notable divergence favoring male patients after the 72nd month, indicating a potential long-term impact. Further investigations are warranted to thoroughly understand the underlying factors contributing to this divergence.

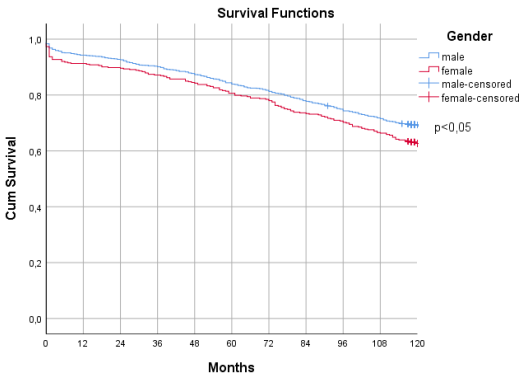

Table 1: Overall Mortality According to Gender

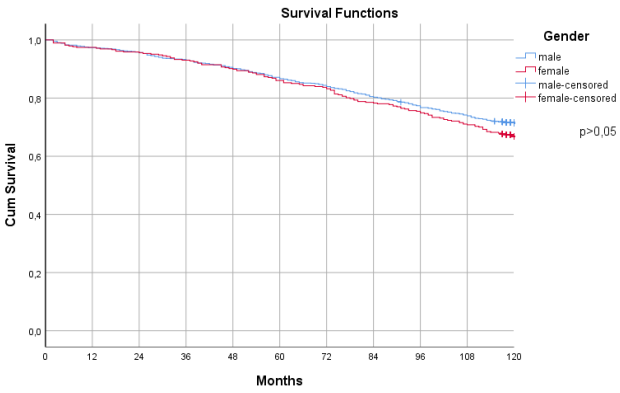

Table 2: Long-Term Mortality According To Gender

ID: 258

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

Unraveling the Role of RDW in Predicting Early and Long-term Mortality following CABG Surgery

Assoc. Prof. Taylan Adademir , MD Fatih Yiğit **, MD Hülya İlayda Serbest*** **,** Prof. Fuat Büyükbayrak
The University of Health Sciences Koşuyolu High Specialization Education and Research Hospital

Background: Red Cell Distribution Width (RDW) is a commonly used biomarker that assesses the variation in erythrocyte volume. Higher RDW levels are associated with conditions such as absolute iron deficiency, inflammation-induced iron sequestration, ischemia, and oxidative stress. These factors can contribute to unfavorable outcomes following cardiac surgery. While previous studies have explored the prognostic value of elevated RDW as a predictor of increased early and late mortality after Coronary Artery Bypass Grafting (CABG), it remains understudied in large-scale series within Turkey. Therefore, the objective of our research is to examine the predictive capability of RDW in relation to early and late-term mortality subsequent to CABG surgery.

Metod: This study included all 1867 patients who underwent isolated Coronary Artery Bypass Grafting (CABG) surgery at our hospital between July 2011 and August 2013. The mean age of the patients was 60.4 ± 10.1 years (59.8 ± 9.9 years for males and 62.4 ± 10.7 years for females). Among the patients, 22.2% (n=414) were female. Early mortality was defined as deaths occurring within the first 30 days of hospitalization or within the hospital premises. Long-term mortality data were obtained through the mortality reporting system. The mean follow-up duration was 116.1 ± 6.8 months. Early mortality rate was 3.9% and the long-term mortality rate was determined as 29.6%. Mortality data were reevaluated based on patients preoperative RDW levels.

Results: The overall mortality rate observed in this study was 32.4% (n=604), with an early mortality rate of 3.9% (n=72). The median RDW value for all patients was 14.8% (14.1-15.8). Significantly higher median RDW levels were observed in the subgroup of patients who experienced early mortality compared to those who survived (15.4% vs 14.8%, $p<0.05$).

To further investigate the relationship between RDW and mortality, the remaining patients were stratified into three groups based on preoperative RDW values: Group 1 (0-25th percentile), Group 2 (25-75th percentile), and Group 3 (>75th percentile). During the ten-year follow-up period, the survival rates were 74.7%, 72.3%, and 61.2% respectively for each group. Patients in Group 3 demonstrated significantly lower survival rates compared to the other groups (Table 1), indicating a long-term impact of elevated RDW levels on mortality ($p<0.001$). Univariate analysis revealed a statistically significant association between RDW levels and mortality prediction (p: 0.000; OR: 1.166 CI: 1.096-1.239).

Conlcusion: Elevated RDW levels may be considered as a predictor for both early and late mortality following coronary artery bypass grafting (CABG) in the Turkish population too. However, the significance of normalizing RDW values during the preoperative period and its impact on mortality remains unknown, necessitating further extensive studies to elucidate this relationship.

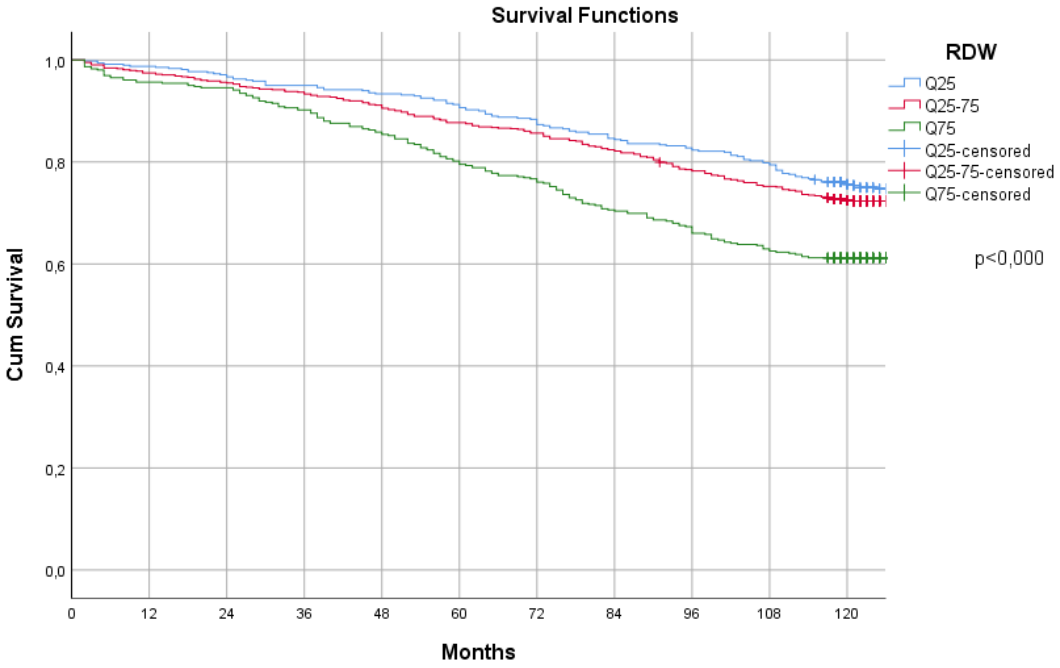

Table 1: Long Term Mortality based on RDW Quartiles

Oral Presentation Session

Perspectives in Arrhythmia Management

Date: 06.11.2023 Time: 08:00 – 09:00 Hall: 6

ID: 198

Topic:

Cardiology > Arrhythmias and antiarrhythmic therapy

Presentation Type:

Oral Presentation

The Effects of Radiofrequency Ablation Therapy on QT Parameters

MD Cansu Ozturk **, Prof. Onder Ozturk***

Health Sciences University of Turkey, Diyarbakır Gazi Yasargil Education and Research Hospital, Department of Cardiology, Diyarbakir, Turkey

OBJECTIVE: The frequency of premature ventricular complex (PVC) increases with age. The prevalence of PVC is 6% in the 45-65 age group. Frequent idiopathic PVC can lead to tachycardia-related cardiomyopathy resulting in left ventricular dysfunction and dilatation. Treatment of PVCs with antiarrhythmics or radiofrequency ablation (RFA) can restore ventricular function in the absence of known heart disease. PVCs may have a benign course, or may lead to arrhythmic sudden death. The aim of this study is to measure the QT parameters of patients treated with RFA, who have frequent VEV.

METHODS: A total of 18 patients with symptomatic frequent PVC and receiving RFA therapy were included in the study. The clinical, laboratory and electrocardiographic parameters of the patients were evaluated retrospectively. Heart rate, QT, QTc, QT dispersion, QTc dispersion parameters were measured from ECG recordings.

RESULTS: The mean age of the patients was 46.88 ± 14.11 years, 7 patients were male and 11 patients were female. Hypertension was present in 4 (22.2%) patients and Diabetes Mellitus was present in 2 (11.1%) patients (Table 1). When evaluated in terms of QT parameters, no significant difference was found in terms of QT parameters before and after ablation (Table 2).

CONCLUSIONS: In this study, we did not find any significant changes in QT parameters after RFA. However, prospective multicenter clinical studies are needed to investigate the long-term effects of RFA on ventricular repolarization parameters.

Table 1: Clinical characteristics of the patients

Variables	**Datas**
Gender (F/M)	7/11
Age (year)	46.88±14.31
Hypertension	4 (22.2 %)
Diabetes Mellitus	2 (11.1 %)
Smoking	1 (5.6 %)
LVEF (%)	55.83±9.11
Glucose (mg/dl)	97.66±23.45
Creatinin (mg/dl)	0.76±0.15
Total cholesterol (mg/dl)	164.38±41.54
LDL cholesterol (mg/dl)	93.30±31.94
HDL cholesterol (mg/dl)	42.59±7.54
Triglyceride (mg/dl)	122.24±75.87

Table 2. Electrocardiographic findings of the patients before and after RFA

Variables	Before RFA	After RFA	p Value
QT (ms)	398.27±54.29	395.41±31.27	0.345
QTc (ms)	452.75 ± 37.22	443.40±25.88	0.249
QTd (ms)	44.70±13.28	52.50±19.14	0.083
QTcd (ms)	49.05±14.33	56.75±20.60	0.232
QRS (ms)	98.25±27.47	99.43±26.23	0.889
Heart Rate	73.29±16.02	71.0±9.28	0.932

References:

- [1] Yamada S, Chung FP, Lin YJ, et al. Electrocardiographic characteristics for predicting idiopathic right ventricular outflow tract premature ventricular complex-induced cardiomyopathy. J Interv Card Electrophysiol. 2018;53(2):175-185. doi:10.1007/s10840-018-0384-5
- [2] de Lavallaz JDF, Mézier J, Mertz L, et al. Risk factors for the development of premature ventricular complex-induced cardiomyopathy: a systematic review and meta-analysis. J Interv Card Electrophysiol. 2023;66(5):1145-1163. doi:10.1007/s10840-022-01421-8
- [3] Marcus GM. Evaluation and Management of Premature Ventricular Complexes. Circulation. 2020;141(17):1404-1418. doi:10.1161/CIRCULATIONAHA.119.042434

Keyword: *premature ventricular complex, ablation, QT*

ID: 15

Topic:

Cardiology > Transcatheter ablation for tachyarrhythmias - Ventricular tachycardia

Presentation Type:

Oral Presentation

Rare Thromboembolic Complications of Cavotricuspid Isthmus Ablation: Single Center Experience

MD Fatih Erkam Olgun* **,** Prof. Fethi Kiliçaslan
Istanbul Medipol University

Background: Cavotricuspid isthmus (CTI) – dependent atrial flutter (AFL) is one of the most common supraventricular tachyarrhythmias. Catheter ablation (CA) for AFL is an effective method of treatment and has been successfully used for 30 years. The most severe complications associated with CA include death, stroke, complete atrioventricular block, cardiac tamponade, acute myocardial infarction, and thromboembolism. The risk of developing ischemic stroke or pulmonary embolism (PE) from electrophysiologic procedures is reportedly 0% to 1.7%.

Objective: The aim of this study was to share our experience with the rare thromboembolic complications of cavotricuspid isthmus ablation such as ischemic stroke and pulmonary embolism.

Methods: We retrieved our data about patients with AFL who underwent CTI ablation between 2020 and 2022 at our center. Inclusion criteria were documentation of standard 12-lead electrocardiographic (ECG) findings of isthmus-dependent AFL or typical AFL during the electrophysiological study. All interventions were performed with uninterrupted oral anticoagulation and transesophageal echocardiography was performed on patients who were in AFL on the day of the procedure. The CARTO 3 (Biosense Webster, CA, USA) three-dimensional electroanatomic mapping system, a quadripolar ablation catheter (Thermocool SmartTouch Catheter; Biosense Webster, CA, USA) through the steerable sheath flushed with heparinized saline were used. The clinical findings and treatments of patients who developed ischemic stroke or pulmonary embolism during and after the procedure were evaluated.

Table 1. Baseline Characteristics and Laboratory Findings

Variables	(n=209)
Baseline characteristics	
Age (years), mean (SD)	60.04±11.40
Gender (female), n (%)	104 (49.8%)
Diabetes Mellitus, n (%)	65 (31.1%)
Hypertension, n (%)	155 (59.8%)
Hyperlipidemia, (%)	79 (37.8%)
Coronary Artery Disease, n (%)	110 (52.6%)
Chronic Kidney Disease, (%)	8 (3.8%)
Current Smoker, n (%)	65 (31.1%)
Body Mass Index (kg/m^2; SD)	29.70±4.91
Left Ventricular Ejection Fraction (%) (SD)	61.07±6.90
Left Atrial Diameter (mm), mean (SD)	41.72±5.34
CHA_2DS_2VASc Score, mean (SD)	1.99±1.51
HASBLED Score, mean (SD)	1.01±0.84
Laboratory Findings	
Creatinine (mg/dl; SD)	0.87±0.19
TSH (uIU/mL; SD)	1.83±1.74
WBC (x103 /µL; SD)	8.30±1.99
Hemoglobin (g/dL; SD)	13.11±1.49
Platelets (x10^3 /µL; SD)	255.77±54.91
ALT (U/L; SD)	20.36±7.14
AST (U/L; SD)	20.21±6.27
Medications	
Acetylsalicylic Acid, n (%)	8 (3.8%)
Clopidogrel, n (%)	14 (6.7%)
NOAC, n (%)	169 (80.9%)
Warfarin, n (%)	8 (3.8%)

*Continues variables are reported (mean±SD). Categorical variables are reported n (%).
Abbreviations: ALT; Alanine transaminase, AST; Aspartate transaminase, NOAC; Novel oral anticoagulants, TSH; Thyroid Stimulating Hormone, WBC; White Blood Cell.

Table 2: Baseline clinical and procedural data of the patients with thromboembolic complications of CTI ablation

No	Sex	Age	Complication	BMI	DM	HT	CAD	CKD	LVEF (%)	LAD (mm)	OAC
1	M	66	Pulmonary embolism presented with dyspnea and complete AV block.	30.12	+	+	+	+	55	44	Rivaroksaban
2	F	61	Ischemic stroke presented with facial and left-sided plegia	35.56	+	+	-	-	65	36	Apixaban

Abbreviations: AV; Atrioventricular, BMI; Body mass index, CAD; Coronary artery disease, CKD; Chronic kidney disease, DM; Diabetes mellitus, HT; Hypertension, LAD; Left atrial diameter, LVEF; Left ventricular ejection fraction, OAC; Oral anticoagulation.

Results: Two hundred and nine patients (age 60.04±11.40 years) with AFL were enrolled. Baseline characteristics of study population are summarized in Table 1. Two patients (0.96%) developed thromboembolic complications during and after the procedure. In patient 1, pulmonary embolism presenting with dyspnea and complete AV block occured at the second hour of the postoperative follow-up was treated without sequelae with temporary pacemaker implantation, noninvasive mechanical ventilation and heparin infusion. In patient 2, facial paralysis, left arm and left leg plegia occurred respectively during the placement of figure of eight suture in the groin. The patient was discharged without any sequelae after mechanical thrombectomy to the acute occlusion of the right medial cerebral artery by the interventional radiology team. Baseline clinical and procedural data of the 8 patients are summarized in Table 2.

Conclusion: Ablation of CTI for typical atrial flutter is safe and effective. Despite all precautions being taken, thromboembolic complications could be seen during the procedure and in the postoperative follow-up.

References:

- [1] Nunes-Ferreira A, Alves M, Lima da Silva G, Cortez-Dias N, de Sousa J, Pinto FJ, Caldeira D. Anticoagulation after typical atrial flutter ablation: Systematic review and meta-analysis. Pacing Clin Electrophysiol. 2021 Oct;44(10):1701-1710. doi: 10.1111/pace.14342.
- [2] Expósito V, Rodríguez-Entem F, González-Enríquez S, Veiga G, Olavarri I, Olalla JJ. Stroke and Systemic Embolism After Successful Ablation of Typical Atrial Flutter. Clin Cardiol. 2016 Jun;39(6):347-51. doi: 10.1002/clc.22538. Epub 2016 Mar 30.

Keyword: *Atrial flutter, CTI ablation, Ischemic stroke, Pulmonary Embolism*

ID: 232

Topic:

Cardiology > Transcatheter ablation for tachyarrhythmias - Atrial fibrillation

Presentation Type:

Oral Presentation

The Predictors Of Phrenic Nerve Injury In Cryoballoon Based Pulmonary Vein Isolation: A Single Center Retrospective Cohort Study

MD Fatih Beşiroğlu[*] [1] , MD Patricia Pruszkowska[2] , Assoc. Prof. Özgür Çağaç[3] , Assoc. Prof. Burak Hünük[4] , Prof. Adam Sokal[2] , Prof. Oskar Kowalski[2] , Prof. Zbigniew Kalarus[2]

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[2] Silesian Center for Heart Diseases (SCHD), Department of Cardiology, Zabrze, Poland

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Background: Cryoballoon-based pulmonary vein (PV) isolation/ablation technique (CBA) is an established rhythm control strategy for the management of atrial fibrillation (AF). Phrenic nerve injury (PNI) is a frequent complication during CBA. However, there is scarce data about the clinical predictors of PNI and/or peri-procedural risk factors.

Purpose: Our study aims to describe the clinical predictors of PNI in CBA technique in the adult population.

Methods: Procedural and clinical data of 135 patients who underwent CBA of AF from January 2022 to January 2023 in our center were retrospectively reviewed. Patients with missing data (n:3) and right-sided PV variations (2 right common ostia, 1 right common trunk) were excluded. In CBA procedure, abdominal palpation during phrenic high-output-pacing from the superior vena cava together with compound-motor-action-potential monitoring was routinely applied as a precaution for PNI while performing right-sided-PV CBA applications. The number of temporary (complete prompt recovery of phrenic nerve diaphragmatic functions after the secession of cryothermal energy up to 3 days), persistent (symptomatic PNI after 3 days to <6 months), or permanent (symptomatic PNI >6 months) PNI events and procedural parameters were noted.

Results: 129 patients [Age (mean ± SD) 64 ± 10.4, Male n(% overall) 85(65.9)] were included. Baseline and clinical characteristics are presented in Table-1. Overall, 21 PNI events (16,3%) were noted [14 transient (10,9%) and 7 persistent (5,4%)]. No permanent PNI was observed. No previously established clinical high risk features in AF; such as old-age, coronary-heart-disease, obesity or diabetes were found to be statistically associated with PNI in uni-variate analyses (Table-1). However, PNI events were found to be significantly associated with female gender (Female %: 20.5 in PNI population vs 14.1 in no PNI population, p=0,032) and a borderline association with hypertension (HT) (HT %: 85.7 in PNI vs 67.6 in no-PNI, p=0.045). In the multivariate logistic-regression-analyses, female gender [Odds-ratio: 1.308 p=0.043] and HT [Odds-ratio: 3.002 p=0.046] were found to be significant predictors of PNI events, outnumbering age and obesity (Table-2).

Conclusions: Hypertension and female gender might be proposed as clinical predictors of PNI events in CBA. These findings might be a consequence of our highly limited/conflicting knowledge of the

gender-based procedural/PV variation data. Our results might also be a contribution for future pre/intra-procedural risk algorithms.

Table-1: Baseline characteristics of the study population

Variables	Overall (129)	No Phrenic Nerve Injury (n:108)	Phrenic Nerve Injury (n:21)	*P*-value
Age (mean±SD)	64 ± 10.4	64.17 ± 10.89	63.2 ± 8.1	0.697
Male [n (%)]	85 (65.9)	73 (85.9)	12 (14.1)	**0.032**
Female [n (%)]	44 (34.1)	35 (79.5)	9 (20.5)	
Obesity [n (%)]	29 (22.5)	26 (24.1)	3 (14.3)	0.326
Hypertension [n (%)]	91 (70.5)	73 (67.6)	18 (85.7)	**0.045**
Diabetes mellitus [n (%)]	30 (23.3)	25 (23.1)	5 (23.8)	0.270
Coronary artery disease [n (%)]	47 (36.4)	37 (34.3)	10 (47.6)	0.244
Chronic Kidney Disease [n (%)]	14 (10.9)	12 (11.1)	2 (9.5)	0.831
Cerebrovascular Disease [n (%)]	15 (11.6)	14 (13)	1 (4.8)	0.283
Atrial Fibrillation [n (%)]	38 (29.5)	32 (29.6)	6 (28.6)	0.806
CHA2DS2-VASc score (mean±SD)	2.67 ± 1.4	2.67 ± 1.4	2.71 ± 1.2	
0	7 (5.4)	7 (6.5)	0 (0)	
1	21 (16.3)	17 (15.7)	4 (19.0)	
2	32 (24.8)	27 (25)	5 (23.8)	0.670
≥3	69 (53.5)	57 (52)	12 (57)	

Table.2 Multivarite Logistic Regression Analysis on Predictors of Phrenic Nerve Injury

Parameters	**Odds Ratio**	p
STEP1		
Age	0.968	0,221
Gender, Female	1.928	0,042
HT	3,647	0,066
Obesity	0,419	0,205
STEP2		
Obesity	0,448	0,237
HT	2,948	0,032
Gender, Female	1,631	0,042
STEP3		
Gender, Female	1,308	0,043
HT	3,002	0,046

References:

- [1] Phrenic Nerve Injury During Cryoballoon-Based Pulmonary Vein Isolation: Results of the Worldwide YETI Registry. Circ Arrhythm Electrophysiol . 2022 Jan;15(1):e010516. doi: 10.1161/CIRCEP.121.010516. Epub 2021 Dec 28.

Keyword: *atrial fibrillation, Cryoballoon-based pulmonary vein isolation, phrenic nerve injury, complication, gender*

ID: 19

Topic:

Cardiology > Arrhythmias and antiarrhythmic therapy

Presentation Type:

Oral Presentation

Timing of Ventricular Tachycardia Ablation

MD Gamze Yeter Arslan*
Kepez State Hospital

Introduction and Aim: Ventricular tachycardia is a fatal circulatory disorder and needs urgent treatment. Ablation therapy is an effective option in patients presenting with ICD storm. The aim of our study is to evaluate the ventricular tachycardia ablation time. Method: The study was followed up at between 2017 and 2023. 76 (F/M:28/48) patients diagnosed with ventricular tachycardia strom. All patietns underwent electrophysiology laboratuvary in 72 hours. we divided the patients into 2 groups as the first 12 hours and after. Results: Hemodynamic parameters of the patients taken in the first 12 hours were better observed. Arterial mean blood pressure and oxygen saturation were better in the first group and the need for cardioversion was less. ($p<0.02$) Conclusion: Hemodynamic parameters and 1-year ICD shocking rates were observed to be less in patients who received vt ablation in the first 12 hours.

Keyword: *ventricular tachycardia, ablation, Icd ström*

ID: 276

Topic:

Cardiology > Electrocardiography and non-invasive electrocardiology

Presentation Type:

Oral Presentation

Low QRS Voltage In ECG Is A Prognostic Marker In Liver Transplantation Patients

Assoc. Prof. Arzu Yazar[* 1] , MD Yusuf Ziya Şener[* 2]

[1] *Medipol Mega Hastanesi, Istanbul*

[2] *Beypazarı Devlet Hastanesi, Ankara*

Background and Objectives: Cardiovascular events are among the leading causes of mortality in liver transplant(LT) patients.(1) Thus, screening for cardiovascular risk factors play a significant role in the pretransplant evaluation. There is evidence that low QRS voltage (LQRSV) in the electrocardiogram (ECG) of individuals free of cardiovascular disease (CVD) is releated to increased mortality risk.(2) The aim of this study is to investigate the relationship between presence of LQRSV and postoperative cardiovascular adverse events in LT patients.

Materials and Methods: A total of 53 patients who are evaluated with coronary angiography, before LT and found not to have critical coronary lesion were included in the study. Patients divided into two groups according to the presence or absence of LQRSV in preoperative ECG.

Results: LQRSV was observed in %18.8 (n=10) of the patients who had LT. All-cause mortality and major adverse cardiac events(cardiac mortality, acute heart failure, ventricular tachycardia/fibrillation) were significantly higher in LQRSV(+) group.(all $p < 0.05$). There wasn't significant association between LQRSV precence and myocardial infarction.(p=0.09)(table 2)

Conclusion: Our data shows that presence of LQRSV in ECG is associated with increased mortalitiy and cardiovascular adverse events after liver transplantation.

References:

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- [2] 2. Usoro AO, Bradford N, Shah AJ, Soliman EZ. Risk of mortality in individuals with low QRS voltage and free of cardiovascular disease. The American Journal of Cardiology. 2014;113(9):1514-7.

Keyword: *liver transplantation, ecg, low QRS voltage, cardiac mortality, electrocardiogram*

Oral Presentation Session

Challenges in Coronary Interventions

Date: 06.11.2023 Time: 09:00 – 10:10 Hall: 6

ID: 140

Topic:

Cardiology > Percutaneous coronary interventions

Presentation Type:

Oral Presentation

The Effect Of Hand Dominance On Radial Artery Spasm And Occlusion: A Prospective Observational Study

MD Kenan Toprak[1] **, MD Muhammed Bahadır Omar**[* 2] , MD Mehmet İnanır[3] , MD Tolga Memioğlu[3] , MD Ali Palice[4] , MD Mustafa Kaplangoray[4] , MD Asuman Biçer[1] , MD Mustafa Begenç Taşcanov[1] , MD İbrahim Halil Altıparmak[1] , MD Recep Demirbağ[1]

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[2] UMRANİYE TRAINING AND RESEARCH HOSPITAL, ISTANBUL, Turkey

[3] Abant Izzet Baysal University, Medical Faculty, Cardiology Department, Bolu, Turkey

[4] Mehmet Akif İnan Training and Research Hospital, Sanlıurfa, Turkey

Transradial access (TRA) has become the most commonly used method for cardiac catheterization (CC) today. Many medical and technical applications have been proposed to reduce these complications. The aim of this study is to examine the effect of hand dominance on radial artery spasm (RAS) and radial artery occlusion (RAO) in subjects undergoing CC via TRA. Between April 2020 and August 2022, 1713 subjects who underwent CC via TRA were included in the study. Patient data were obtained in terms of hand dominance of the catheterized side and RAS and RAO during a 1-month follow-up period. RAS was seen in 9.6% of the subjects. The RAS in patients catheterized by the dominant hand was significantly higher than that performed by the non-dominant hand (12% vs 7.8%; p=0.004). RAO was seen in 1% of the subjects. RAO was significantly higher in the spasm side than in the no-spasm side (3% vs. 0.8%; p=0.009). Hand dominance was determined as independent predictor of radial artery spasm (p=0.006). In our study, RAS and RAO were more common on the dominant hand side than on the non-dominant side. Choosing the non-dominant hand for TRA for CC may reduce the incidence of RAS and RAO.

Keyword: *: transradial access, radial artery spasm, radial artery occlusion, hand dominance*

ID: 114

Topic:

Cardiology > Percutaneous coronary interventions

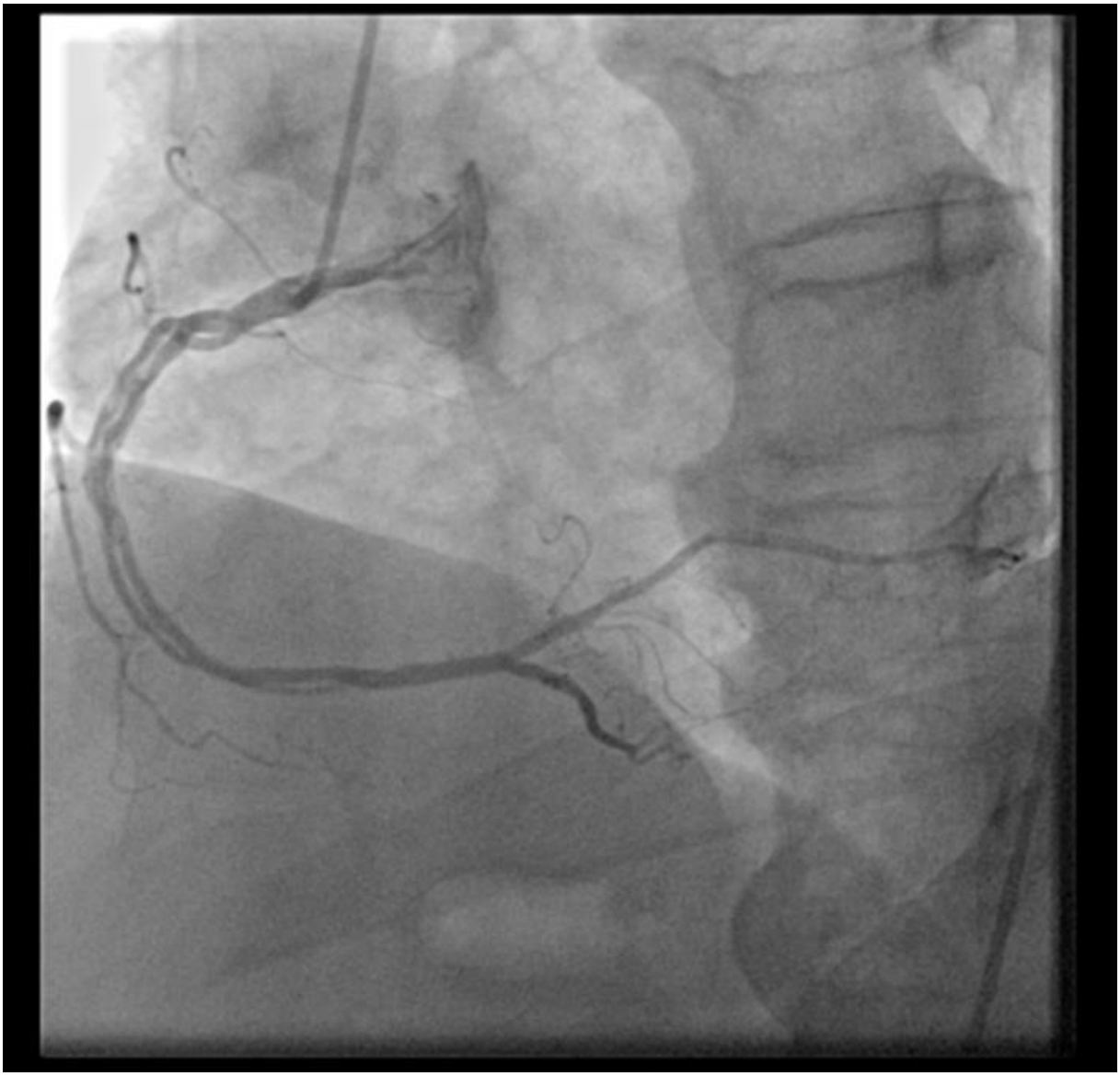
Presentation Type:

Oral Presentation

True Double Lumen RCA: An Extremely Rare Congenital Coronary Anomaly

MD Ömer Kertmen* **,** MD Erdinç Pelit , Prof. Yılmaz Özbay
Amasya University Sabuncuoğlu Şerefeddin Research and Training Hospital

Double origin right coronary artery (RCA) is a very rare congenital coronary artery anomaly. In this anomaly, two separate coronary arteries usually originate from the same ostium and end by traversing different paths. In other words, in this anomaly, there are two separate RCAs and they only share the common ostium. In the case we will share, a single RCA originating from a single ostium divides into two main branches in the proximal trunk; these two main branches, which are very close to each other in size and width, reunite in the distal trunk and give distal branches. There are only a few case reports of this coronary anomaly, which is defined as a true double lumen right coronary artery in the literature.



References:

- [1] Congenital anomaly of the true double-lumen right coronary artery: An extremely rare case
- [2] Congenital coronary artery anomalies: a bridge from embryology to anatomy and pathophysiology—a position statement of the development, anatomy, and pathology ESC Working Group
- [3] A Case of Double Right Coronary Artery with Separate Ostium

Keyword: *Coronary Anomaly, Right Coronary Artery, Double Lumen RCA*

ID: 51

Topic:

Cardiology > Coronary stents and advances in stent technology

Presentation Type:

Oral Presentation

Takotsubo Cardiomyopathy After Elective PCI: Misdiagnosis As A Stent Thrombosis

Prof. Ömer Göktekin[1] , MD Gülsüm Bingöl[1] , MD Özge Özden[1] , MD Enes Alıç[2] **, MD Haşim Tüner**[* 1]

[1] *Memorial Bahçelievler Hospital Cardiology Department*

[2] *İstanbul Aydın Universty VM Medical Park Florya Cardiology Department*

INTRODUCTION: Takotsubo cardiomyopathy (TTC), also known as ‘stress-induced cardiomyopathy'. Catecholamine increase plays an important role in the pathophysiology of TTC and it is most commonly seen in postmenopausal women.

CASE PRESENTATİON: A 73-year-old female patient was admitted to the cardiology clinic with complaints of shortness of breath and chest painon exertion.She lost her daughter due to cancer one year ago and is still experiencing intense stress ECG was found NSR (Figure1). TTE LVEF was 60%, CT Angiography showed critical calcific stenosis extending from the LMCA to the LAD and CTO in the mid RCA. SPECT showed ischemia in the inferior and anterior walls of left ventricle. In the first session RCA CTO was revascularized successfully. The LMCA-LAD lesion was revascularized 10 days ago. The patient, who was followed up in the cardiology service, developed abrupt onset palpitations and shortness of breath. In her ECG, rapid ventricular response AF was detected. HR was 170/min. Intravenous furosemide and amiodarone treatment was started. Control ECG was showed subacute anterior myocardial infarction findings. Global LVEF was found to be 30% with hyperkinesia in the basal part of the left ventricle, ballooning of the middle and apical segments which is the typical finding for TTC. Pericardial effusion surrounding the heart and measuring 12mm. LAD stent thrombosis was primarily suspected. CAG showed that LMCA-LAD stents were open. We decided to perform a CMRI to clarify the clinical picture. Severe hypokinesia and apical ballonning of LV was remarkable on CMRI too clearly. Edema sequences(T2-STIR and native T2 mapping) showed edema in the apical segments with no accompanying LGE which was consistent with TTC.

DISCUSSION: Our patient, a postmenopausal woman, was under intense emotional stress due to loss of her daughter. TTC should be considered in the differential diagnosis of acute stent thrombosis, especially in patients under intense stress.

ID: 36

Topic:

Cardiology > Percutaneous coronary interventions

Presentation Type:

Oral Presentation

Assessing the Association Between the Atherogenic Index of Plasma and Coronary Plaque Burden: A Retrospective Intravascular Ultrasound Analysis

MD Aslan Erdoğan* **,** MD Arda Sişman , MD Ayşe İrem Demirtola
Cam & Sakura City Hospital

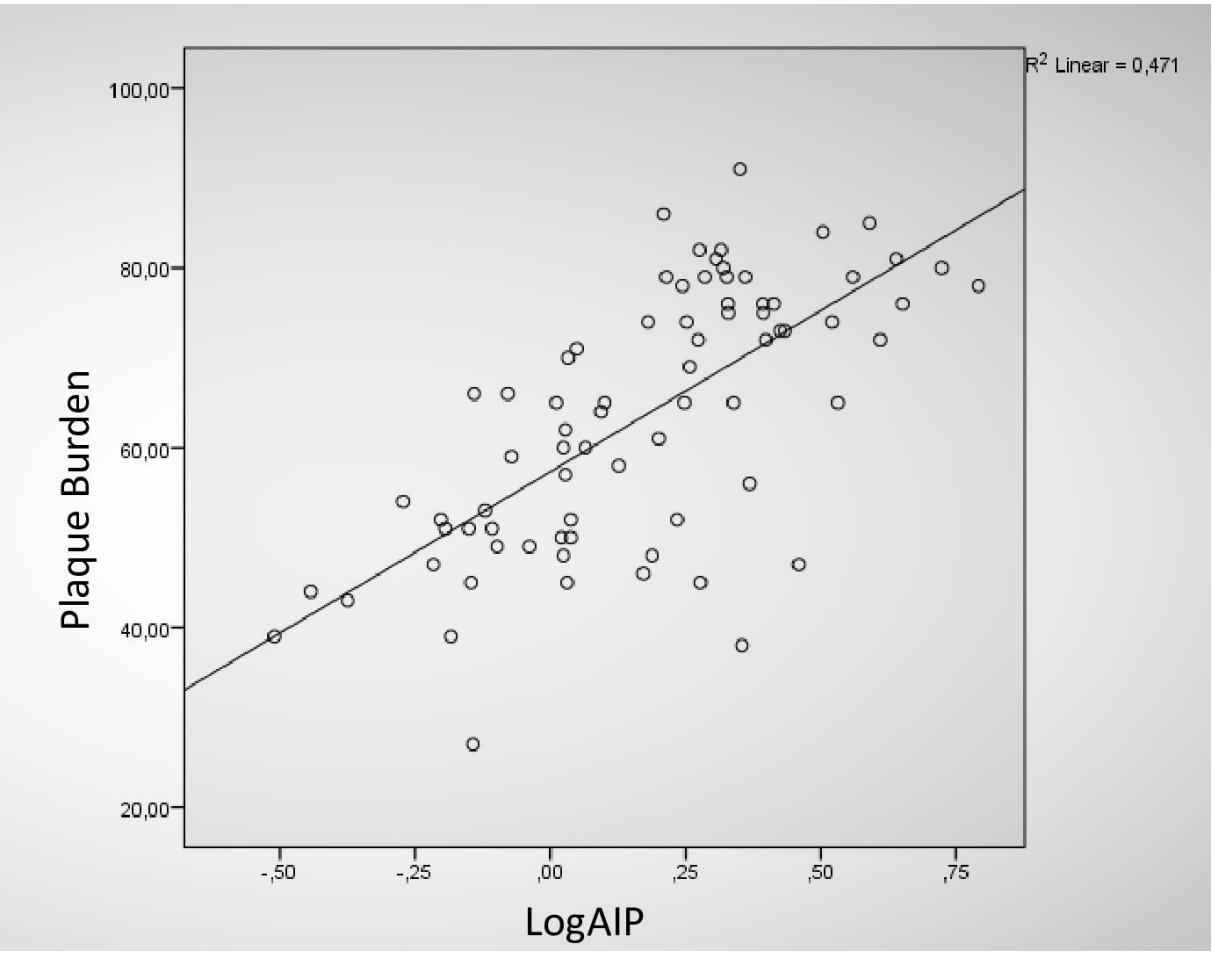
Background: In the context of atherogenesis and the development of coronary artery disease, inflammation and lipid metabolism are known to be significant contributing factors. This study aimed to explore the potential association between the Atherogenic Index of Plasma (AIP) and plaque burden in patients who underwent intravascular ultrasound (IVUS) examination.

Methods: A retrospective analysis was conducted on a cohort of seventy-six consecutive patients who had undergone IVUS between June 2020 and May 2023. AIP, calculated as the logarithm of plasma triglyceride divided by high-density lipoprotein cholesterol, was utilized as a measure of atherogenicity. Plaque burden, expressed as a percentage, was determined by dividing the total plaque area by the total vessel area. Multivariate regression analysis and Spearman's correlation analysis were employed to investigate the relationship between AIP and high plaque burden.

Results: The median age of the overall population was 59 years (interquartile range: 55-68), with males comprising 72.4% of the sample. Univariate regression analysis revealed that age, diabetes mellitus (DM), smoking, and AIP were significant predictors of plaque burden. Furthermore, multivariate regression analysis indicated that AIP and DM independently predicted high plaque burden (odds ratio [OR] = 1.53, 95% confidence interval [CI]: 1.12-2.02, $p = 0.021$). Spearman's correlation analysis demonstrated a positive correlation between the AIP index and high plaque burden (rho: 0.682, $p < 0.05$).

Conclusion: This study provides evidence that the AIP index, a surrogate marker of atherosclerosis, may serve as a predictive tool for assessing plaque burden in patients undergoing IVUS examination. These findings contribute to our understanding of the association between lipid metabolism, inflammation, and atherogenesis, potentially aiding in risk assessment and disease management.

Table 1. Baseline characteristics of the study population



Variables	Overall (n= 76)	Plaque Burden: Low (n=21)	Plaque Burden: High (n=55)	p-value*
Demographic features and risk factors				
Age; median, (IQR)	59 (55-68)	56.5 (52-61)	62 (55-69)	**0.041**
Male; n (%)	55 (72.4%)	10 (55.6)	45 (77.6)	0.068
DM; n (%)	45 (59.2)	6 (33.3)	39 (67.2)	**0.011**
HT; n (%)	52 (68.4)	12 (66.7)	40 (69.0)	0.855
HL; n (%)	56 (73.7)	13 (72.2)	43 (74.1)	0.872
Smoking; n (%)	38 (50.0)	5 (27.8)	33 (56.9)	**0.031**
Family history of CAD; n (%)	25 (32.9)	3 (16.7)	22 37.9)	0.093
BMI	23.6(22.7-24.6)	23.7(22.5-24.4)	23.7(23.0-24.3)	0.315
Angiographic results, n (%)				

Laboratory findings				
Total cholesterol, mmol/L; Median [IQR]	4.33 (3.50-5.53)	4.14 (3.05-5.30)	4.33 (3.68-5.59)	0.337
Triglyceride, mmol/L; Median [IQR]	1.54 (1.07-2.14)	1.07(0.85-1.46)	1.71 (1.32-2.23)	**<0.001**
HDL-C, mmol/L; Median [IQR]	1.03 (0.82-1.26)	1.19(0.97-1.35)	0.99(0.80-1.21)	**0.034**
LDL-C, mmol/L; Median [IQR]	2.59 (1.70-3.47)	2.61 (1.58-3.45)	2.59 (1.91-3.47)	0.574
Creatinine, mg/dl; Median [IQR]	0.85 (0.74-1.04)	0.87 (0.71-0.98)	0.85 (0.7-0.104)	0.990
e-GFR, ml/min/1.73m^2; Median [IQR]	91 (72-99)	95 (71-99)	91 (71-99)	0.660
Glucose, mg/dl; Median [IQR]	106 (90-151)	108 (96-122)	125 (114-157)	0.174
WBC,103/dL; Median [IQR]	8.4 (7.2-10.5)	7.2 (6.2-9.4)	8.6 (7.2-10.8)	0.108
Haemoglobin, g/dl; Median [IQR]	13.3 (12.0-14.6)	13.6 (12.4-14.5)	13.5 (11.9-14.5)	0.341
Platelet count,103/dL; Median [IQR]	254 (204-300)	263 (220-296)	253 (205-309)	0.660
Lymphocyte, cells/µL, Median [IQR]	2.0 (1.5-2.5)	2.0 (1.6-2.9)	2.1 (1.4-2.5)	0.696
Neutrophils, cells/µL; Median [IQR]	4.9 (4.1-7.4)	5.2 (4.6-7.6)	4.8 (3.9-7.3)	0.396
CRP, mg/l; Median [IQR]	3.95 (1.35-7.9)	4.9 (3.9-6.1)	7.6 (5.5-9.3)	0.305
Albumin, g/dl; Median [IQR]	4.0 (3.7-4.3)	2.7 (0.75-8.0)	4.1 (2.0-8.1)	0.681
Medications prescribed at discharge, n (%)				
Antiplatelets, n (%)	58 (76.3)	16 (76.1)	48 (76.3)	0.901
B-blockers, n (%)	37 (48.6)	10 (47.6)	27 (49.0)	0.801
ACEIs or ARBs	22 (28.9)	6 (28.5)	16 (29.0)	0.755
OAD, n (%)	25 (32.8)	5 (23.8)	20 (36.3)	0.091

Values are presented as numbers (n) and percentages (%), mean±standard deviation, or median (interquartile range 25th-75th percentiles). For continuous data, the p-value was calculated using the

Independent Samples t-test or the Mann-Whitney U-test, and for categorical variables, the Chi-Square test or Fisher's exact test, as appropriate.

*p<0.05 was considered statistical significance. **Abbreviations:** ACEIs, angiotensin-converting enzyme inhibitors; ARBs, angiotensin receptor blockers; CRP, C-reactive protein;DM,diabetes mellitus;e-GFR, estimated glomerular filtration rate; HDL-C, high-density lipoprotein cholesterol; HT, hypertension; HL, hyperlipidemia; IQR, interquartile range, LDL-C, low-density lipoprotein cholesterol; OAD, oral antidiabetic drug; WBC, white blood cell.

Table 2. Univariate and multivariate regression analysis for predicting plaque burden

	Univariate Analysis			**Multivariate Analysis**		
Variable	OR	CI(95%)	p	OR	CI (95%)	P*
Age	1.03	1.01-1.05	0.049	0.98	0.96-1.00	0.280
Smoking	1.05	1.02-1.25	0.031	1.01	0.99-1.05	0.080
DM	1.34	1.05-1.52	0.029	1.03	1.01-1.45	0.044
TG/HDL	1.75	1.41-2.5	<0.001	1.53	1.12-2.02	0.021

*p<0.05 was considered statistical significance. **Abbreviations:** DM,diabetes mellitus;e-GFR, estimated glomerular filtration rate; HDL-C, high-density lipoprotein cholesterol; HT, hypertension;TG, Triglyceride.

Keyword: *atherosclerosis, atherogenic index of plasma, inflammation,*

ID: 133

Topic:

Cardiology > Other

Presentation Type:

Oral Presentation

Safety And Efficacy Of Invasive Bolus Thermodilution Method In Diagnosis Of Coronary Microvascular Dysfunction (CMD): Real World Data

MD Ankita Aggarwal[*] [1] **,** MD Sheikh Ayaz[2] , MD Usheem Syed[2] , MD Mariam Saleem[1] , MD Harini Lakshman[1] , MD Nishtha Sareen[2]

[1] *Ascension Providence Hospital*

[2] *Ascension St Mary's Hospital*

Background: Coronary Microvascular dysfunction (CMD) is the most common etiology of cardiac chest pain in patients with no obstructive coronary artery disease(CAD). CMD is associated with a 4-fold increase in mortality and a 5-fold increase in major cardiovascular events. In the absence of obstructive CAD, CFR, the ratio of coronary flow achieved at maximal coronary vasodilation/flow under baseline conditions, reflects coronary microvascular function. The Index of Microcirculatory Resistance (IM] is an estimate of maximal distal coronary flow during hyperemia and pressure and can provide a more reproducible assessment of the microcirculation. An abnormally reduced CFR <2, IMR >25 indicates CMD. CFR and IMR can be measured invasively as adjunct to coronary angiography. We aimed to assess the efficacy and safety of the new invasive bolus thermodilution technology in the diagnosis of CMD.

Methods: A Retrospective chart review of the patients referred to our lab for invasive workup for CMD between June 2022 to February 2023 was conducted. Data on baseline characteristics including the presence of co-morbidities was collected. We performed a descriptive analysis of the patients undergoing invasive workup of CMD with the invasive technology. We also looked at the efficacy of the procedure in diagnosing CMD successfully. Safety outcomes including in-hospital and 30- days post-op complications were also analyzed.

Results: From June 2022 to February 2023, 47 patients were referred to our lab for a workup of CMD. This accounts for the largest retrospective study analyzing this technology to date. Of these, invasive CMD workup was indicated in 36 patients. Mean age of the study population was 66 years. There were 27% females. Baseline characteristics revealed the presence of diabetes in 27%, hypertension in 72%, and hyperlipidemia in 72% of patients. Procedural success was 97% (CFR and IMR values could not be obtained in one patient due to slow flow). 47% of patients were found to have microvascular dysfunction as evidenced by IMR >25. 53% of the patients with CMD had a normal stress test. (p-value 0.04). The procedure was completed using radial access in 89% of the patients. There were no major complications including major bleeding, post-op TIA/CVA, Post-op MI or procedure-related mortality. Only one access site related to radial access complications was noted. There were no complications noted in the 30-day follow-up period.

Conclusion:

CMD is often misdiagnosed as non-cardiac chest pain due to a lack of awareness among physicians and the availability of a well-established diagnostic modality. Bolus thermodilution is an invasive diagnostic modality with a very high procedural success as noted in our study. The procedure can safely be performed without any major complications noted in the majority of the cases.

Keyword: *coronary microvascular dysfunction, coronary reserve flow, index of microvascular resistance*

Oral Presentation Session

Minimally Invasive Valve Surgery: A New Era in Cardiac Surgery

Date: 06.11.2023 Time: 09:15 – 10:15 Hall: 7

ID: 165

Topic:

Cardiovascular Surgery > Minimally invasive mitral valve surgery

Presentation Type:

Oral Presentation

An Experimental Case-Based Role Model Study Of Mitral Neochordae Implantation With New Tools Via Transapical Approach

MD Ersin Doğanözü[*] [1] **,** MD Ayşe Ceren Doğanözü[2] , Prof. Atilla Sezgin[3] , Prof. Alp Aydınalp[4]

[1] *Ankara 29 Mayis State Hospital*

[2] *Ankara Training and Research Hospital, Department of Anesteziology and Reanimation*

[3] *Baskent Universit, Department of Cardiovascular Surgery*

[4] *Başkent University Faculty of Medicine, Department of Cardiology*

Introduction

Increasing fragility with the aging population compels less invasive procedures. Even if cardiac surgeries are getting minimally invasively with new techniques and technological development in the field, many valve surgery candidates suffer from being qualified as inoperable due to fragility, unstable circulatory system, and to be post-myocardial infarction and their life is in danger every day that they are not operated. The main purpose of this case-based role model study is to invent a new technique for implanting a transapical mitral valve neocorda implantation with new tools.

Case Report

The study was designed as a role model study with a domestic pig. The pig was operated upon at the Experimentaanimalss' production and research center in the veterinarian faculty of Baskent University.

Equipment:

Figure 1A: Ozan's Ring: The purpose of the apparatus is for stabilized the myocardium and to resist the widening of the hole that is made by the seldinger needle

Figure 2B: Picket with the hole: The purpose of the apparatus is to pierce the mitral valve. It is placed on the dilatator of the sheath. After piercing the mitral valve it is pushed by a Teflon wire to the atrial face of the mitral valve.

The step-by-step description of the procedure

a. Left ventricle is punctured by a seldinger needle and a J guide wire is advanced to the left ventricle.

b. The apparatus which has a diameter as the distal part of an 8F sheath is loaded **(Ozan's ring)** on the 8F sheath, it is advanced to the apical of the left ventricle till it penetrates the myocardium, and the sheath is removed except J wire.

c. The 7 F sheath is advanced on the guide wire into the left ventricle.

d. With TEE guidance, the sheath is manipulated under the posterior leaflet of the mitral valve.

e. The neo-chord is attached to the part of the second apparatus **(Picket with the hole-PWH)**, the chord is placed on the top of the dilator, and when the heart rate is paced at 200 beats/min, the second apparatus is pushed with TEE guidance to pierce the posterior leaflet. With a J-tipped Teflon wire, the second apparatus is pushed from the dilator tip to the atrial surface of the mitral valve, and the dilator is removed.

f. Three pro-glides are placed on the apical left ventricle at 10-14-18 o'clock.

g. Sheath will be removed and bleeding control is achieved by making an apical knot with pro-glides.

h. Then the processing is terminated

i. The subject will be allowed to remain alive for about an hour, after which it will be sacrificed and the entrance and placement of the neocord will be observed.

The Procedure: Midline sternotomy was performed and the pericardium was opened because the pig heart was out of reach of the seldinger needle. Although the procedure was planned to be performed under transesophageal echocardiography (TEE) the heart could not be visualized most probably due to pneumothorax that developed during sternotomy and the over-weight of the guinea pig. We decided to continue the procedure by attaching the TEE probe over to the heart. The seldinger needle was advanced into the left ventricle from the side of the left anterior descending artery. The J guide wire was advanced to the left ventricle and the needle was removed. An 8 F sheat and **PWH** apparatus over the sheath was advanced into the wall of the left ventricle till the apparatus was implanted in the myocardium. Hereupon, an 8 F sheath was extracted while the J wire was inside and a 7 F sheath was advanced over the J wire and the PWH apparatus is advanced through the valve. The sheath was visualized inside of the left ventricle. (Figure 2). The hemodynamics of the pig deteriorated due to pneumothorax and the echocardiographic images were insufficient to manipulate the sheath under the posterior leaflet of the mitral valve. The cardiovascular team decided to terminate the procedure. Intracardiac propofol was used for sacrification. The heart was displaced and the desired experimental study was performed in a disconnected heart.

Conclusion

We concluded that this role model study is significant in that it has the potential to be a precursor to laparoscopic or percutaneous intracardiac procedures. The method that we administered in the current study is innovative and groundbreaking if it would be performed. Future role model studies must be designed witmaterialsal that would have a better technological design in equipped animal laboratories

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translational biology interdisciplinary working group, and quality of care and outcomes research interdisciplinary working group." Circulation 117.13 (2008): 1750-1767.

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ID: 207

Topic:

Cardiovascular Surgery > Endovascular surgery

Presentation Type:

Oral Presentation

A Interesting Case Of Transcatheter Mitral Edge- To-Edge Repair In Recurrent Mitral Regurgitation After Failed Alfieri Stitch

Assoc. Prof. Attaullah Khan Niazi*
King Edward MedicalUniversity Lahore

Presenting complaint:

• A 72 years old man who is wheelchair-bound due to NYHA class III symptoms comes with clinical signs of heart failure.

Past medical history:

Aortic root replacement with bio-prosthetic AVR (2015).

Alfieri repair of the mitral valve with postoperative moderate-severe

residual regurgitation.

Asthma

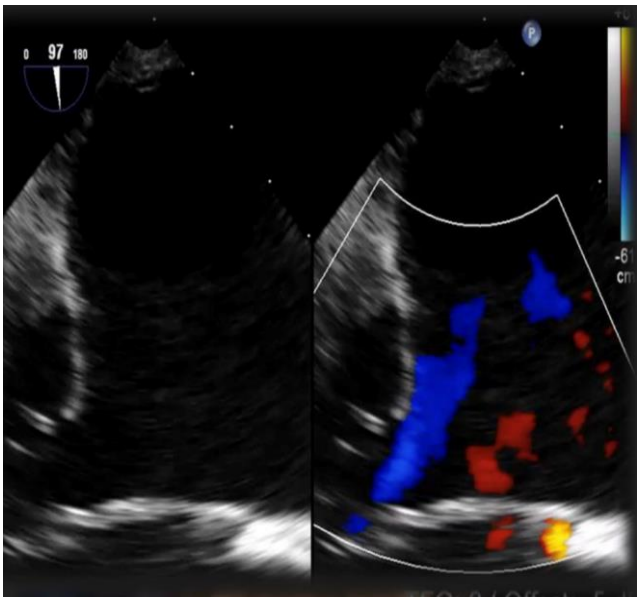
Permanent Atrial fibrillation

Amiodarone induced thyroid dysfunction

Obstructive sleep apnea

Presenting complaint:
A 72 years old man who is wheelchair-bound due to NYHA class III
•
symptoms comes with clinical signs of heart failure.
Past medical history:
Aortic root replacement with bio-prosthetic AVR (2015).
•
Alfieri repair of the mitral valve with postoperative moderate-severe
• residual regurgitation. Asthma •

Permanent Atrial fibrillation .
Amiodarone induced thyroid dysfunction .
Obstructive sleep apnea .



:

• Trans-esophageal echo was done which showed:

➢Severe mitral regurgitation secondary to P2/P3 prolapse ➢Mild left ventricular impairment in the context of severe mitral

regurgitation
➢Ejection fraction = 50%
➢Well-seated bio-prosthetic aortic valve with normal function ➢MV mean gradient <2mmHg
➢Suitable anatomy for mitral TEER

Investigations

Investigations :

Procedural details:

- Day-case procedure
- General anesthetic/trans-esophageal

echo guided

- Device: Pascal ACE (Edward Lifesciences)
- Access: 11F right femoral vein, pre-closed

with 2 x-proglides

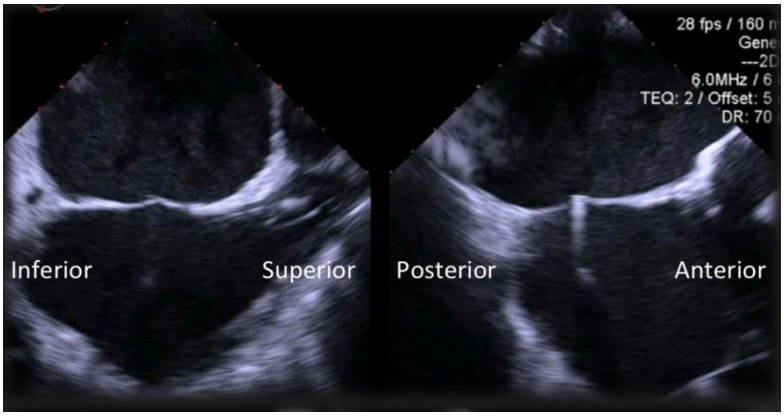
- Trans-septal puncture positioned

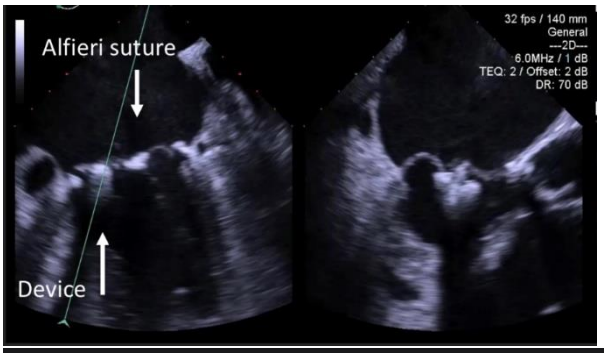
mid-posterior septum

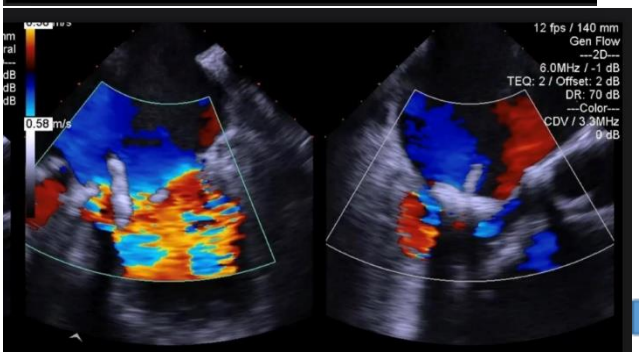
- The implant positioned medial to Alfieri

stitch (over-dominant jet)

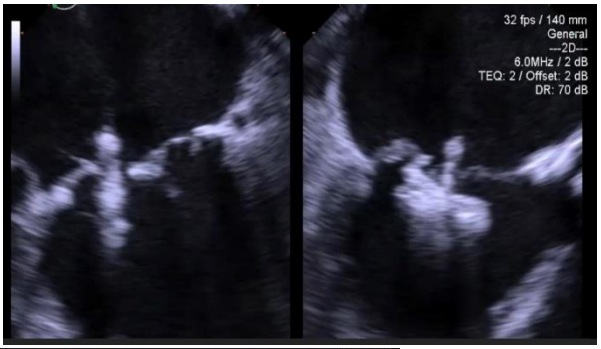
Procedural details:







FIRST GRASP



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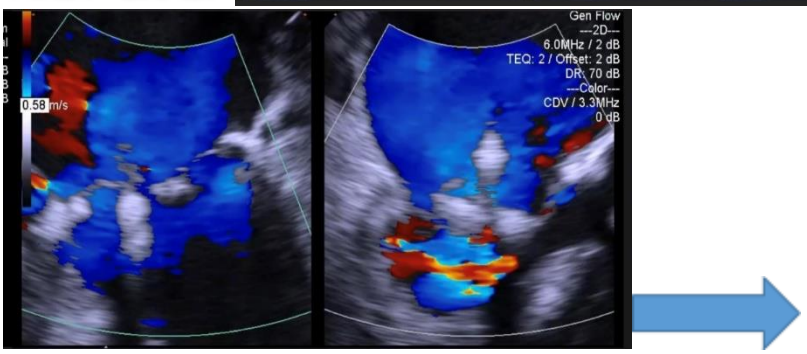
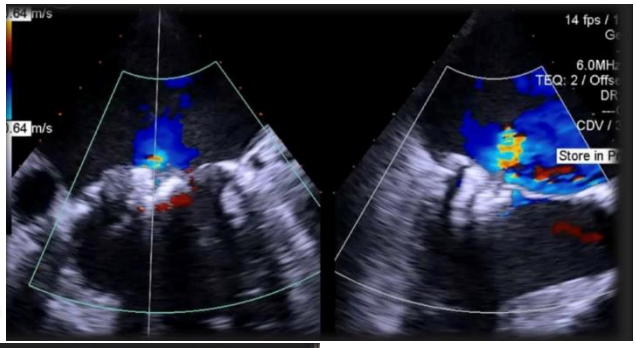
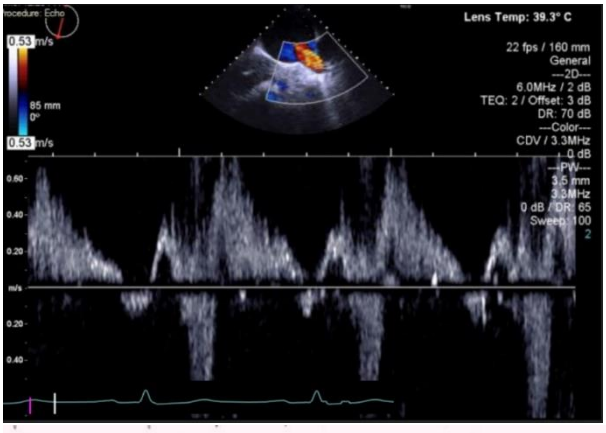
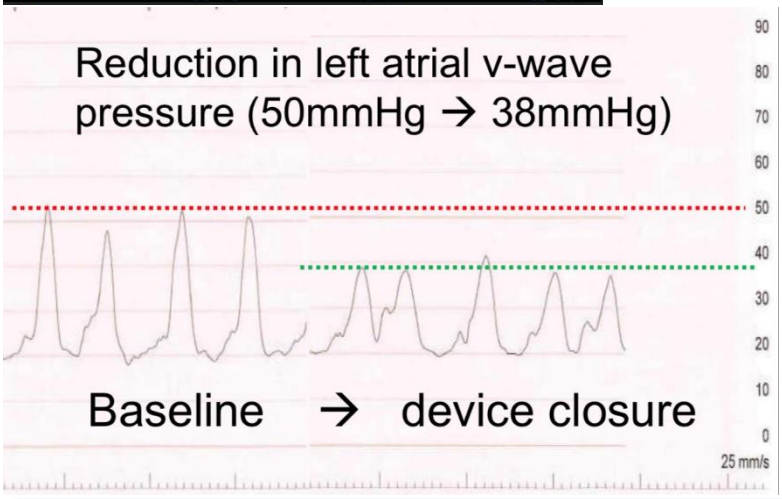


SECOND GRASP

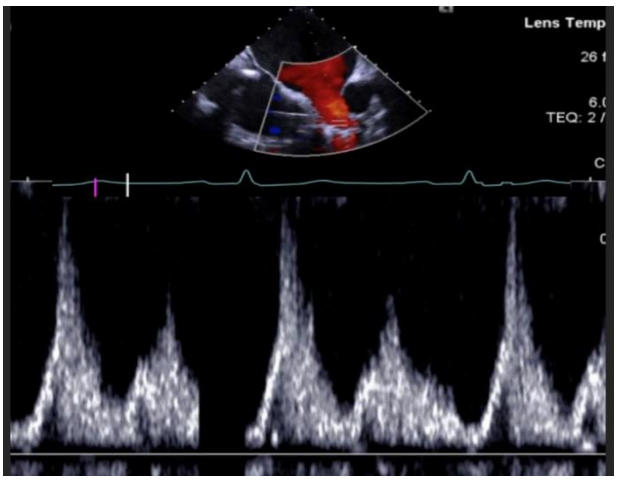


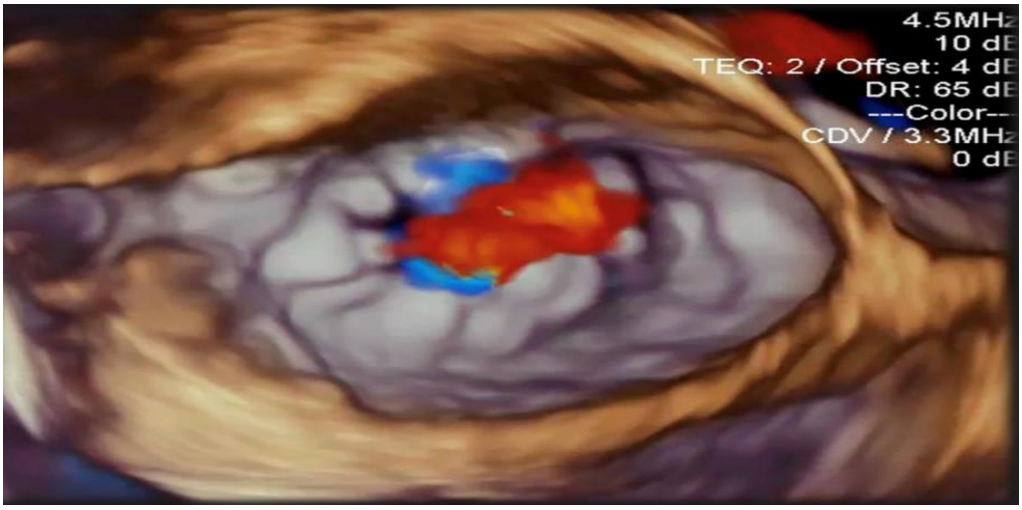
THIRD GRASP





Normalization of pulmonary vein flow





Final result:

• Stable device position
• Mild residual MR
• Mitral valve mean gradient

unchanged (<3mmHg)

Learning points:

• This case highlights the differences between the Alfieri

procedure versus the trans-catheter edge to edge repair:➢Ability to check the final result in TEER before the end of the procedure under

hemodynamically normal conditions
➢Can try multiple positions of the device and optimize the leaflet grasp to

get the best possible results
• Demonstrate maneuverability of the Pascal device in

challenging anatomy

Keyword: *Alfieri stitch, mitral clip, heart failure*

ID: 178

Topic:

Cardiovascular Surgery > Minimally invasive mitral valve surgery

Presentation Type:

Oral Presentation

Mitral Valve Surgery via the Left Anterior Minithoracotomy and Transseptal Right Atrial Access

MD Dmytro Babliak* **,** Prof. Oleksandr Babliak
Diagnostic And Treatment Center For Children And Adults Of The Dobrobut Medical Network, Kyiv, Ukraine

BACKGROUND

Our aim is to present the technique for simultaneous mitral valve (MV) surgery and coronary artery bypass grafting (CABG)using a minimally invasive approach through a single minithoracotomy.

METHODS

Between October 2020 and June 2023 we operated on 34 non-consecutive patients, in whom we performed simultaneous procedures involving the MV and CABG via left anterior minithoracotomy. The average age of the patients was 65.3 years, mean body surface area (BSA) - 1.92 and a mean left ventricular ejection fraction - 42.9%. Preoperative CT angiography was routinely carried out.

Operation performed with peripheral cardiopulmonary bypass, aortic crossclamping and cold blood cardioplegia. The surgical access was 6 to 8 cm incision in the 4th intercostal space (ICS) on the left anterior side. Access to the MV was through the right atrial and transseptal incision.

Standard techniques for MV repair/replacement were employed. MV repair/replacement was performed after distal anastomoses, only LIMA graft was anastomosed after MV surgery.

RESULTS

Successful MV visualization was achieved in all patients, and the planned procedures were performed without conversion to sternotomy in all patients.

32 individuals (94%) underwent MV repair, MV replacement was performed in 2 patients (6%). Conventional surgical instruments were used in 19 cases (55.9%), long-shafted instruments - in 15 cases (44.1%). A knot-pusher was required in 11 instances (32.4%). A CT distance from the skin level to the posterior annulus of the MV is 12.7 ± 1.4 cm (9.5-16.8). Complete concomitant revascularization was successfully achieved in all cases, with an average of 2.56 ± 0.8 (1-4) distal anastomoses per patient.

The mean total operation time was 336 ± 44 minutes (245-420), cardiopulmonary bypass (CPB) time - 225 ± 36.8 minutes (160-316), cross-clamp time - 127.4 ± 23 minutes (80-169). The average length of stay in the intensive care unit was 1.74 ± 0.67 days (1-4), the total hospital stay - 6.6 ± 2.2 days (4-14). Notably, there were no cases of bleeding requiring revision, strokes, or other major complications, and no instances of hospital or 30-day mortality.

CONCLUSIONS

Performing MV surgery through the left anterior thoracotomy and transseptal approach is a valuable and efficient technique for simultaneous procedures conducted via a single minithoracotomy incision.

Keyword: *CABG, Mitral Valve, Minimally Invasive*

ID: 26

Topic:

Cardiovascular Surgery > Heart valve repair

Presentation Type:

Oral Presentation

Short-Term Outcomes of A New Approach: Right Vertical Infra-Axillary Mini-Thoracotomy in Ozaki Procedure

MD Ahmet Arif Aglar*

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Ahmet Yavuz Balcı[1], Ahmet Arif Ağlar[1], Zekeriya Küçükdurmaz[2]

[1] Medistate Kavacık Hastanesi, Kalp ve Damar Cerrahisi Kliniği, İstanbul

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OBJECTIVE: The Ozaki procedure, which has been the focus of attention with its remarkable mid-term results in aortic valve reconstruction, requires conventional sternotomy. Although there are few reports on the feasibility of mini-sternotomy for the Ozaki procedure, there are no studies on mini-thoracotomy approach. The aim of this study is to present the short-term results of the right vertical infra-axillary mini-thoracotomy approach for the Ozaki technique.

METHODS: We performed a retrospective analysis of 6 consecutive patients (4 males and 2 females) undergoing the Ozaki procedure with right vertical infra-axillary mini-thoracotomy between October 2020 and January 2023. Surgical indications of AVR were as follows: severe aortic stenosis in 5, severe aortic regurgitation in 1 of patients. Concomitant procedure (tricuspid DeVega annuloplasty) was performed in 1 patient.

RESULTS: The Ozaki procedure with mini-thoracotomy was successfully performed in all patients. The mean age was 69.1±8.6 years. The overall duration of follow-up was 13.5±9.6 months. Postoperative echocardiographic assessment showed a mean transvalvular pressure gradient of 7.2 ± 3.4 mmHg at discharge, and 7.4 ± 3.3 mmHg at last follow-ups. The assessed grades of regurgitation at the same times were as follows: no regurgitation in 4 patients and minimal in 2 patients at discharge, while no regurgitation in 3 patients and minimal in 3 patients at last follow-ups. All patients showed a mean improvement of 1.16 in New York Heart Association functional class. There was no mortality, reintervention or any valve related complication.

CONCLUSIONS:

The Ozaki procedure with right vertical infra-axillary mini-thoracotomy was found to have good feasibility, hemodynamic performance and safety at short-term period. Further follow-up is necessary to evaluate its midterm to long-term outcomes.

References:

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Keyword: *Ozaki, Mini-thoracotomy*

ID: 182

Topic:

Cardiovascular Surgery > Minimally invasive aortic valve surgery

Presentation Type:

Oral Presentation

Short And Long-Term Outcomes Of Minimally Invasive Aortic Valve Surgery According To Pleural Integrity Preservation

MD Beatrice Bacchi[*] [1] **,** MD Francesco Cabrucci[1] , MD Bruno Chiarello[1] , Assoc. Prof. Aleksander Dokollari[2] , Prof. Massimo Bonacchi[1]

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[2] *Department of Cardiac Surgery Research, Lankenau Institute for Medical Research, Main Line Health, Wynnewood, Pennsylvania, USA*

Background

Pleura integrity is a significant parameter influencing the outcomes in conventional cardiac surgery interventions. The impact of pleural integrity preservation in minimally invasive surgery is still not widely investigated. This study aims to define the role of pleural integrity preservation (PPI) on short and long-term outcomes after minimally-invasive aortic valve replacement (MIAVR).

Methods

Data from 2430 consecutive patients who underwent MIAVR between 1997-2022 were retrospectively collected. Patients were divided into two groups: patients with PPI versus not-pleura integrity preservation (not-PPI). PPI has considered the maintenance of the pleura closed without the need for a chest tube insertion at the end of the surgical procedure. The not-PPI group included patients treated by right anterior Mini-Thoracotomy (824) or Ministernotomy (154) requiring surgical pleural drainage. A propensity-matched analysis was used to compare the two groups (not-PPI vs PPI). The main outcome was all-cause incidence of postoperative respiratory complications.

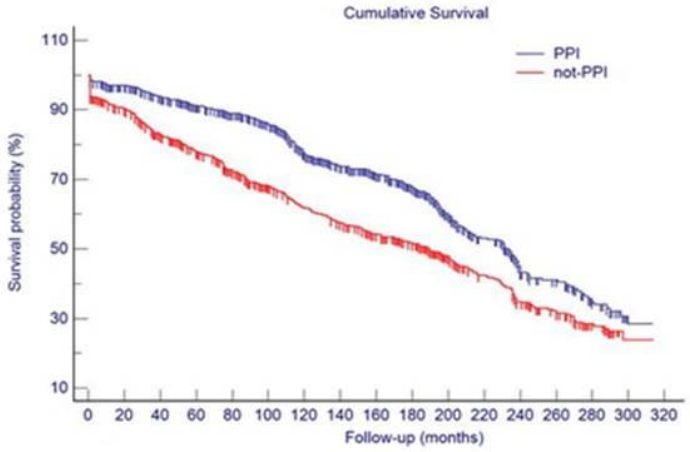
Results

	PPI n=848	**Not-PPI** n=848	**OR [95% CI]**	**P-value**
LOS	0.009	0.010	0.78 [0.29-2.09]	0.615
Chest tubes drainage (ml/m^2) (SD)	138.84 (59.3)	298.5 (109.8)	0.47 [0.37-0.58]	<0.001
Blood transfusion rates	0.14	0.27	0.44 [0.35-0.56]	<0.001
Pneumothorax/subcunaneous enphisema requiring chest tube	0.01	0.09	0.10 [0.05-0.20]	<0.001
Significative pulmonary atelectasis	0.01	0.35	0.02 [0.01-0.04]	<0.001
Pleural effusions requiring thoracentesis	0.03	0.14	0.19 [0.22-0.29]	<0.001
Prolonged ventilation support > 24 h	0.01	0.06	0.15 [0.07-0.32]	<0.001
Prolonged ICU stay > 3 days	0.018	0.051	0.34 [0.19-0.61]	0.0002
Hospital stay [day] (SD)	5.2 (3.1)	8.9 (3.2)	0.47 [0.24-0.62]	0.013
Prolonged hospitalization stay> 10 days	0.032	0.061	0.50 [0.31-0.81]	0.004
30-day mortality	0.010	0.029	0.31 [0.31-0.70]	0.0028
30-day Cardiac death	0.007	0.017	0.42 [0.16-1.11]	0.072

After propensity-matching, 848 patients were included in each group (PPI and not-PPI). Mean follow-up time was 147.4 months. Post-operatively, not-PPI vs PPI patients had a longer intensive care unit stay (hours) (9.7 vs 17.3, p= 0.00003, respectively), and hospital length of stay (LOS) (days) (5.2 vs 8.9, p= 0.00002, respectively).

The rate of respiratory complications, including incidence of pneumothorax and/or subcutaneous emphysema, pulmonary atelectasis, and pleural effusion events requiring thoracentesis/drainage, was significantly higher in the not-PPI vs PPI group. Thirty-day all-cause mortality was higher in not-PPI vs PPI (0.029 vs 0.010, p= 0.0028, respectively), (Table 1).

Perioperative, short- and long-term all-cause mortality was significantly higher in the not-PPI group, (Figure 1)



Conclusions

Not-PPI after MIAVR was associated with an increased incidence of postoperative complications, and increased LOS compared to PPI. Even long term survival was significantly better in the PPI group. Particularly, the not-PPI approach increased 4 folds the probability of long-term mortality. Therefore, a MIAVR-tailored patient-procedure approach to maintaining the pleura integrity seems positively impacts short- and long-term outcomes.

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Keyword: *Minimally invasive aortic valve surgery, Pleura integrity, Respiratory function, postoperative outcome*

Oral Presentation Session

Aortic Valve Surgery: New Observations, Build-Up Experiences

Date: 06.11.2023 Time: 10:30 – 11:30 Hall: 7

ID: 1

Topic:

Cardiovascular Surgery > Adult congenital heart disease

Presentation Type:

Oral Presentation

Constrictive Pericarditis Accompanying Bicuspid Aortic Valve Stenosis, Localized Aortic Aneurysm, Aortic Ulcer, Block Annular And Localized Aortic Calcification

MD Bilalcan Yeniköy , MD Ali Gül **, Assoc. Prof. Mehmet Erin Tüysüz***

SBÜ Mersin Şehir Eğitim ve Araştırma Hastanesi

Abstract:

Bicuspit aortic valve is the most common congenital valve anomally that can be assosicated with many additional diseases. In this report, 70 years old male patient taken to operation with bicuspid aortic valve and ascenden aortic aneurisym who has constrictive pericarditis and an aortic ulcer invaded to right atrium was presented. This patient underwent mechanical aortic valve replacement, ascending aortic graft and right atrium repair.

Introduction:

Bicuspid aortic valve is the most common congenital valve anomaly affecting 1-2% of the population. It is associated with aortic wall anomalies such as aortic coarctation, aortic dissection and aortic aneurysm on the background of aortic stenosis or aortic insufficiency, and may be further complicated by extra-valvular pathologies such as infective endocarditis [1].

Case report:

A 70-year-old male patient who presented to our cardiology department with complaints of shortness of breath and chest pain was diagnosed with bicuspid aortic valve. Echocardiography revealed advanced aortic stenosis. Coronary angiography was normal. Aortic valve surgery was decided in the council.

Preoperative Thorax CT revealed a localized aneurysm in the ascending aorta. Aortic valve and ascending aorta replacement was planned.

Intraoperative exploration revealed chronic constrictive pericarditis and a localized aneurysm adjacent to the noncoronary valve and invading the right atrium. Distal ascending aorta and bicaval cannulation were performed due to the existing pathology.

The ulcerated aortic tissue adjacent to the noncoronary cusp was resected together with the highly adherent atrial tissue in the roof of the right atrium. The right atrium was repaired with primary suturing (figure 1). Macroscopic examination revealed that the localized aneurysm involved all layers of aortic tissue, was fibrotic and contained nonpurulent cystic tissue suggesting that it developed on the basis of infection. Ulcerated plaque and localized calcifications developed in the ascending aorta.

The aortic valve position was replaced with a No. 21 mechanical biliflet valve and the ascending aorta was replaced with a No. 30 dacron tube graft supracoronary. The patient was extubated on postoperative day 1 and discharged on postoperative day 10.

Discussion:

In this report, the patient who was operated with the diagnosis of aortic stenosis and aortic aneurysm was found to have simultaneous constrictive pericarditis, ulcerated aortic aneurysm and invasion into the right atrium. Our case included all pathologies except aortic coarctation seen in the bicuspid aortic valve.

Conclusion:

Bicuspid aortic valve may be associated with many anomalies. Ulcerated aortic lesions may invade adjacent cardiac structures. Bicaval cannulation should be considered in these patients.

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Braverman AC, Güven H, Beardslee MA, Makan M, Kates AM, Moon MR. The bicuspid aortic valve. Curr Probl Cardiol. 2005 Sep;30(9):470-522. doi: 10.1016/j.cpcardiol.2005.06.002. PMID: 16129122.

Keyword: *Annular Calcification., Bicuspid Aortic Valve, Aortic Aneurysm*

ID: 130

Topic:

Cardiovascular Surgery > Congenital heart surgery

Presentation Type:

Oral Presentation

Aortic Valve Repair Versus Replacement In Laubry And Pezzi Syndrome

Assoc. Prof. Redha Lakehal* , Prof. Radouane Boukarroucha
Faculty of medicine Constantine 03 Algeria

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, and 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. Ventricular septal defect was closed in100 percentage of patients and associated with conservative valve repair in 6 other. 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 Ventricular septal defect without valvular gesture, 03 have saw their aortic regurgitation 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 ventricular septal defect including infundibular and périmembranous one must be systematic. In fact, the onset of AR during the evolution of a ventricular septal defect is a turning progression of the disease since its occurrence ecompromises the long-term prognosis and modifies the therapeutic indications.

ID: 122

Topic:

Cardiovascular Surgery > Thoracic and thoracoabdominal aortic dissections and aneurisms

Presentation Type:

Oral Presentation

Surgery Of False Anastomotic Aneurysms After Intervention Of Modified Bentall: Case Report

Assoc. Prof. Redha Lakehal* **,** Prof. Radouane Boukarroucha
Faculty of medecine constantine 03 Algeria

Introduction: False anastomotic aneurysms are exceptional and serious. The most serious complication is breaking, imprivisible and letal.Support for association reference surgical repair. The aim of our work is to remind of this exceptional complication in postoperative.

Methods: We report the observation of a woman aged 64 year operated from aneurysm of the segments 0 and 1 with benefit from intervention of modified Bentall .The diagnostic was reported in post operating by angiochest CT scan motive by chest pain or there reveal the externalization of control with false aneurysm periprothetique on the proximal anastomosis with increase of the false aneurysm on angiochest CT scan control realized after a week. Procedure per exploration after installation of cardiopulmonary bypass femoro-femoral left and induction of circulatory arrest to 19: big proximal aneurysm with exteriorization of blood from the left atrium roof. The gesture was after evacuation of the hematoma in setting flat of the false anevrysmale after evacuation of the hematoma.stregthening of the anastomosis by point and repair of the roof of left atrium.

Results: The suites immediate operating post were marks by a mediastinitis,endocarditis on aortic prosthesis complicated by acure ischemia of right lower limb to 18 day who benefit from one of the desobstruction by fogarty sensor and death in 20 days by septic shock.

Conclusion: False anastomotic aneurysms justify rapid intervention to prevent their rupture .The benchmark treatment is surgery.

ID: 152

Topic:

Cardiovascular Surgery > Ascending Aorta Surgery

Presentation Type:

Oral Presentation

Evaluation of Lymphatic Drainage Caused by Paraaortic Lymph Node Damage in Open Aortic Surgery

MD Sevda Kurtulmuş* **,** Prof. Sinan Arsan , MD Fatih Öztürk , MD Anıl Güzel
Marmara University Department of Cardiovascular Surgery

OBJECTIVE The major lymphatic drainage system in the human body is the ductus thoracicus. While this channel carries lymphatic fluid and digested fats to the systemic circulation, it also allows proteins outside the vascular system to return to the blood. Injury of the ductus thoracicus can occur as a result of blunt, penetrating trauma or during surgery. Surgical injury of the ductus thoracicus occurs during interventions related to the heart, lung, aorta, esophagus, sympathetic chain, and subclavian vessel. The milky white appearance of the pleural fluid in thoracentesis should suggest chylothorax and treatment should be started immediately after the diagnosis is confirmed by biochemical methods. Chylothorax treatment methods are conservative and surgical methods to reduce drainage. In this article, patient who developed chylothorax after aortic surgery was presented. This case of chylothorax developing after open aortic surgery is discussed in the light of literature information. METHODS In July 2019, a 65-year-old male patient was admitted to Marmara University Pendik Research Hospital Cardiovascular Surgery clinic with the diagnosis of enlargement of the arcus aorta, advanced mitral insufficiency and coronary artery disease. Benthall, Mitral valve replacement and 2-vessel Bypass operations were performed in the same session. RESULTS In the examinations performed at the hospitalization of the patient, left sinus closure and mediastinal enlargement were observed on chest X-ray. The patient was intubated for 4 days.The patient, who was diagnosed with chylothorax, started total parenteral nutrition through a central venous catheter. Daily pleural drainage, weight, liver function tests, kidney function tests and electrolyte levels were followed. Since the fluid coming from the drains was 1000cc/day on average and initially hemorrhagic, then chylous, and did not decrease, paracentesis was performed on the 20. day. Oral intake of the patient was stopped and Oliclonomel and Octreotide were started. As the serochyllous drainage from the drain was 100cc/day or less, the drains were removed on the postoperative day. Later, the patient was discharged in good health. CONCLUSIONS Chylothorax due to duct damage in open aortic surgery is a condition with a high mortality risk and can also be prevented by conservative or surgical treatment. In conservative treatment, octreotide treatment reduces the lymphatic drainage, which reduces surgical treatment, and allows the ductus thoracicus to close spontaneously. In this patient, we applied Octreotide treatment and it was successful.

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ID: 167

Topic:

Cardiovascular Surgery > Aortic valve surgery

Presentation Type:

Oral Presentation

PTFE Cusps In The Aortic Position: 7 Years Experience

Prof. Vladlen Bazylev* **,** MD Andrey Voevodin , MD Alyona Kuznetsova , MD Mihir Premal
Federal center of cardiovascular surgery

Aim of study: Research of the clinical and hemodynamic results of transcatheter replacement of the aortic valve with the prosthesis containing polytetrafluoroethylene cusps.

Methods. “MedLab-CT” 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 PTFE plates. The reason of choice of synthetic material was the hypothesis of the absence of biodegradation of PTFE. The valve has passed the preclinical phases of the in vitro and in vivo tests. The study included 523 patients who had undergone implantation of the “MedLab-CT” prosthesis. The survival rate, as well as hemodynamic parameters according to echocardiography for up to 7 years, were evaluated. 287 patients were examined in person, the rest went through a telephone survey.

Results. The 7-years follow-up was conducted. The majority of patients belonged to the elderly group (mean age 74.3 years). For 246 patients (47 %) according to the EuroSCORE II scale a high risk of surgical intervention was determined. 7-yaers survival was 62%; 22 (5%) deaths were noted at the hospital stage, 31 patients died in the long-term period. 6 (1.1%) strokes were recorded. In the personal examination group, the average gradient on the aortic valve prosthesis is defined at 9.2 ±3.9 mm Hg; insufficiency due to paraprosthetic fistulas not higher than I degree was noted in 124 patients (43 %), not higher than II degree in 3 (1%) case; transvalvular aortic regurgitation was not detected.

Conclusion. 7-year results of using aortic valve with PTFE leaflets are not inferior to data using known TAVI models.

Keyword: *TAVI, synthetic cusps*

ID: 21

Topic:

Cardiovascular Surgery > Heart valve repair

Presentation Type:

Oral Presentation

Transapical Off-Pump Mitral Valve Repair With Neochord Implantation: A Systematic Review

Assoc. Prof. Ahmed Ahmed*
Ain Shams University, Cairo, Egypt

Introduction: Mitral valve repair (MVr) is the gold standard for the treatment of degenerative mitral valve regurgitation (MR). The recently introduced NeoChord DS1000 has gained increasing recognition as a feasible, potentially safe, and effective procedure with minor complications and promising outcomes. This study aims to conduct a systematic review of the published literature that discusses the technical feasibility and outcome of transapical off-pump MVr with NeoChord DS1000 device implantation in the treatment of degenerative MR. Methods: This review was performed according to the PRISMA statement. Databases searched in this review included Pubmed, Web of Science, Scopus, and Cochrane databases for systematic reviews. All English articles on humans reporting isolated MVr using NeoChord DS1000 device were included provided that basic preoperative data, operative specifications, and postoperative mortality and morbidity were reported. Results: This review included six studies comprised 249 patients who had NeoChord mitral procedure. Almost all patients included had severe MR (243/249, 97.6%). Operative success was achieved in 241 out of the 249 patients (96.8%). No intraoperative mortality was reported. Intraoperative arrhythmia was reported in six patients (2.4%) and significant bleeding was reported in eight patients (3.2%). Conclusion: Awaiting more evidence, NeoChord mitral procedure appears to be a promising procedure that can be considered in selected cases.

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Pepe M, De Cillis E, Acquaviva T, et al. Percutaneous edge-to-edge transcatheter mitral valve repair: current indications and future perspectives. Surg Technol Int. 2018;32:201-207.
Colli A, Adams D, Fiocco A, et al. Transapical NeoChord mitral valve repair. Ann Cardiothorac Surg. 2018;7(6):812-820.

Keyword: *mitral regurgitation, mitral valve repair, NeoChord DS1000*

Oral Presentation Session

A Potpourri of Interventional Cardiology

Date: 06.11.2023 Time: 10:30 – 11:40 Hall: 6

ID: 66

Topic:

Cardiology > PI for SHD-ASD, VSD,PDA closure

Presentation Type:

Oral Presentation

Safety and Efficacy of Amplatzer Duct Occluder II and Konar-MFTM VSD Occluder in the Closure of Perimembranous Ventricular Septal Defects in Children weighing less than 10 kg

MD Kaan Yildiz[*] [1] , Prof. Nazmi Narin[2] , MD Sedef Oksuz[1] , Assoc. Prof. Rahmi Ozdemir[2] , MD Sedat Bagli[1] , MD Rasit Aktas[1] , MD Muhammed Akif Atlan[1] , MD Ikbal Nur Safak[1] , Prof. Cem Karadeniz[2] , Assoc. Prof. Ozge Pamukcu[3]

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[2] *Katip Celebi University Faculty of Medicine, Department of Pediatric Cardiology, Izmir, Turkey*

[3] *Erciyes University Faculty of Medicine, Department of Pediatric Cardiology, Kayseri, Turkey*

Introduction: Transcatheter closure of perimembranous ventricular septal defects (pmVSD) using various devices has become a successful procedure in recent years. This study aims to compare the outcomes of patients with congenital pmVSD weighing less than 10 kg who underwent closure using Amplatzer Duct Occluder (ADO) II and Konar-MF^{TM}VSD occluder (MFO) devices.

Methods: This retrospective study included 52 patients with hemodynamically significant pmVSD, suitable for transcatheter closure, between January 2018 and January 2023. The patients were divided into two groups: ADO II device group (n=22) and MFO group (n=30). Both groups were evaluated in terms of procedural duration, success rate, complications, and to medium-term follow-up data.

Results: The average age of the patients was 11.6 months (4.1-27). The average weight was 7.35 kg (3.6-9.9). The mean defect size for the left ventricle (LV) side was 7.0 mm (5.4-11.2) for MFO and 4.7 mm (3.6-6.4) for ADO II. For the right ventricle (RV) side, it was 5.7 mm (4.9-9.2) for MFO and 3.9 mm (3.4-.5.2) for ADO II. During the closure procedure, antegrade technique was used in 19 (63.3%) patients with MFO, and retrograde technique was used in 15 (68.1%) patients with ADO II. The success rates of VSD closure were similar in both groups (95.4% for ADO II and 96.6% for MFO). The procedure and fluoroscopy times were shorter with the MFO device ($p<0.05$). Similar rates of hemodynamic complications were observed in both groups. There was no significant difference between the two groups in terms of major complication rates. One patient who received the ADO II device developed complete atrioventricular block (CAVB) six months later and required pacemaker implantation. In one patient who received the MFO device, CAVB occurred three days later, and the device was removed. In one patient with MFO device placement, left bundle branch block (LBBB) developed within 24 hours and resolved after steroid treatment. No significant aortic regurgitation or tricuspid valve damage was observed in the entire series. There were no incidences of death,

hemolysis, or infective endocarditis. The mean follow-up period in our study was 41.2 months (12-61).

Conclusion: High success rate and low complication rate are crucial in terms of selecting the right device and managing potential situations during and after the procedure. Both devices have provided significant advantages over other devices in transcatheter closure due to their flexibility, ease of application, and small delivery system. The lack of a suitable device for ADO II in large (>6 mm) defects and the selection of the MFO device in cases with SAR < 3 mm have made MFO more preferred over ADO II. Both MFO and ADO II are effective and safe devices with excellent success and closure rates in appropriately selected pmVSDs, along with low morbidity incidence. Our series is the first study comparing the mid-term outcomes of MFO and ADO II devices in patients weighing less than 10 kg in the literature.

Keyword: *Ventricular septal defect, transcatheter closure, weight <10kgs, Amplatzer Duct Occluder (ADOII), Konar-MFTM VSD occluder (MFO)*

ID: 215

Topic:

Cardiology > Percutaneous coronary interventions

Presentation Type:

Oral Presentation

Repeat Perforation After Percutaneous Coronary Intervention

MD Büşra Tozlu* **,** MD Direnç Yılmaz , Assoc. Prof. Kanber Öcal Karabay
Şehit Prof. Dr. İlhan Varank Sancaktepe Eğitim ve Araştırma Hastanesi, İstanbul ,Türkiye

Repeat Perforation After Percutaneous Coronary Intervention

Introduction:Coronary artery perforation is a rare but life-threatening serious complication during percutaneous coronary intervention, although it is often noticed during the procedure, it can also develop late after the procedure.We present a case of coronary rupture which was diagnosed and treated during the procedure but resulted in pericardial tamponade after three hours.

Case:A 60-year-old male patient presented with chest pain. Coronary angiography revealed a significant stenosis at the end of the proximal segment of LAD. A PT2 guidewire placed distal to the well-developed diagonal branch originate from the stenotic region. After multiple balloon dilation to the diagonal ostium, 3.0x24mm DES implantation was applied to the LAD. Upon observing extravasation from the guidewire in its diagonal distal, diagonal flow was restricted by dilatation with a 3.0x10mm balloon inside the stent. It was observed that the extravasation was disappeared in contrast injection. TIMI-3 flow was restored after the procedure and he was followed in the coronary intensive care unit. Although no significant pericardial effusion was observed in the 1st and 2nd hour post-procedure transthoracic echocardiography(TTE) in the postoperative intensive care follow-ups. His blood pressure dropped at the 3rd hour and large pericardial tamponade was noticed on TTE. Pericardiocentesis could not be performed from the subcostal area, apical pericardiocentesis was performed with TTE and 600cc of pericardial fluid was aspirated. In control TTE no pericardial effusion was noticed and extravasation at the distal part of diagonal artery was observed. A 3.5x19mm graft stent was inserted into the LAD stent and multiple long-term postdilatations were performed with a 3.5x10mm balloon. No extravasation was detected and the diagonal flow was interrupted. After detection of fluid in the left pleural area in TTE, a chest CT performed and a large hemothorax was observed. Next day TTE revealed 0.4cm pericardial effusion surrounding the left ventricle. The patient become desaturated in follow-ups, control coronary angiography revealed that the diagonal branch was occluded. Thoracentesis was performed and pleural drainage catheter was inserted. The patients hemodynamics improved, vitals were stable after procedure, discharged after medical treatment was arranged.

Conclusion:Prompt diagnosis of both coronary artery perforation and pericardial tamponade is essential. Emergency pericardiocentesis should be performed in case of tamponade. It should be kept in mind that not all pericardial tamponade develop immediately.

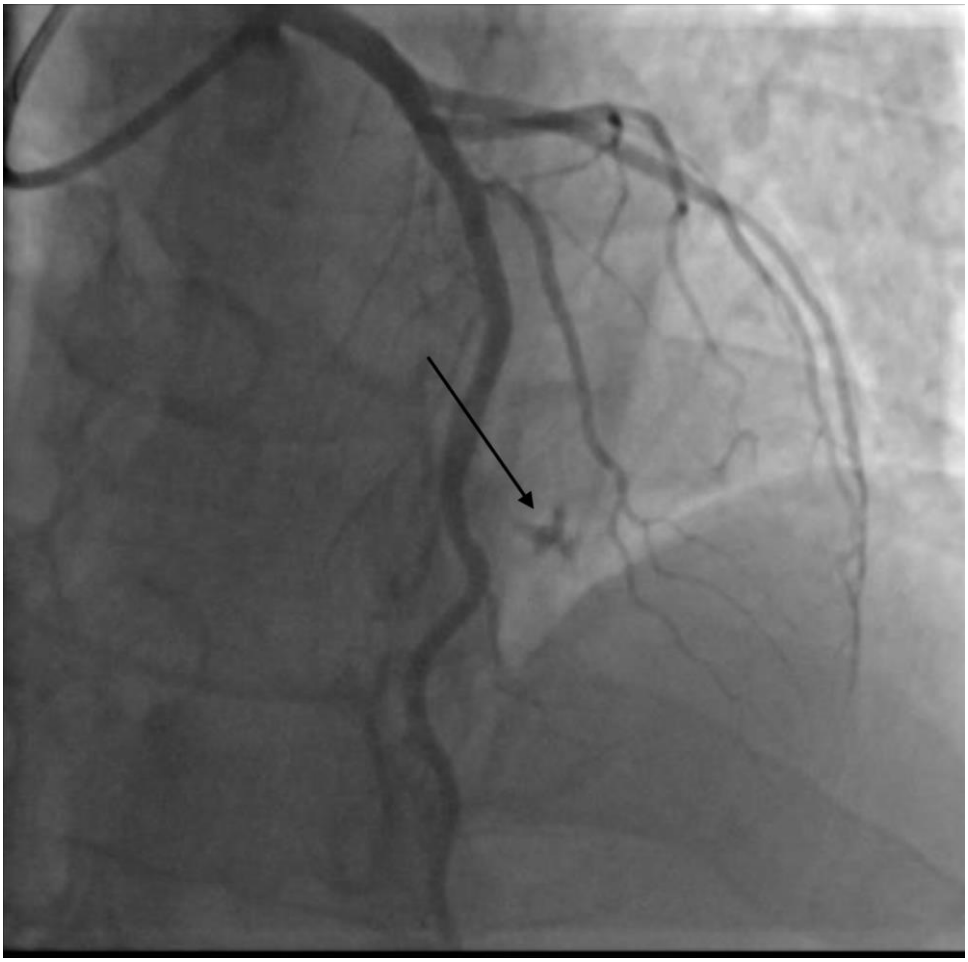

Fig1. Coronary perforation

Keyword: *coronaryperforation, pericardialtamponade, hemothorax*

ID: 200 - 19th UCCVS - Oral Presentation

Association of carotid stent fracture and its subtypes with long-term restenosis

MD Mehmet Altunova* , **MD Gokhan Demirci**
University of Health Sciences, Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training and Research Hospital, Department of Cardiology, Istanbul, Turkey

INTRODUCTION: Endovascular therapy (EVT) in carotid artery disease is a frequently used treatment method with successful long-term results. However, depending on the procedure, the frequency of stent fracture has been reported in different publications at rates ranging from 3.7% to 38.6%, and many etiologies have been suggested to explain their occurrence. One of the important complications after EVT is restenosis. In many studies, the effect of stent fracture in the development of long-term restenosis is controversial, and there are limited studies on whether there is a relationship between the fracture type and the development of restenosis. Our aim in this study is to investigate the role of the presence and type of stent fracture in the development of long-term post-procedure restenosis in patients who underwent EVT for carotid artery stenosis.METHODS: Fifty-six patients who underwent EVT with Xact stent due to carotid artery stenosis in our center between 2016 and 2020 were included in the study. The patients were divided into 2 groups those with and without long-term restenosis. Basic demographic and interventional characteristics were compared between the two groups. Stent fracture was evaluated with fluoroscopic examinations in the catheter laboratory. Stent fracture: type I (a strat break), type II (multiple strat breaks without stent deformity), type III (fracture of multiple strats with deformity of the stent), type IV (complete rupture of the stent with no intervening space) and type V (complete rupture of the stent with a space in between). The predictive role of stent fracture was analyzed.RESULTS: As a result of our study, the number of patients who developed restenosis during long-term follow-up was 9 (16.1%). The mean follow-up was 50.6 months in the entire study population. Of the demographic characteristics, DM (p=0.040) was higher in the restenosis group. There was no difference in terms of other features. When evaluated in terms of lesion characteristics, the degree of calcification was found to be significantly higher in the restenosis group (p=0.001). When evaluated in terms of stent characteristics, stent length (p=0.029) and presence of fracture (p=0.023) were higher in the restenosis group, while stent proximal diameter (p=0.023) was significantly lower in the restenosis group. Univariate Cox regression analysis was performed with all parameters to determine the predictors of long-term restenosis, and fracture 3-4-5, calcification, and stent length were significant parameters for the development of long-term restenosis. In multivariate Cox analysis with these parameters, fracture type 3-4-5 (p=0.012) was determined as an independent predictor of long-term restenosis after carotid EVT. In Kaplan-Meier analysis, fracture type 3-4-5 was found to be a determining factor for long-term restenosis (p<0.001). DISCUSSION AND CONCLUSION: Our study showed that there is no relationship between the presence of stent fracture and the development of long-term restenosis in patients who underwent carotid artery intervention. However, the presence of type 3-4-5 stent fracture has been shown to be a strong predictor of the development of long-term restenosis. Therefore, it can be said that stent fracture subtypes should be taken into account when risk assessment of patients.

References:

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Keyword: *Stent fracture, carotid artery disease, Restenosis*

ID: 29

Topic:

Cardiology > Cardiac pacing for bradyarrhythmias

Presentation Type:

Oral Presentation

An Unusual Case Of Transvenous Lead Extraction With Hybrid Approach

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INTRODUCTION: Transvenous lead extraction (TLE) is a technically complex procedure for the removal of permanent leads and may be associated with serious complications such as vascular and cardiac perforation. Despite the complexity of the procedure, TLE can be successfully performed using a variety of approaches and tools, such as simple manual traction, locking stylets, telescopic sheaths, snare, excimer laser, and surgical technique. We aimed to present a case of TLE who had failed the TLE procedure before, using the left subclavian vein and right femoral vein accesses with three available electrodes, but only with a combined approach.

CASE: A 47-year-old male patient with symptomatic hypertrophic obstructive cardiomyopathy under medical treatment was admitted to our clinic for the first time 3 years ago. The patient underwent alcohol septal ablation. Iatrogenic permanent 2:1 AV-block developed after the procedure. Upon the patient's request, a two-chamber ICD battery implantation procedure was performed in another center. In the patient, who was followed up for two years without symptoms, diaphragm stimulation due to battery electrodes and related hiccups and contraction complaints continued despite all battery adjustments. Electrode dysfunction was detected and TLE was scheduled but the procedure was unsuccessful. The atrial electrode was stuck in the superior vena cava (VCS) and could not be resected and a new atrial lead was inserted and discharged. The patient applied to us due to the development of lead dysfunction in the ventricular electrode during the battery control. In the measurements made, the lead impedance was around 3000 ohms. TLE procedure followed by new electrode implantation was planned for the patient. The cardiovascular surgery team was kept on standby during the procedure. First, a temporary pacing electrode was placed at the apex of the right ventricle. After dissection of the encapsulating fibrous tissue around the generator and entangled electrodes under deep sedation with the support of the anesthesia team, the deformed atrial electrode, which was tried to be extracted before and remained in the VCS, was extracted with the Spectranetics telescopic mechanical expander sheath. Other leads were tried to be extracted, the atrial lead was partially extracted, but it broke off from its shaft and the tip remained in the VCS. The ventricular lead shaft was deformed and ruptured due to pulling. Therefore, it was decided to continue the procedure with the transfemoral vein. The goose-neck snare was advanced through the 6F 3.5 right Judkins catheter, and after repeated attempts, the electrodes were individually trapped and taken to the periphery. Leads taken into the femoral vein were externalized by surgical cut-down. A two-chamber ICD battery was re-implanted via the right subclavian vein, and the procedure was terminated by removing the temporary pacing electrode.

DISCUSSION: Femoral TLE can be used as an alternative or combined method, especially in leads that cannot be removed from the subclavian route. This hybrid approach will increase the chance of success of the procedure, as in our case.

ID: 92

Topic:

Cardiology > Percutaneous coronary interventions

Presentation Type:

Oral Presentation

A RARE CASE, A 14-Year-Old Case Report of Hypobetalipoproteinemia Diffused Acute Anterior Myocard Infarction

MD Ahmet Ferhat Kaya* **,** MD Mehmet Hasan Özdil
non

A 14-year-old patient with a previously known diagnosis of hypobetalipoproteinemia applied to our emergency department with the complaint of chest pain. Upon detection of acute anterior myoacrd infarction in the electrocardiogram of the patient, the patient was taken to the catheter laboratory for primary revascularization and successful revascularization was performed. In this rare case for adult cardiologists, there is not enough data in the literature on revascularization strategy, catheter selection, stent size and selection, dual antiaggregant treatment duration, and statin use and etc. We believe that this rare case will contribute to the literature with this case report.

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Keyword: *hipobetalipoproteinemia, Myocard infarction, adolescent patient*

Oral Presentation Session

Cardiac Surgery Practices: What We Have Learned from Recent Observations

Date: 06.11.2023 Time: 11:40 – 13:00 Hall: 7

ID: 16

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

Corruption and Bribery Crimes from the Perspective of a Doctor of Laws Physician

Prof. Hasan Tahsin Keçeligil*

Ondokuz Mayıs University (Medical School and Faculty of Law)

OBJECTIVE: Due to the nature of the job, the responsibilities and obligations of physicians and health care providers are above and far beyond all professions. Because the field of study of the medical profession is directly the "human body" and medical practices are closely related to the "right to life", which is the highest of rights. First of all, the right to health was derived from the right to life, which is at the highest level among human rights, and the patient's rights emerged from it.

METHODS: Physicians may be perpetrators of various crimes while they are performing their profession or because of their profession. One of the most important among these crimes is corruption, also known as "knife money" in our country. The crime of corruption is among the economic crimes that doctors can commit, together with the crime of bribery. It takes part in a group of crimes called disgraceful crimes. The crime of corruption is a specific crime that can only be committed by public servant physicians.

RESULTS: The crime of corruption is committed by the doctor, by abusing the influence provided by his duty, to benefit himself or someone else or to compel a person to make a promise in this way. It is defined in Article 250 of the Turkish Penal Code. It is different from the crime of bribery based on mutual agreement.

COCCLUSIONS: In this paper, the crime of corruption as a type of crime that can be committed by public servant doctors, as well as the crime of bribery, will be examined, accompanied by judicial decisions.

ID: 47

Topic:

Cardiovascular Surgery > Cardiac Tumors

Presentation Type:

Oral Presentation

Operative Management and Outcomes of Cardiac Myxoma Patients

MD Dilşad Amanvermez Şenarslan* **,** Assoc. Prof. Funda Yıldırım , MD Halil Demren , Prof. Ömer Tetik
Manisa Celal Bayar University Cardiovascular Surgery

BACKGROUND: Myxoma accounts for the majority of benign intracavitary cardiac tumors. They can cause hemodynamic symptoms by obstructing the blood flow in the heart cavity where they are located or by causing deformation of the related cardiac valve. This study aims to report an 20-year experience of a single center in the management of cardiac myxoma.

METHODS: We retrospectively reviewed the surgical features of cardiac myxoma operations performed in our clinic in the last 20 years.

RESULTS: Surgery was performed in 25 patients due to myxoma. One patient was a 14-year-old male pediatric patient, and the others were adult patients. Gender distribution of adult patients was 10 maleand 15 female patients. 4 of the myxomas were localized to the right atrium and 21 of them were locatedin the left atrium.
The surgical approach differs according the surgeon choice. The surgery was performed with the right atrial approach in twelve patients. The surgery was performed with the left atrial approach in 13 patients.
Coronary artery bypass operation was performed in three patients, and secundum ASD closure operation was performed in one patient due to the patent foramen ovale. Since septum resection was also performed in patients whose myxomas were removed with the right atrial approach, the formed septal defect was repaired with a patch. The defects formed after removal of the pedunculated mass in the left atrial approach were primarily repaired.

Table-1: Operative characteristics

	Right atrium	Left atrium
Location	4	21
Surgical approach	12	13
Presence of thrombus	1	-
Recurrence	-	-
Coexistance of the other surgical procedures	CABG-3, PFO-1	

CONCLUSIONS: Once the diagnosis is made, surgical intervention should be performed without delay. Surgery for myxomas is performed using standard cardiopulmonary bypass procedures. General principles; avoiding manipulation of the heart in order not to cause tumor embolization during the procedure, full-thickness removal of the attached cardiac wall or interatrial septum with the tumor, removal of the tumor from the environment without fragmentation, examination of all cardiac cavities and valve pathologies. The defect in the cardiac wall or septum is closed with a patch or primary repair.

Cardiac myxomas are generally benign tumors and surgical excision is the only option in their treatment. After being diagnosed with echocardiography, patients who underwent primary surgery mostly live asymptomatically. Intermittent echocardiographic examinations should be performed during follow-ups for the possibility of recurrence.

ID: 64

Topic:

Cardiovascular Surgery > Research

Presentation Type:

Oral Presentation

The Role of "Monocyte Distribution Width (MDW)" Parameter in Early Prediction of Sepsis in Patients Undergoing Open-heart Surgery

Assoc. Prof. Abdullah Özer[1] **, MD Sercan Tak[* 1] ,** MD Hüseyin Demirtaş[1] , MD Alperen Kutay Yıldırım[1] , MD Elif Şimşek[1] , Prof. Gürsel Levent Oktar[1] , Prof. Zühre Kaya[2]

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Background: When an infection occurs, there are changes in the morphology and distribution of monocytes. Monocyte distribution width (MDW) indicates this reaction in monocytes and has the advantage of being easily measured, being part of the CBC. This study aims to investigate the efficacy of MDW as a rapid sepsis biomarker in patients undergoing open-heart surgery.

Methods: A total of 64 patients who underwent open heart surgery (study group, n=43) and minor vascular surgery (control group, n=21) were included in the study. Blood samples taken the day prior to the operation, at the postoperative 24th hour, and on the day of discharge were examined. CBC, CRP, PCT, TNF-alpha, IL-6, and MDW were analyzed. The SOFA scoring system, which evaluates organ failure in six systems, was used to assess the sepsis-related prognosis of the patients.

Results: In the study group, there were 33 CABGs, 5 MVRs, 3 AVRs, 1 AVR+MVR, and 1 ascending aorta graft replacement. 21 Radiofrequency ablation procedure for varicose veins included the control group. MDW values at all periods were significantly higher in the study group than in the control group. In the study group, postoperative 24th hour MDW values were substantially greater than pre-operative and discharged MDW values($p<0.05$). Correlation analyses of MDW with other markers and some clinical findings were performed. Postoperative 24-hour MDW evaluations showed a significant positive strong correlation with IL-6 ($r=0.659$, $p=0.001$), PCT ($r=0.577$, $p=0.001$), CRP ($r=0.699$, $p=0.001$) and postoperative SOFA score ($r=0.659$, $p=0.001$).

Three patients in the study group, who had clinical signs of infection, were diagnosed with sepsis because the diagnosis of infection was confirmed by positive cultures, and their SOFA scores were ≥2. The postoperative 24th-hour MDW values of three patients with sepsis were statistically significantly higher than those of the others (mean: 24.38 – 21.43, $p=0.049$). According to ROC analysis, the area under the curve (AUC) was 0.779 (95% CI: 0.545-1.000), and the most suitable cut-off MDW value was 23.165 with a sensitivity of 66.7% and specificity of 80%

Conclusions: While sepsis is rarely observed after open heart surgery, it remains a significant complication. Studies indicate that MDW, which CBC devices can measure, can be used as an early biomarker for sepsis. In our study, MDW measurements in patients diagnosed with sepsis were found to be significantly higher compared to the others, suggesting that MDW may be an indicator for the diagnosis of sepsis in patients undergoing open-heart surgery.

ID: 91

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

Assessment of Gender Diversity among Authors in the Journal of Turkish Thoracic and Cardiovascular Surgery Publications

MD Adeviye Özsoy[1] **, MD Burçin Çayhan Karademir[* 2] ,** Assoc. Prof. Taylan Adademir[2]

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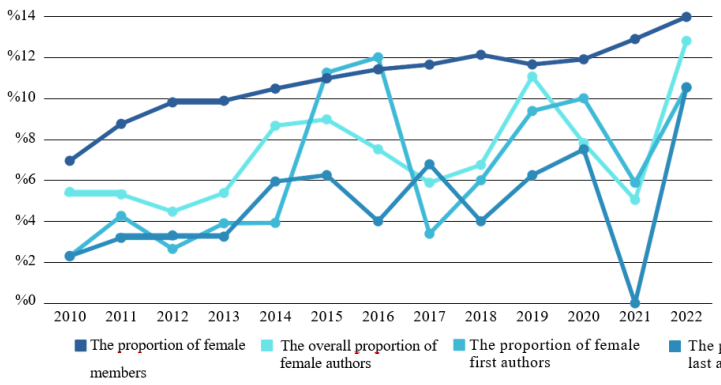
[2] University of Health Sciences, Kosuyolu Heart and Research Hospital, Istanbul, Turkey

Background: The number of female cardiovascular surgeons has been steadily increasing over the years in Turkey. The number of female members in the Turkish Society of Cardiovascular Surgery was 57 (6.95% of the total number of surgeons) in 2010 and increased to 321 (13.97%) in 2022. It is unknown whether the contribution of female cardiovascular surgeons to the scientific literature has paralleled this increase. The aim of our study is to elucidate the proportion of female physician contributions in the publications of the Turkish Journal of Thoracic and Cardiovascular Surgery.

Method: Between 2010 and 2022, a comprehensive review was conducted on the original articles, reviews, and case reports published in the Turkish Journal of Thoracic and Cardiovascular Surgery, focusing specifically on the field of cardiovascular surgery. The analysis involved determining the total number of authors, differentiating between female and male authors, and documenting whether female authors held positions as either the first or last author. In cases where gender identification based on names was inconclusive (unisex names), gender verification was performed by accessing the official websites of the authors' affiliated institutions. Authors who were not cardiovascular surgeons, publications in the field of thoracic surgery, and articles submitted from sources outside of Turkey were excluded from the study.

Results: A total of 1,112 publications from the Turkish Journal of Thoracic and Cardiovascular Surgery were included in the study, encompassing 4,393 authors. Among these authors, 6.65% (n=292) were female. Female authors were identified as the first author in 65 articles (5.85%) and as the last author in 48 articles (4.31%). The summary of female surgeon representation within the Turkish Society of Cardiovascular Surgery, including overall contributions and proportions of first and last authorship among women, is presented in Table 1.

Conclusion: Despite the increasing number of female surgeons, it is observed that the contribution of female surgeons in publications remains relatively stable and lags behind the overall proportion. The reasons for the relatively low contribution of female authors to scientific literature should be examined, and authors should be encouraged to contribute more to the field of science.



	The overall proportion of female authors	The proportion of female first authors	The proportion of female last authors	The proportion of female members
2010	5.43	2.3	2.3	6.95
2011	5.31	4.26	3.19	8.75
2012	4.47	2.65	3.31	9.80
2013	5.38	3.9	3.25	9.88
2014	8.66	3.92	5.94	10.47
2015	8.97	11.25	6.25	10.97
2016	7.51	12	4	11.41
2017	5.88	3.39	6.78	11.64
2018	6.75	6	4	12.12
2019	11.06	9.38	6.25	11.65
2020	7.81	10	7.5	11.9
2021	5.04	5.88	0	12.89
2022	12.8	10.53	10.53	13.97

Table 1. The proportion of female cardiovascular surgeons within the Turkish Society of Cardiovascular Surgery and the summary of female surgeon representation within the publications, including overall contributions and proportions of first and last authorship among women,

Keyword: *Gender Diversity*

ID: 126

Topic:

Cardiovascular Surgery > Cardiac Tumors

Presentation Type:

Oral Presentation

Surgery Of Cardiac Myxoma: About A 134 Cases

Assoc. Prof. Redha Lakehal* **,** Prof. Radouane Boukarroucha
Faculty Of Medicine Constantine 03 Algeria

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 134 patients with clear female prevalence of 49 years median age with the extreme ones going from 10 to 82 years operated between January 2000 and December 2022 .The base of insertion of the tumor is septal in the majority of the cases. A completeand satisfactory resection of the myxome carrying its base of establishment is carried out in all the cases .In 104 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 tumour cardiac generally symptomatic.Its diagnosi s 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 repetitionremains possible justifying a regular echographic monitoring.

ID: 127

Topic:

Cardiovascular Surgery > Cardiac Tumors

Presentation Type:

Oral Presentation

Surgery Results Of Cardiac Hydatid Cysts: About Of 41 Patients

Assoc. Prof. Redha Lakehal[*] , Prof. Radouane Boukarroucha
Faculty Of Medicine Constantine 03 Algeria

Introduction: Our country is known to be an endemic area of hydatid cyst. Thanks to new exploration techniques, we are witnessing an increasing frequency of cardiac localization. Surgery remains the only radical therapeutic alternative. The aim of our work is to shed light on the epidemiological, clinical, paraclinical and therapeutic characteristics of patients operated on for cardiac hydatidosis and the interest of prevention.

Methods: From January 2000 to June 2023, 41 patients with hydatid cysts of the heart were operated on in our department; they are 21 women and 20 men. The average age is 26 years with extremes of 06 to 66 years. The location is varied (left ventricle, interventricular septum, right ventricle, left atrium and pericardium). The symptomatology took different clinical forms (exertional dyspnea, rest dyspnea, palpitation and syncope). Sinus rhythm was present in 39 cases. The diagnosis was confirmed in all cases by Doppler echocardiography and chest CT or chest MRI.

Results: The surgical indication was posed in urgency after realization of the echocardiography-doppler and the thoracic TDM in 12 patients and delayed in 27 patients. It was practiced: punctures, draining, flattening, removal of the proligerous membrane, sterilization and padding of the residual cavity. 08 patients operated onwith a beating heart under circulatory assistance, one patient with a beating heart and 39 patients under aortic clamping. The average duration of the CEC: 40 min. Overall hospital mortality of one patient.

Conclusion: The cardiac localization of the hydatid cyst is always primitive. The prognosis is dominated by the occurrence of the most often formidable complications. The diagnosis is made thanks to the contribution of echocardiography and thoracic CT scan. We insist on a policy of prevention of hydatid disease.

ID: 263

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Oral Presentation

Effects of Cilostazol on the Myocardium in an Obese Wistar Rat Model of Ischemia-Reperfusion Injury

Assoc. Prof. Tolga Demir[1] , Assoc. Prof. Mazlum Şahin[2] , MD Fatma Tuğba İlal Mert[3] , MD Fatma Saraç[4] , MD Ahmet İbrahim Balkaya[1] , MD Kanan Gurbanov[* 1]

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[4] *Department of Pediatric Surgery, University of Health Sciences Turkey, Basaksehir Cam Sakura City Hospital*

Objectives: This study aims to determine the protective effect of cilostazol on myocardium in obese Wistar rats with induced ischemia-reperfusion injury (IRI).

Methods: Four groups with 10 Wistar rats were included: 1] Sham Group: IRI was not established in normal weight-Wistar rats. 2] Control Group: IRI but no cilostazol in normal weight-Wistar rats. 3] Cilostazol in normal weight-Wistar rats: IRI and cilostazol was administered. 4] Cilostazol in obeseWistar rats: IRI and cilostazol was administered.

Results: Tissue adenosine triphosphate (ATP) levels were significantly higher and superoxide dismutase (SOD) levels significantly lower in the control group than in the sham group and normal weight cilostazol group (p=0.024 and p=0.003). Fibrinogen levels were 198 mg/dL in the sham group, 204 mg/dL in the control group, and 187 mg/dL in the normal-weight cilostazol group (p=0.046). Additionally, plasminogen activator inhibitor-1 (PAI-1) levels were significantly higher in the control group (p=0.047). The level of ATP was significantly lower in the normal-weight cilostazol group than in the obese group (104 vs 131.2 nmol/g protein, p=0.043). PAI-1 level was 2.4 ng/mL in the normal weight cilostazol group and 3.7 ng/mL in the obese cilostazol group (p=0.029). Normal-weight Wistar rats with cilostazol had significantly better histologic outcomes than the control group and obese Wistar rats (p=0.001 and p=0.001).

Conclusion: Cilostazol has a protective effect on myocardial cells in IRI models by decreasing inflammation. The protective role of cilostazol was reduced in obese Wistar rats compared with normal-weight Wistar rats.

Oral Presentation Session

Smart Ideas and Observations in Cardiology Practice

Date: 06.11.2023 Time: 11:45 – 12:55 Hall: 6

ID: 2

Topic:

Cardiology > Acute coronary syndromes

Presentation Type:

Oral Presentation

Effects of de novo atrial fibrllation on prognosis in patients with STEMI

MD Metin OKŞUL[*] [1] , MD Yusuf Ziya ŞENER[2] , MD Adnan Duha CÖMERT[1] , MD Rohat TÜZÜN[1] , MD Serdar SÖNER[1] , MD Ercan TAŞTAN[1] , MD Tuncay GÜZEL[1] , MD Mahsum ALTUNBAŞ[1] , MD Cansu ÖZTÜRK[1] , Prof. Erkan BAYSAL[1]

[1] Gazi Yaşargil Training and Research Hospital

[2] Beypazarı State Hospital

Background/Introduction: Atrial fibrillation occurs in the setting of ST-elevation myocardial infarction (STEMI) and it is associated with a worse prognosis.

Purpose: We aimed to evaluate the effects of de novo AF development on cardiovascular outcomes in STEMI cases.

Methods: We screened all of the STEMI cases between January 2018 and January 2021. Patients with de novo AF during hospitalization due to STEMI were compared with 1:1 propensity matched STEMI cases without AF.

Results: A total of 68 patients were enrolled. Mean age of the study population was 65.5 ±11.5 years and vast majority of the patients were male (66.2%). Baseline characteristics were similar between the two groups and demonstrated in Table-1. Sustained ventricular arrhythmia rates were similar between the two groups (5.8& vs. 5.8%; p=1.000). Contrast induced nephropathy was more frequent in patients with AF, however it was not statistically significant (14.7% vs. 2.9%; p=0.197). Bleeding episodes were classified into major and minor bleeding according to the need of transfusion and presence of lifethreatening hemorrhage. Major bleeding was occured in only one case (Upper gastrointestinal bleeding) and minor bleeding rates were similar (14.7% vs. 5.8%; p=0.427). In-hospital mortality was distinctly higher in patients with AF, whereas it was not statistically significant (20.5% vs. 2.9%; p=0.054). Outcomes were summarized in Table-1.

Conclusion(s): Contrast induced nephropathy, in-hospital mortality and bleeding rates are higher in STEMI patients with AF than counterparts despite it is not statistically significant. Larger sized studies will clarify the association between AF development and worse outcomes in STEMI patients.

Table-1. Baseline characteristics and outcomes			
Parameter	**De novo AF (+) n=34**	**De novo AF (-) n=34**	***p* value**
Age, years	67.1 ± 13.5	63.8 ± 8.9	0.250
Gender, male	22 (64.7 %)	23 (67.6 %)	1.000
Hypertension, n (%)	11 (32.3 %)	10 (39.4 %)	1.000
Diabetes mellitus, n (%)	16 (47.0 %)	13 (38.2 %)	0.624
Smoking, n (%)	15 (44.1 %)	9 (26.4 %)	0.205
Medications, n (%);			
-Renin-angitensin system blockers	9 (26.4 %)	10 (29.4 %)	1.000
-Beta blockers	15 (44.1 %)	9 (26.4 %)	0.205
-Statins	6 (17.6 %)	8 (23.5 %)	0.764
Echocardiographic measurements;			
-Left ventricular ejection fraction, %	45.7 ± 9.5	49.6 ± 9.1	0.091
-Left atrial diameter (PLAX), mm	38.9 ± 4.1	36.9 ± 4.5	0.067
-Mitral regurgitation, n (%);			
*Mild	15 (44.1 %)	21 (61.7 %)	0.336
*Moderate	14 (41.1 %)	10 (29.4 %)	
*Severe	5 (14.7 %)	3 (8.8 %)	
Laboratory parameters;			
-Hemoglobin, g/dL	15.8 ± 2.4	16.3 ± 1.6	0.298
-Glomerular filtration rate, ml/min/m^2	71.4 ± 12.5	69.6 ± 10.6	0.686
-Peak troponin I level, ng/L	21405 ± 4560	20265 ± 2450	0.752
Infarct related artery, n(%)			
-Left anterior descending artery	11 (32.3 %)	20 (58.8 %)	
-Circumflex artery	12 (35.2 %)	6 (17.6 %)	0.076
-Right coronary artery	11 (32.3 %)	8 (23.5 %)	
Outcomes, n (%);			
Bleeding			
-Major	1 (2.9%)	0 (2.9%)	1.000
-Minor	5 (14.7%)	2 (5.8%)	0.427
Ventricular arrhythmia (Sustained)	2 (5.8%)	2 (5.8%)	1.000
In-hospital mortality	7 (20.5%)	1 (2.9%)	0.054
Contrast induced nephropathy	5 (14.7%)	1 (2.9%)	0.197

ID: 164

Topic:

Cardiology > Other

Presentation Type:

Oral Presentation

Management Of Acute Coronary Syndrome In Essential Thrombocytosis

MD Enes Alıç[*] [1] , MD Mert Deniz Savcılıoğlu[2] , Assoc. Prof. Irfan Veysel Düzen[3] , Assoc. Prof. Ertan Vuruşkan[3]

[1] *Cardiology Department Of Medikalpark Florya Hospital, Istanbul*

[2] *Cardiology Department Of Ağrı State Hospital*

[3] *Cardiology Department Of Gaziantep University Hospital*

Entrance

In essential thrombocytosis, increased platelet count and thrombocyte dysfunction play a role in both thrombosis and increased bleeding tendency. 50-60% of cases with ET have JAK2-V617F mutation.(3,4) If JAK2-V617F mutation is negative (approximately 40-50% of cases), MPL-W515L/K mutation may be positive in 3-5%

CASE REPORT

A 26-year-old female patient was admitted to our emergency department with the complaint of typical chest pain that started 2 hours ago. On the patient's admission ECG, ST segment elevation in the RBBB and anterior leads (Figure-1), the patient was considered to have anterior ST segment elevation myocardial infarction (STEMI) and coronary intense coronary infarction. taken into care. The patient was started on 300 mg acetylsalicylic acid, 600 mg clopidogrel, tablet therapy. 5000 IU heparin was given iv. In coronary angiography; An 80% thrombosed lesion was observed in the proximal LAD. (Figure-2). CX and RCA were normal. A 4.0x20 mm BMS was implanted into the LAD lesion. Control ECG showed ST resolution and a decrease in the patient's chest pain. The patient with a platelet count of 1.5 million in the laboratory results was taken for platelet apheresis with the recommendation of the Hematology Clinic. The sheath was removed after 24 hours in the patient with a high risk of bleeding. Hydroxyurea was added to the treatment of the patient whose control platelet value was 738 thousand after apheresis. The patient, whose platelet count was 1.2 million under medical treatment in the service follow-ups, was taken to platelet apheresis for the second time with the recommendation of the Internal Medicine Hematology Clinic.

CONCLUSİON

The 26-year-old female patient in this case was diagnosed with Essential Thrombocytosis (ET) in 2014. T(9-22) (BCR-ABL) and JAK2 V617f gene mutations were found to be negative in the examination performed by Real Time PCR of the patient who was referred to Hematology because of incidentally elevated platelets in the health institution he applied to with URTI in 2014. Although it is noteworthy that this case was the first thrombotic complication of the patient, the patient had a history of C/S in 2017 and no thrombotic or hemorrhagic complications were observed in this period. As it is known, although JAK2 V617f gene mutation positivity leads to an increase in the incidence of thrombotic events, thrombotic complications were observed in this case despite the mutation being negative. In cases where patients with chronic myeloproliferative disease present with acute coronary syndrome, it is necessary to establish a good balance between the risk of bleeding and the tendency to thrombosis. In this case, we followed a more conservative treatment option and applied Acetylsalicylic acid and Clopidogrel treatment to the patient, but considering the bleeding

complication, we did not apply a more radical treatment such as GP2b/3a treatment.
In conclusion, despite the increased platelet count in ET, platelet dysfunction requires a delicate balance management with bleeding at one end and thrombosis at the other. For this reason, it is necessary to establish a good balance between bleeding risk and thrombosis tendency in cases with acute coronary syndrome in patients with ET.

Keyword: *essential thrombocytosis, acute coronary syndrome*

ID: 83

Topic:

Cardiology > Percutaneous coronary interventions

Presentation Type:

Oral Presentation

A case of a giant hydatic cyst occupying almost the entire intraventricular cavity

MD Kenan Toprak[*] [1] **, MD Muhammed Bahadır OMAR**[*] [2] , MD Asuman Biçer[1] , MD Nazım Kankılıç[3] , MD Mehmet Salih Aydın[4] , MD Mustafa Çetin[1]

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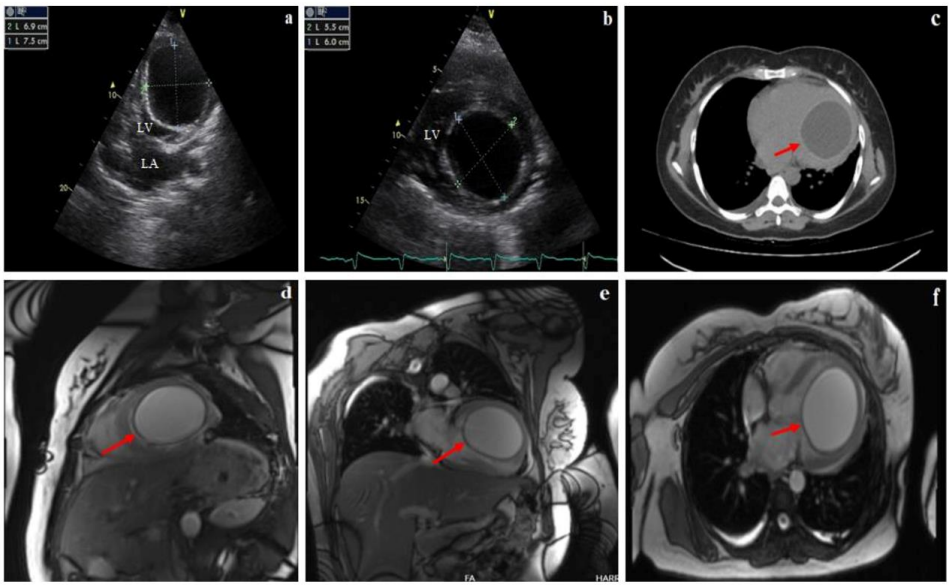
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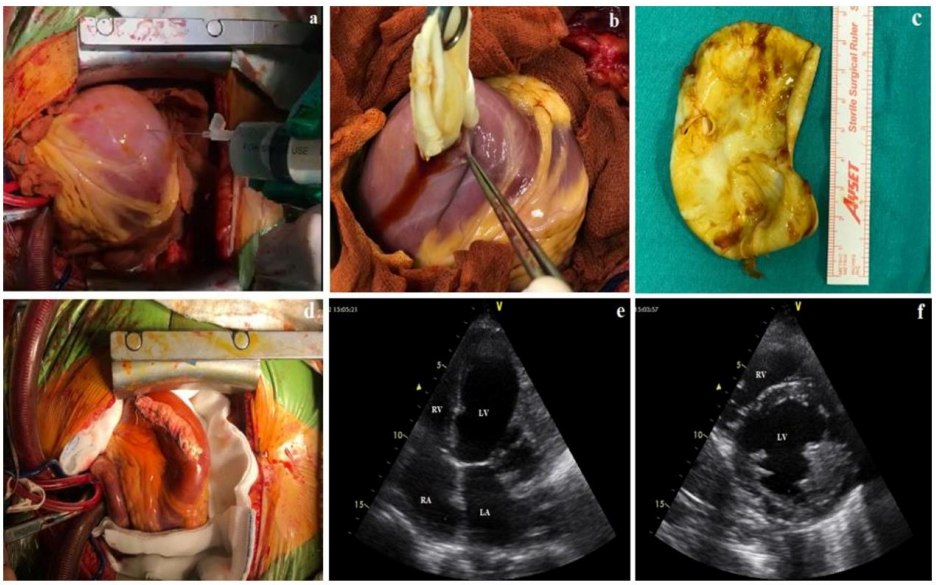

Hydatid cyst is a parasitic infection caused by the parasite Echinococcus granulosus. Although the disease most commonly presents with liver and lung involvement, it may rarely present with cardiac involvement in 0.5-2% of cases. Here, the management of a giant univesicular echinococcal cyst of 69×75 mm in size, almost completely occupying the intraventricular cavity of a Syrian migrant who was

previously operated for hepatic hydatid cyst and applied to the outpatient clinic with the complaint of dyspnea, will be presented. To the best of our knowledge, this case is the largest intracardiac univesicular cyst presented in the literature so far.

Hydatid cyst disease is a zoonotic parasitic infectious disease caused by accidental ingestion of food contaminated with the eggs of the parasite Echinoccus granulosus. The disease often presents with liver (50-70%) and lung(5-30%)involvement. Cardiac involvement is very rare and accounts for a total of 0.5-2% of all patients. The most common sites of cardiac involvement are left ventricular free wall and right ventricle and interventricular septum. In cardiac involvement, symptomatic features vary from patient to patient, depending on the location and size of the cyst. Cardiac hydatid cyst is currently treated surgically and can lead to fatal outcomes if not surgically intervened.

CASE REPORT

A 42-year-old Syrian migrant woman applied to the cardiology outpatient clinic with the complaint of dyspnea. She stated that her shortness of breath had gradually increased in the last year.On physical examination, blood pressure was 100/70 mm Hg, heart rate was 113 bpm, and saturation was 96%. On auscultation, there was a 2/6° systolic murmur in the mitral focus. The ECG was in normal sinus rhythm and there were non-specific ST-T changes.In her medical history, it was learned that the patient had been operated for hydatid liver cyst 5 years ago and she did not have a regular medication.Transthoracic echocardiography revealed a 69x75 mm hypoechoic cystic mass that filled almost the entire left ventricular cavity(Figure 1a-b). The left ventricular cavity was enlarged and left ventricular contraction was restricted due to the cystic mass, and the effective opening of the mitral valves during diastole was prevented by the cyst(Video 1).

Thoracoabdominal Computed Tomography(Figure 1c) and cardiac magnetic resonance(Figure 1d-1e) imaging confirmed the presence of hydatid cyst in the left ventricular cavity (Figure, furthermore, multiple cystic lesions were found in the hepatic lodge on tomography. An enzyme-linked immunosorbent assay(ELISA) was positive for echinococcus antibodies.The patient was started on albendazole treatment and was referred Faculty of Medicine, Department of Cardiovascular Surgery.

OPERATİON TECNİQUE

Median sternotomy was performed under general anesthesia. Aortic and two-stage (unicaval) venous cannulations were performed. Cardiac arrest was achieved with anterograde Del Nido cardioplegia, followed by cross-clamping. Mild hypothermia(32-34 °C) was maintained in the operation. In open exploration, hydatid cyst was seen in the left ventricular region. The cystic material was aspirated (Figure 2a), then a short incision was made from the anterior wall of the left ventricle and the cyst was removed from the posterolateral wall to which the cyst was attached (Figure 2b-2e).The cavity formed by removal of the cyst mass was irrigated with hypertonic saline solution. There was no connection with the left ventricular cavity. The cyst cavity was closed between Teflon felt strips attached with two layers of horizontal mattress sutures using 2-0 Ethibond® (Ethicon, Johnson & Johnson Medical N.V., Belgium), in a Cooley-like aneurysmectomy(Figure 2d) like our previous cases.

In the histopathological examination, the excised material was compatible with a univesicular echinococcal cyst.In control echocardiography, it was observed that left ventricular functions were mildly depressed (Left ventricular ejection fraction: 45%) and mitral regurgitation persisted (Video 2).Presumably, dysfunction of the subvalvular structures by the cyst resulted in post-operative persistence of mitral regurgitation.The patient was consulted to gastroenterology in terms of hepatic cysts and was discharged uneventfully on the 9th postoperative day with albendazole treatment.

DISCUSSION

Hydatid cyst is an endemic parasitic infection seen mainly in sheep farming countries such as Mediterranean countries, Middle East and South America. Animals such as cats and dogs are the main carriers and humans are intermediate hosts. Ingested parasitic larvae enter the systemic circulation via the portal venous system. The most common involvement in hydatid disease is liver (50-70%) and lung to lung (5-30%), followed by skeletal muscles (5%), bones (3%), kidneys (2%), spleen (1%) and brain (1%). Cardiac involvement is very rare and cardiac involvement is seen in 0.5-2% of cases. The larvae usually reach the left side of the heart via the coronary circulation, and in the presence of parasitic involvement, the inflammatory response produces an adventitial pericystic layer. The left ventricle is the most frequently involved cardiac structure (55-60%) due to rich coronary blood supply. Afterwards, right ventricle (10-15%), pericardium (7%), pulmonary artery (6-7%), left atrium (6-8%), right atrium (3-4%), and interventricular septum (4-7%) involvement is seen. Cardiac hydatid disease may be asymptomatic, but it often presents with non-specific symptoms such as shortness of breath, chest pain and palpitations depending on its location and size.

Patients with cardiac cysts are usually diagnosed or suspected on transthoracic echocardiography during their outpatient examination. Cardiac magnetic resonance imaging and computed tomography provide more extensive information for the localization and extent of cardiac cysts. The diagnosis is confirmed by histopathological and serological tests.Cyst excision is the gold standard in the treatment of the disease, and albendazole therapy is typically prescribed for at least four days preoperatively and for 4 to 12 weeks postoperatively.

Cardiac cysts must be treated surgically because they can be fatal if left untreated. We recommend cyst fluid aspiration as the initial treatment of surgery in large cardiac cysts, because the introduction of cyst fluid into the circulation means both the risk of anaphylaxis and the systemic spread of possible daughter vesicles in the cyst to the whole body. Normothermic cardiopulmonary bypass can be used safely in patients with cardiac hydatid disease. It would be beneficial to use a hypertonic saline solution perioperatively as a protoscolitic agent, since it has few side effects. In cases with extensive cystic lesions, capitonnage similar to ventricular aneurysm repair may be beneficial in preserving ventricular functions.

CONCLUSIONS

Cardiac hydatid cyst is a rare but important manifestation of echinococcal paarsitic infection. In these patients, early diagnosis and surgical intervention are vital to prevent major complications. In our case, the patient presenting with a cardiac cyst that covers almost the entire ventricular cavity had stable vital signs apart from only dyspnea, probably because the growth progression of the cyst was chronic, and hemodynamic compensation took time to adapt to the process. Good management of perioperative procedures is important for prognosis. The case we present is also a case that demonstrates this approach.

ID: 268

Topic:

Cardiology > Other

Presentation Type:

Oral Presentation

Cardiac Power Index Is A Novel Parameter For Prediction Of Myocardial Injury During Liver Transplantation

MD Aykun Hakgör*

Medipol Mega University Hospital Dept. of Cardiology

Background: Despite comprehensive preoperative cardiovascular assessment, cardiovascular events remain a leading cause of postoperative mortality, due to the complexity of liver transplantation surgery. Therefore hemodynamic monitoring during liver transplantation is crucial. With Pulse Index Continuous Cardiac Output (PICCO) technology, hemodynamic parameters such as cardiac power index (CPI) can be follwed during surgery. The aim of this study is to investigate the relationship between CPI and postoperative secondary myocardial infarction.

Method and results: A total of 53 patients were included in the study. Postoperative myocardial injury (PMI) was observed in 28.3% (n=15) of these patients. Patients divided into two groups according to the presence or absence of myocardial injury following liver transplantation. ΔCPI was significantly lower in patients with PMI (-0.27 ± 0.11 W/m²) than those without PMI (0.08 ± 0.18 W/m²) ($p<0.05$). The multivariate analysis showed that the only independent predictor of PMI was ΔCPI (HR: 2.245, 95% CI: 1.145 – 4.387, p: 0.032) (Table-1). ROC analysis that revealed ΔCPI values lower than -0.15 W/m² were significantly associated with PMI. Peak troponin level, hospital stay and myocardial infaction prevelance were significantly higher in ΔCPI ≤ -0.15 W/m² group ($p <0.05$ for all).

Table 1. Univariate and Multivariate Logistic Regression Analyses to Determine Independent Predictors of Myocardial Injury Following Liver Transplantation.

Predictors of Myocardial Injury Following Liver Transplantation.

Variable	**Univariate Analysis**		
	Odds Ratio	**95% Confidence Interval**	**p value**
Age	2.071	0.805 – 5.313	0.046
LVEF	0.970	0.946 – 0.995	0.135
BNP level	1.040	1.223 – 1.064	0.442
ΔCPI	2.326	1.511 – 3.716	0,012
Operation Time	2.651	1.104 – 6.317	< 0.001
Vasopressor Need	1.916	1.225 – 2.293	0.081

	Multivariate Analysis		
	Odds Ratio	**95% Confidence Interval**	**p value**
Age	1.242	1.012 – 1.472	0.121
ΔCPI	2.245	1.145 – 4.387	0.032
Operation Time	2.180	1.349 – 3.511	0.008

LVEF: Left Ventricular Ejection Fraction, BNP: Brain Natriuretic Peptide, CPI: Cardiac Power Index

Conclusion: Our data shows that ΔCPI which constitutes the decrease in CPI during transition from the anhepatic phase to the neohepatic phase, can be used as a marker of poor cardiac prognosis in patients who underwent liver transplantation.

Oral Presentation Session

From Awareness to Cardiovascular Therapy

Date: 06.11.2023 Time: 13:00 – 14:00 Hall: 6

ID: 225

Topic:

Cardiology > Hypertension and antihypertensive therapy

Presentation Type:

Oral Presentation

Evaluation of the level of hypertension awareness among undergraduate students

MD Ajar Koçak*
Ufuk University, College of Medicine, Department of Cardiology

Objective:

Hypertension (HT) is a prominent contributor to cardiovascular morbidity and mortality, accounting for approximately 7.5 million annual deaths globally. The aim of this study was to assess the degree of awareness about HT and healthy lifestyle practices among undergraduate students.

Methods:

An online survey developed for this study was distributed to 546 undergraduate students. Initially, an evaluation of the responses provided by all participants was conducted. A subsequent analysis compared the responses of medical faculty students with those of students from other faculties. Finally, the influence of social factors, medical history, and the COVID-19 pandemic on HT awareness were explored.

Results:

Around half of study participants (46.9%) believed that they led a healthy lifestyle. Notably, the prevalence of smoking in our study was relatively low (27.1%) and the participants exhibited a commendable level of knowledge about food ingredients that can increase blood pressure (BP). Additionally, half of the participants were engaged in regular physical exercises, having a mean body mass index (BMI) within the normal ranges (23.13.5 kg/m2). Females and medical students had lower smoking rates and lower mean BMI in comparison to their male counterparts and non-medical students.

A significant proportion of study participants (61.9%) possessed a home sphygmomanometer and 65.8% of them had at least one BP measurement in the preceding year. Once again, there was a higher prevalence of females and medical students who engaged in the practice of monitoring their BP. As expected, medical students were more proficient with sphygmomanometer use and the ideal conditions for measuring BP. Interestingly, three out of four students demonstrated a lack of knowledge regarding the specific thresholds of high BP and HT.

Logistic regression analysis revealed that the presence of cardiovascular diseases among participants' relatives is associated with higher awareness of HT. Approximately 25.3% of the students believe that the COVID-19 infection or vaccination can potentially affect the regulation of BP. However, this perception does not appear to have had a substantial influence on the level of HT awareness.

Conclusions:

The study revealed that medical students exhibited a greater level of awareness regarding hypertension compared to their non-medical counterparts. When considering gender as a factor, it was observed that women exhibited higher levels of awareness. Although the awareness of hypertension among undergraduate students exceeds that of the general population, it is deemed insufficient. Therefore, educational institutions must undertake substantial measures to address this issue.

Survey questions	Total (n=546)	Distribution by faculties		
		Faculty of Medicine (n=328)	Other faculties (n=218)	P value
Do you believe that you lead a healthy lifestyle?	256 (46.9)	178 (54.3)	78 (35.8)	P<0.01
Do you smoke?	148 (27.1)	48 (14.6)	100 (45.9)	P<0.01
Do you know which food components can raise blood pressure?	343 (62.8)	230 (70.1)	113 (51.8)	P<0.01
Do you exert regular physical exercise?	267 (48.9)	168 (51.2)	99 (45.4)	0.34
Body mass index (kg/m^2)	23.1 ±3.5	22.8 ±3.7	23.5 ±3.2	0.02
Do you have a sphygmomanometer at home?	338 (61.9)	216 (65.9)	122 (56.0)	0.15
Have you measured your blood pressure in the last year?	360 (65.8)	248 (75.6)	112 (51.4)	P<0.01
Do you know the ideal conditions for measuring blood pressure?	306 (56)	254 (77.4)	52 (23.9)	P<0.01
What are the blood pressure thresholds?	125 (22.9)	100 (30.5)	25 (11.5)	P<0.01
What is the most common symptom of high blood pressure?	289 (52.9)	224 (68.3)	60 (27.5)	P<0.01
Which organ is most commonly affected by hypertension?	289 (52.9)	212 (64.6)	97 (44.4)	P<0.01
Do you have a family history of hypertension?	284 (52)	178 (54.3)	106 (48.6)	0.37
Do you have a family history of diabetes?	198 (36.3)	118 (36)	80 (36.7)	0.89
Do you have a family history of high cholesterol?	286 (52.4)	172 (52.4)	114 (52.3)	0.98
Do you have a family history of cardiovascular diseases?	224 (41)	124 (37.8)	100 (45.9)	0.15
Do you have a family history of stroke?	58 (10.6)	36 (11)	22 (10.1)	0.75
Do you have a family history of kidney diseases?	56 (10.3)	36 (11)	20 (9.2)	0.52
Do you believe COVID-19 infection or vaccination can affect blood pressure?	138 (25.3)	72 (22)	66 (30.3)	0.06

Caption

Keyword: *Hypertension, Awareness, Undergraduates*

ID: 209

Topic:

Cardiology > Preventive cardiology

Presentation Type:

Oral Presentation

Evaluation of Clinicians' Awareness of Fatigue in Patients Using Beta-Blockers

MD Hasan Can Könte*
Medipol Bahcelievler Hospital

OBJECTIVES: This study aims to emphasize that clinicians have poor awareness of fatigue, which is one of the adverse effects in patients using beta-blockers.

METHODS: Medical records of 1082 patients using beta-blockers in the outpatient clinic were reviewed. It was recorded whether there was fatigue, whether it was questioned in previous visits, and how long he had complaints. When evaluated with exclusion criteria, fatigue was detected in the remaining 21 patients using beta blockers.

RESULTS: The mean duration of drug use in 21 patients using beta-blockers was 8.2 years. Although the complaints are more common in females gender and in the use of old-generation beta-blockers, almost all of them have been found to have complaints since the first time of drug use. It was determined that none of these patients were asked whether they had fatigue or not at previous visits. The treatment of patients with side effects was changed with new-generation beta-blockers or calcium channel blockers. It was noticed that the patients' complaints improved at the visit one month later.

CONCLUSION: In this study, it was concluded that questioning these side effects and making agent changes, if any, is important to increase drug compliance and reduce patient complaints.

Keyword: *adverse effect, beta-blocker, fatigue*

ID: 194

Topic:

Cardiology > Cardiac resynchronization therapy

Presentation Type:

Oral Presentation

Effect Of Betablocker Dosing On ICD Shocks

MD İdris Yakut*
Medipol İstanbul University

BACKGROUND:

Implantable cardioverter defibrillator(ICD) therapy in heart failure is one of the cornerstones of heart failure treatment, as it reduces sudden death that may be associated with malignant arrhythmias. The use of beta-blockers reduces the ICD appropriate shock rate compared to patient who do not use beta-blockers. With our study, it will be examined whether ICD shocking differs according to beta-blocker dose levels.

METHODS:

60 patient hospitalized with ICD shock and 86 patient with similar baseline characteristics but no shocked, 146 patients with ICD were included in our study. Of this patient, 15 were woman and 131 were men. The mean age of the patients is 51.1. Beta-blocker doses use by these patients during hospitalization were divided into initial, titration and maximum dose groups.

RESULTS:

In the group receiving ICD shock, 5 (8.3 %) patient using initial dose beta-blockers, 45 (74%) patients using titration dose and 10 (16.7%) patient who reachedthe maximum dose were determined. According to the results of beta-blocker dose and ICD shock comparison analysis, it was determined that there was no statistically significant difference between shock groups in term of beta-blocker distributions⌊X2(sd=2, n=146)=0.335, p>.05⌉. Univariate logistic regression analysis was performed to determine the varaibles that predicted the shock variable in patients. Cardiomyopathy(CMP) ischemic (p<.001), End systolic diameter(ESD)(p<.001) and atrial fibrilation(AF)(p<.05) variables were determined as significant predictor of shock status.

CONCLUSIONS:

Beta-blockers significantly reduce mortality, sudden detah and ICD shock rates in heart failure patients with their benefical effects. In meta-analysis of patient level data from MADIT-II and SCD-HeFT, higher NYHA class, lower LVEF, no beta-blocker therapy and single chamber ICD(versus dual chamber) were significant predictors of appropriate shocks. In our study, CMP ischemic, ESD and AF were found to be predictors of ICD shock. It was found that the beta-blocker dose did not have a significant effect on ICD shock.

Table 1. Demographic characteristics of all patients

Characteristics	Subgroups	Shock Group (n=60)		No Shock Group (n=86)		
		n	%	n	%	p
Sex	Female	6	10,0	9	10,5	,927
	Male	54	90,0	77	89,5	
CMP ischemic	Yes	27	45,0	65	75,6	,000***
	No	33	55,0	21	24,4	
HT	Yes	26	43,3	38	55,8	,919
	No	34	56,7	48	44,2	
Digoxin	Yes	15	25,0	20	23,3	,808
	No	45	75,0	66	76,7	
Smoking	Yes	20	34,5	11	12,9	,002**
	No	26	44,8	38	44,7	
	Ex-smoker	12	20,7	36	42,4	
AF	Nsr	33	55,9	63	73,3	,030*
	AF	26	44,1	23	26,7	
DM	Yes	21	35,0	27	32,1	,720
	No	39	65,0	57	67,9	
		Ort.	SS.	Ort.	SS.	p
Age		50,48	12,04	55,45	9,29	,006**
EF		22,09	7,33	23,73	7,30	,185
EDD		65,95	9,77	60,78	8,51	,001***
BMI		26,75	3,67	27,25	2,83	,359
NYHA		2,43	0,72	2,19	0,76	,050*
Sodium		137,22	5,14	137,19	4,81	,967
Uricasid		6,93	2,01	7,23	2,21	,395
AST		25,07	13,54	24,65	12,50	,849
ALT		24,97	13,09	26,56	18,17	,564
Directbil		0,40	0,44	0,36	0,36	,579
Totalbil		1,09	0,76	1,01	0,65	,491
LDL		97,71	31,69	94,53	35,52	,582
Trgliserid		140,53	76,75	162,20	116,13	,209
HDL		42,90	22,53	37,91	7,85	,062
KOL		170,20	39,97	165,44	46,09	,520
BNP		2125,15	3493,00	2568,36	5711,39	,614
sPAB		42,97	11,00	40,76	11,60	,252
ESD		56,82	9,76	50,88	7,78	,000***
TAPSE		16,00	3,43	16,48	3,90	,473

• **Table 2.** Betablocker vs shock groups results of chi-square analysis

			Shock Groups				
			No	Yes	Total	Chi-Square	p
Betablocker	İnitial	Count	6	5	11	,335	,846
		% within Betablocker	54,5	45,5	100,0		
		% within Shock Type	7,0	8,3	7,5		
	Titration	Count	68	45	113		
		% within Betablocker	60,2	39,8	100,0		
		% within Shock Type	79,0	75,0	77,4		
	Max	Count	12	10	22		
		% within Betablocker	54,5	45,5	100,0		
		% within Shock Type	14,0	16,7	15,1		
Total		Count	86	60	146		
		% within Betablocker	58,9%	41,1	100,0		
		% within Shock Type	100,0%	100,0	100,0		

Not: ** = p ≤.05; **= p ≤,01; ***= p ≤.,001*

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Keyword: *ICD shock, betablocker, heart failure*

ID: 56

Topic:

Cardiology > Other

Presentation Type:

Oral Presentation

Factors Affecting Persistent Atrial Fibrillation in Patients with Post-Operative Atrial Fibrillation and One-Year Results of Apixaban Treatment.

Assoc. Prof. Ufuk Türkmen[1] , **MD Kudret Atakan Tekin**[* 2]

[1] *Department of Cardiovascular Surgery, Hitit University Faculty of Medicine, Corum, Türkiye*

[2] *Department of Cardiovascular Surgery, Hitit University Corum Erol Olcok Training and Research Hospital, Corum, Türkiye*

Objective: Post-operative new-onset atrial fibrillation (POAF) occurs in approximately 10-40% of patients after coronary artery bypass surgery (CABG). Guidelines for managing atrial fibrillation suggest anticoagulation based on CHA2DS2-VASc risk factors, regardless of arrhythmia. We aimed in this study; to evaluate the factors affecting PAF between patients with persistent AF (PAF) and patients without (non-PAF) and the rates of minor and major bleeding and thromboembolism that may occur under apixaban treatment in our patients who developed POAF after CABG and were treated with apixaban as an anticoagulation drug for one year.

Methods: Among 642 patients who underwent elective isolated CABG in our hospital between January 2019 and June 2022, 73 patients with POAF after discharge were included in our study. Demographic characteristics, medical history, perioperative variables and medical data of the patients were analyzed retrospectively from the hospital database.

Results: PAF was present after one year in 14 (19.18%) of 73 patients ($p<0.001$).In PAF patients, age 72.14±5.71 ($p=0.002$), female gender 11 (78.57%) ($p<0.001$), body surface area 1.79 (1.57-2.32) ($p=0.043$)), preoperative CVO of 6 (42.86%) ($p<0.001$), left atrium diameter mean 5.45 cm (5-6.1) ($p<0.001$), CHA_2DS_2-VASc score of 4 and above ($p<0.001$) 0.001) was found to be significant. In the one year using Apixaban, Epistaxis 4 (28.57%) ($p= 0.039$) was found to be significant in the PAF group. Between the two groups of PAF and non-PAF, there was no significant difference in terms of GIS bleeding, pericardial hematoma, thoracentesis, reoperation, transfusion, intracranial haemorrhage, thromboembolism, SVO, subcutaneous hematoma.

Discussion: The prevalence of POAF varies according to the type and technique of surgery, patient characteristics, arrhythmia method, and arrhythmia definition. It is very important to reveal the risk factors of POAF as it prolongs the hospital stay and increases mortality risk. Although POAF is common after CABG, patient data on anticoagulation and treatment strategies in patients returning to sinus rhythm after discharge are insufficient. According to the guidelines, anticoagulation therapy with rate and rhythm controls is recommended in patients with prolonged POAF (>48 hours) with risk factors or other AF comorbidities.

Conclusions: It shows that treatment with apixaban as anticoagulation in patients who develop POAF after isolated CABG can be a safe and effective anticoagulant option with minimal bleeding and thrombotic event risk within one year. More comprehensive multicenter randomized studies are needed to identify POAF risk factors in more detail.

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Keyword: *postoperative atrial fibrillation, coronary artery bypass grafting, apixaban, persistent atrial fibrillation*

Oral Presentation Session

New Horizons in Aortic Valve Surgery

Date: 06.11.2023 Time: 13:00 – 14:00 Hall: 7

ID: 22

Topic:

Cardiovascular Surgery > Aortic valve surgery

Presentation Type:

Oral Presentation

A Multi Center Experience: Is Valve Replacement Safe for Patients with Hugely Dilated Left Ventricle?

Assoc. Prof. Ahmed Ahmed*
Ain Shams University, Cairo, Egypt

Background: Dilated left ventricle occurs in chronic aortic and mitral regurgitations. We describe the early outcome of mitral and aortic valve replacement for patients with severely dilated left ventricle in different surgical interventions. Methods: From March 2014 to December 2018, 620 patients with left ventricular end-diastolic diameter (LVEDD) of ≥ 70 mm underwent valve replacement procedures in 8 cardiac surgery centers in Egypt. One hundred ninety four cases (31.3%) underwent aortic valve replacement, 173 cases (27.9%) underwent mitral valve replacement, 123 cases (19.9%) underwent double valve replacement, 59 cases (9.5%) underwent double valve replacement with either tricuspid valve repair or replacement, 33 cases (5.3%) underwent mitral valve replacement with either tricuspid valve repair or replacement, 20 cases (3.2%) underwent mitral valve replacement with CABG, 10 cases (1.6%) underwent aortic valve replacement with CABG, while 8 cases (1.3%) underwent aortic valve replacement with ascending aortic aneurysm repair. Results: Four patients (0.6%) developed new postoperative renal failure, which required dialysis. Twentynine patients (4.7%) required reoperation for bleeding. One patient (0.2 %) developed sternal dehiscence. Five patients (0.8%) postoperatively developed stroke. Twenty-five patients (4%) died, and the main causes of death were low cardiac output and sepsis with eventual multi-organ failure. Conclusion: Valve replacement in patients with hugely dilated left ventricle are safe operations with satisfactory outcomes even if combined with other procedures, especially with proper preoperative preparation, intraoperative preservation of posterior mitral leaflet, and meticulous postoperative follow up in the surgical ICU.

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replacement with chordae tendineae preservation, traction and fixation in end-stage dilated cardiomyopathy. Rev Bras Cir Cardiovasc Jan-Mar; 22(1):68-74.

Keyword: *Dilated Left Ventricle, Valve Replacement*

ID: 71

Topic:

Cardiovascular Surgery > Aortic valve surgery

Presentation Type:

Oral Presentation

Importance of Intervention Timing in Surgical Aortic Valve Replacement

Assoc. Prof. Ozan Onur Balkanay[*] [1] **,** MD Halil İbrahim Bulut[2] , MD Berk Arapi[1] , MD Çiğdem Tel Üstünışık[1] , Prof. Deniz Göksedef[1] , Prof. Suat Nail Ömeroğlu[1] , Prof. Gökhan İpek[1]

[1] *Istanbul University-Cerrahpasa, Cerrahpasa Medical Faculty, Department of Cardiovascular Surgery*

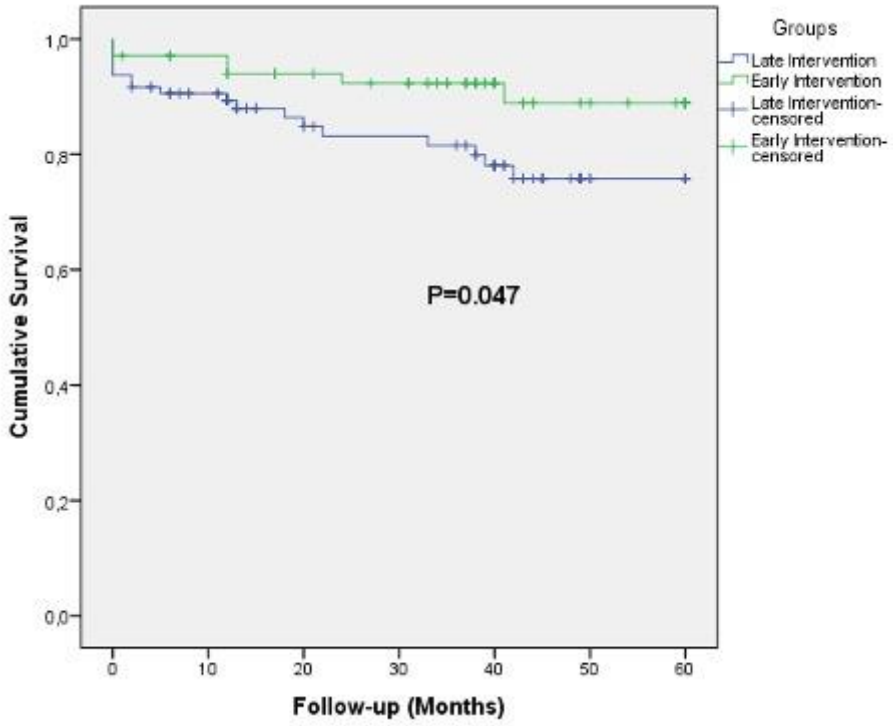
[2] *Istanbul University-Cerrahpasa, Cerrahpasa Medical Faculty*

Background: The objective of this study is to compare early intervention with valve replacement in aortic valve disease, with a focus on differences in short- and mid-term survival. The aim is to provide insights into the importance of early intervention.

Methods: This retrospective study was conducted at a tertiary clinic to investigate the significance of early intervention in aortic valve disease. It included 165 patients who underwent elective surgical aortic valve replacement, excluding certain surgical cases such as infective endocarditis, dissection, or double-valve replacement. Ethical approval was obtained, and data on patient demographics, comorbidities, laboratory parameters, and surgical outcomes were collected. Statistical analyses were performed to assess differences between the early and late intervention groups.

Results: The early intervention group had a slightly higher mean age and BMI compared to the late intervention group. No significant differences were found in most comorbidities between the groups. There were no significant differences in intraoperative mortality (0.0% in both groups). However, there was a significant difference in late mortality, with higher rates in the late intervention group. The levels of postoperative creatinine, creatinine elevation, acute kidney injury, and bleeding did not significantly differ between the groups ($p > 0.05$). Early intervention was the only statistically significant predictor, demonstrating a significant reduction in post-discharge mortality at 60 months (OR=0.20; 95% CI=0.046-0.879; P=0.033).

Conclusion: In conclusion, this study supports the importance of early intervention in aortic valve disease, emphasizing the need for timely treatment to improve patient outcomes. However, further research is required to elucidate the role of early intervention in aortic valve disease.



Keyword: *Aortic valve replacement*

ID: 69

Topic:

Cardiovascular Surgery > Aortic valve surgery

Presentation Type:

Oral Presentation

Comparative Analysis of Mechanical and Bioprosthetic Valves in Aortic Valve Replacement for Young Adults: Implications for Redo Surgery and Long-term Survival

Assoc. Prof. Ozan Onur Balkanay[*] [1] **,** MD Berk Arapi[1] , MD Çiğdem Tel Üstünışık[1] , MD Halil İbrahim Bulut[2] , Prof. Deniz Göksedef[1] , Prof. Suat Nail Ömeroğlu[1] , Prof. Gökhan İpek[1]

[1] *Istanbul University-Cerrahpasa, Cerrahpasa Medical Faculty, Department of Cardiovascular Surgery*

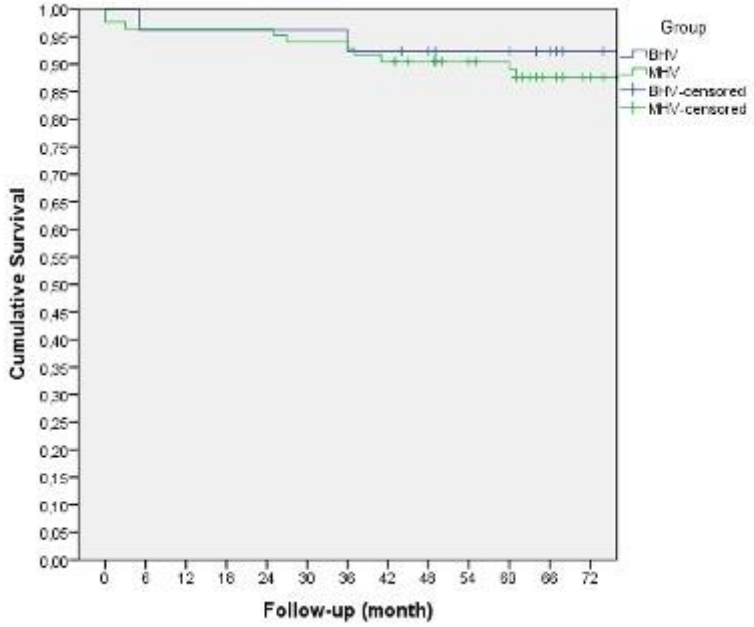
[2] *Istanbul University-Cerrahpasa, Cerrahpasa Medical Faculty*

Background: Controversy persists regarding the use of valves in aortic valve replacement for young adult patients. This study aimed to investigate the effects of mechanical or bioprosthetic valve use in patients under 65 years of age, specifically focusing on redo surgery requirements and survival rates.

Methods: The study was conducted retrospectively after obtaining approval from the University Clinical Trial Ethics Committee. Mechanical heart valves (MHVs) were implanted in eighty-four patients (74%), while bioprosthetic heart valves (BHVs) were implanted in twenty-six patients (26%). The two groups were compared in terms of mortality and the need for redo surgery.

Results: There were no significant differences in patient demographics and comorbidities between the two groups. Complex cardiac operations accounted for a significant proportion of the study cohort (45.5%). Thirty-day postoperative mortality occurred in 2 patients (1.8% overall). The 72-month survival rates were 92.3% for the BHV group and 88.1% for the MHV group ($p = 0.555$). The requirement for redo SAVR was the same in both groups, with 8.0% (2 patients) in the BHV group and 0.0% in the MHV group ($p = 0.131$). Both patients underwent successful redo valve surgery and survived at the 72-month follow-up.

Conclusion: This study showed comparable outcomes of young adult aortic valve replacement patients who received either mechanical or bioprosthetic valves in terms of mortality and the requirement of redo surgery at the 72-month follow-up.



Keyword: *Aortic valve replacement, Bioprosthetic valve, Mechanical valve*

ID: 68

Topic:

Cardiovascular Surgery > Mitral valve surgery

Presentation Type:

Oral Presentation

A Rare Cause of Anemia In a Patient With Mechanical Prosthetic Valve: Ancylostoma Duodenale

MD Senem Has Hasirci[1] , Assoc. Prof. Emir Karacaglar[* 1] **,** MD Nomingerel Tseveldorj[2]

[1] *Baskent University Department of Cardiology*

[2] *Baskent University Department of Gastroenterology*

A 61-year-old male patient with the diagnosis of mechanical prosthetic aortic valve, mechanical prosthetic mitral valve and tricuspid-plasty in cardiology follow-up. The patient using warfarin had an INR between 2.5 and 3.5, and the patient had no active complaints. In the patient's history, he was operated in 2014 due to thrombus in the mitral valve, the thrombus was cleared, and his left atrial appendage was closed. In April 2023, the patient applied to the Emergency Department with the complaints of exertional dyspnea and fatigue His Hemoglobin: 6.5 mg/dl so the patient was given 2 Unit erythrocyte suspension and hospitalized by Gastroenterology. Warfarin treatment of the patient with INR:3.8 was discontinued and low molecular weight heparin 2*0.6 cc was started. Erythematous Gastritis was reported as a result of upper gastrointestinal endoscopy, and colonoscopy was reported as normal. Hematology evaluated the patient and as a result of the tests performed, it was reported as LDH: 661 mg/dl, Haptoglobulin <8 mg/dl, Total Bilirubin: 1.5 mg/dl, Direct Bilirubin: 0.48 mg/dl PNH: negative. Hemolysis due to prosthetic valve was considered in the patient and they referred the patient to the Cardiology Polyclinic. As a result of transesophageal echocardiography, in mitral position compatible with monoleaflet prosthetic valve (mean gradient: 10.2 mmHg), valvular mild mitral regurjitation, monoleaflet aortic mechanical valve (mean gradient: 20 mmHg), and no vegetation or thrombus on the valves were observed (Figure 1A). Although the patient was laboratory compatible, we did not consider hemolysis in the patient who did not have a significant increase in valve gradients according to previous echocardiography and transesophageal echocardiography results. We reconsidered with gastroenterology and had the patient undergo capsule endoscopy. Ancylostoma duodenale was observed in the patient and Pyrantel Pamoat was started (Figure 1B). The patient does not currently have any active complaints. His Hemoglobin values were around 11 mg/dl in the follow-up, and he was re-coumadinized.

Figure 1A: Measurement of prosthetic mitral valve

Figure 1B: The image of Ancylostoma duodenale in capsule endoscopy

Caption

Keyword: *capsule endoscopy, hemolysis, prosthetic valve*

ID: 80

Topic:

Cardiovascular Surgery > Aortic valve surgery

Presentation Type:

Oral Presentation

Comparison of Mechanical and Bioprosthetic Valves on Survival among Patinets Underwent Isolated Aortic Valve Replacement

Assoc. Prof. Mehmet Işık[1] , MD Abdullah Güner[2] **, Assoc. Prof. Özgür Altınbaş**[* 3]

[1] *Konya Necmettin Erbakan University*

[2] *Konya Beyhekim Training and Research Hospital*

[3] *Gaziantep University*

OBJECTIVE: Aortic valve disease may be associated with heart failure, infection or sudden death if untreated. It can be either stenosis or regurgitation and especially seen in elderly individuals. Despite the developments in surgical area, several factors affect the postoperative survey. In this study we aimed to consider the conditions between dead and alive individuals after isolated aortic valve replacement.

METHODS: Between 2016-2022, a total of 19 dead individuals (Group 1) and 180 alive (Group 2) were involved to the study. Preoperative characteristics including laboratory and echocardiographic findings and Euroscore II were evaluated.

RESULTS: Mean age of the poplulation was 63.5±12.0 years (female; n=85, male; n=114). Avarage BMI was 27.9±6.3. Mechanical, bioprosthetic and suturless valves are used in rates of 37.4%, 28.6%, 25%, respectively. Excitus rates in patients with bioprosthetic valve was 14.8% and mechanical valve was 4.1%. Glomerular filtration rates and mean gradient were statistically significantly lower and pulmonary artery pressure and Euroscore II levels (4.45±3.16 vs 2.2±1.74) were statistically significantly higher in Group 1. Lesser ejection fraction, EROA, aortic valve area and maximum gradient were detected in Group 2 whereas diameter of ascendan aorta, LVEDD, LVESD, left ventricular mass and left ventricular mass index were higher (Table 1).

CONCLUSIONS: Several preoperative factors such as decreaed glmomerular filtration rate and meangradient increased pulmonary artery pressure and Euroscore II scores are associated with postoperative mortality in patients who were performed isolated aortic valve replacement, therefore these data can be used to predict worse outcomes after operation. Increased excitus rates in patients with bioprosthetic valve may due to advanced age and decreased maximum and mean gradients in Group 2 may be interpreted as the result of the decreased ejection fraction.

Table 1: Preoperative laboratory and echocardiography findings of the groups

		GROUP 1 (n=19)	**GROUP 2** (n=180)	**P**
Characteristics	**Unit**	**Mean±SD**		
Egfr	ml/min	62,45±16,94	74,41±18,44	0,04
Diameter of Ascendan Aorta	cm	4,24±0,25	4,13±0,40	0,35
Aortic Valve Area	cm^2	0,74±0.2	0,8±0.24	0,34
EF	%	51,80±8,32	56,13±7,90	0,47
LVEDD	cm	4,84±0,73	4,68±0,85	0,74
LVESD	cm	3.03±0,80	2.96±0,82	0,58
EROA	cm^2	1.64±0.4	1.7±0.42	0.62
Max Gradient	mmHg	76,65±17,46	82,57±18,33	0,19
Mean Gradient	mmHg	46,19±13,44	54,18±14,85	0,01
PAP	mmHg	43,31±10,43	34,48±11,16	0,001
Left Ventricular Mass	g	232,35±47,86	228,77±64,15	0,93
Left Ventricular Mass Index	g/m^2	125,27±23,42	123,34±32,68	0,84

Oral Presentation Session

Step-Up in Cardiac Surgery: Myocardial Protection and Beyond

Date: 06.11.2023 Time: 14:15 – 15:15 Hall: 7

ID: 24

Topic:

Cardiovascular Surgery > Coronary artery disease - CABG surgery

Presentation Type:

Oral Presentation

Perioperative Use Of Levosimendan In Patients With Severe Left Ventricular Dysfunction Undergoing Cardiac Surgery: A Systematic Review And Metaanalysis

Assoc. Prof. Ahmed Ahmed*
Ain Shams University, Cairo, Egypt

Background: Levosimendan is a calcium-sensitizing ionodilator. However, the current level of clinical evidence is insufficient to determine the clinical value of levosimendan in patients with severe left ventricular dysfunction subjected to cardiac surgery. The aim of this meta-analysis to provide an update of the current clinical evidence regarding the clinical value of perioperative levosimendan use in adult patients with severe cardiac dysfunction subjected to cardiac surgery. Methods: This meta-analysis was performed according to PRISMA statement. Databases searched included Pubmed, Web of Science, Scopus and Cochrane databases for systematic reviews. Search keywords were extracted from initially retrieved articles and comprised “levosimendan” and “cardiac surgery” using the Boolean search operator AND. The reported outcomes included early mortality, development of atrial fibrillation, acute kidney injury and/or renal replacement therapy, postoperative myocardial infarction, hypotension and low cardiac output syndrome. Aim of the work: The aim of this meta-analysis to provide an update of the current clinical evidence regarding the clinical value of perioperative levosimendan use in adult patients with severe cardiac dysfunction subjected to cardiac surgery. Results: The present meta-analysis showed significant association between levosimendan use and significant reduction of perioperative low cardiac output syndrome [OR (95% CI): 0.60 (0.44-0.82), p=0.001], renal injury and/or renal replacement therapy [OR (95% CI): 0.51 (0.30-0.86), p=0.01]. Also, levosimendan use was associated with a marginal trend towards lower mortality [OR (95% CI): 0.64 (0.39-1.03), p=0.07]. Conclusions: Levosimendan use is associated with reduction of perioperative low cardiac output syndrome and renal injury and/or renal replacement therapy.

References:

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Farmakis D, Alvarez J, Gal TB, et al. Levosimendan beyond inotropy and acute heart failure: Evidence of pleiotropic effects on the heart and other organs: An expert panel position paper. Int J Cardiol. 2016;222:303-312.
Pollesello P, Parissis J, Kivikko M, Harjola VP. Levosimendan metaanalyses: Is there a pattern in the

effect on mortality? Int J Cardiol. 2016; 209:77-83.
Pisano A, Monti G, Landoni G. Levosimendan: new indications and evidence for reduction in perioperative mortality? Curr Opin Anaesthesiol. 2016; 29(4):454-461.

Keyword: *Levosimendan, low cardiac output*

ID: 235

Topic:

Cardiovascular Surgery > Coronary bypass surgery

Presentation Type:

Oral Presentation

Short-Term Results Of Del Nido Cardioplegia Use In Adult Cardiac Surgery

Assoc. Prof. Mustafa Dağlı* **,** Prof. Kadir Durgut
Konya City Hospital

Aim:
Myocardial protection is a fundamental and important issue for successful clinical outcomes in open heart surgery.
Since the 1970s, hyperkalemic cardioplegic solutions have been used as the gold standard in myocardial protection, and different cardioplegia solutions have been obtained by enriching the contents of the solutions used.
Del Nido cardioplegia solution, which has been used in pediatric cardiac surgery for about 25 years, is one of them, and it has also found use in adult cardiac surgery in the last 10 years. The aim of this study is to examine the effectiveness of Del Nido cardioplegia solution, which is a single-dose cardioplegia solution instead of cold blood cardioplegia, which is frequently used in our clinic, in myocardial protection in the early period.
Material-methods: Between January 2023 and July 2023, 24 patients who underwent open heart surgery by the same surgical team in Konya City Hospital of Health Sciences University, who only used del nido cardioplegia, were included in the study. Demographic characteristics of the patients were evaluated.
Preoperative, operative and postoperative data of the patients (cardiac biomarker levels, x-clamp and CPB times, echocardiographic measurements, etc.) were compared. Results The mean follow-up period in the study was 3.3±1.2 months. Age, ejection fraction, EUROscore, NYHA scoring, CABG count, valve replacement, dissection surgeries, and other comorbid conditions were evaluated. Mean aortic x-clamp and cardiopulmonary bypass times were shorter in the DN cardioplegia group. (63.60±14.12 / 76.42±25.49 minutes (p=0.03); and 93.24±11.20 / 97.48±33.21 minutes (p=0.004). Defibrillation was performed in one patient in the DN cardioplegia group.
Peak K+ and Ca++ blood concentrations were lower in the DN cardioplegia group. (4.15±0.68 / 4.47±0.62 (p=0.003); 0.97±0.12 / 1.13±0.04 (p<0.001)).
There was no difference between the groups in terms of changes in left ventricular ejection fraction (p>0.05).
There was no difference between the groups in terms of blood transfusion rates, ventilation and hospital stay, IABP and inotropic support requirement, postoperative and 30-day mortality (p>0.05).
There was no difference between the two groups in terms of postoperative complication rates (p>0.05).
No intraoperative epicardial burn was observed with the DN cardioplegia solution used in our clinic.
Conclusion:
In the light of short-term results, DN cardioplegia provides myocardial protection similar to cold blood cardioplegia.
In addition, we think that DN cardioplegia can be used safely in all routine open cases, providing uninterrupted surgery, with shorter x-clamp, CPB times and lower defibrillation rates.

ID: 190 - 19th UCCVS - Oral Presentation

Results of biatrial cryoablation as a part of combined cardiac surgery in treatment of atrial fibrillation

MD Yury Shneider* **,** MD Georgy Antipov
FSBI "FCHMT" Kaliningrad

•Purpose of the study: To evaluate midterm results of modified McCarthy biatrial cryomaze procedure in combined cardiac surgery. •Material and methods: From January 2020 to March 2023, surgical treatment of AF was performed using a modified McCarthy biatrial cryoablation technique in 145 patients during combined cardiac surgery. The age of the patients is 65 (41-81) years old, 82 men (56.5%). AF: 84 (58%) - long-term persistent, 36 (24.8%) - persistent, 25 (17.2%) - paroxysmal. Concomitant interventions: correction of MV pathology (109), AV pathology (22), tricuspid insufficiency (74), CABG (21), correction of the ascending aorta (9), LV reconstruction (2). All patients – McCarthy procedure. The observation period is 5.8 (1-24) months. We evaluate rhythm and heart chamber remodeling after surgery using ECG, daily Holter monitoring data, ECHO-KG, the need for repeated RFA, the number of pacemaker implantations. •Results: In-hospital mortality - 3.4%. The need for inotropic therapy in 62 (42.7%) patients. The need for temporary PMI up to 10 days in 85 (58.6%) patients. Five patients had AF paroxysm, treated with amiodaron, EIT; at the time of discharge, restoration of sinus rhythm. Total: sinus rhythm at discharge in 101 (72.1%) patients, Arrhitmias - in 24 (17.1%) patients, pacemaker implantations during hospitalization in 15 (10.8%) patients. During the follow-up period, five patients required pacemaker implantation, and four patients had recurrent AF. •Conclusions: Double-atrial modified McCarthy cryomaze shows satisfactory immediate results of survival and restoration of sinus rhythm in patients with AF. There was a significant negative correlation (0.650) between the duration of AF and the sinus rhythm restoration after surgery.

ID: 139 - 19th UCCVS - Oral Presentation

Operative Myocardial protection in patients with Left Ventricular Hypertrophy: The Role of systemic Hypothermia

Assoc. Prof. Ahmed Ahmed*
Ain Shams University, Cairo, Egypt

Objectives: Myocardial hypertrophy represents a great challenge in cardiac surgery. Several strategies have been described to protect the hypertrophied myocardium during cardiopulmonary bypass, and aortic clamping, yet the ideal strategy has not been identified. This study investigates the use of moderate systemic hypothermia (MSH) as an adjuvant method to protect the hypertrophied myocardium in patients undergoing aortic valve replacement (AVR). Methods: Twenty eight patients undergoing AVR were divided into two groups, (Group I) received continuous cold 5–8 °C retrograde blood cardioplegia (CRBC) and their body temperature was cooled down to 23–26 °C. (Group II) also received CRBC but their body temperature was kept at 32–34 °C. Results: No operative morality (30 days) was noted in both groups. Postoperative reduction in ejection fraction (EF) was seen in nine patients of group I and in twelve patients of group II (P , 0.05). The need for multiple inotropes was more in group II (eight patients) than in group I (two patients) (P , 0.001). IABP was needed in three patients of group II and non in group I (P , 0.01). Conclusion: Moderate systemic hypothermia might have a role in protecting hypertrophied myocardium in patients undergoing AVR.

References:

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Padera RF, Schoen FJ. Pathology of Cardiac Surgery: Lawerence H Cohn Cardiac Surgery in the Adult, 3rd ed. McGraw Hill Medical; 2008:136.
Calafiore AM, Teodori G, Bosco G, et al. Intermittent antegrade warm blood cardioplegia in aortic valve replacement. J Cardiac Surg. 1996;11:348–54.
Anderson WA, Berrizbeitia LD, Ilkowski DA, et al. Normothermic retrograde cardioplegia is effective in patients with left ventricular hypertrophy— a prospective randomised study. J Cardiothorac Surg. 1995;36:17–24.

Keyword: *ventricular hyperatrophy, hypothermia, cardioplegia*

Oral Presentation Session

New Horizons in Cardiac Imaging

Date: 06.11.2023 Time: 14:15 – 15:15 Hall: 6

ID: 212

Topic:

Cardiology > Cardiac imaging - Cardiac CT

Presentation Type:

Oral Presentation

Evaluation with a New Artificial Intelligence Analysed Vectorcardiography Method in a Case of False Positive CT Angiography

MD Muhammed Esad Çekin[*] [1] **,** Prof. Arda Özyüksel[2]

[1] *Abant İzzet Baysal Üniversitesi Hastanesi, Bolu*

[2] *Kolan Internatıonal Hospital Group, İstanbul*

Objective:

Accurate screening for coronary artery disease both enable necessary intervention and may avoid unnecessary invasive procedures. For this purpose, stress ECG, MPS and CT angiography can be used. All methods may have its own limitations and side effects. Another new test developed for screening purposes is the artificial intelligence analysed vectorcardiography method. The sensitivity was found to be >90%, promising a high accuracy rate for ischaemia testing (1).

Method:

A 52-year-old male patient with no known disease presented with anginal symptoms. CT angiography was performed due to a family history of CAD; and reported as LMCA normal, LAD proximal 50% lesion, Cx normal, RCA normal calcium score 116. At this stage, the patient also examined with artificial intelligence analysed vectorcardiography, "Cardisiography''. Cardisiography revealed no sign of perfusion impairment. Indeed, when coronary angiography performed, found LAD with plaque, Cx with plaque, and RCA normal (figure 1).

Results:

In our case, we think that coronary CT angiography was false positive due to high calcification. Cardisiography gave negative results consistent with the findings of coronary angiography.

Despite its high diagnostic value, coronary CT angiography has limitations such as low temporal resolution, motion-related artefacts, the need for heart rate reduction and high false positive rates due to severe calcification (2). And also has some risks such as radiation exposure and contrast nephropathy.

Cardisiography is an artificial intelligence analysed vectorcardiography method that focuses on the spatial and temporal heterogeneity of cardiac excitation, developed by training with angiographic findings (1). It is a diagnostic method that estimates the risk of perfusion impairment by analysing ischaemic findings reflected on vectorcardiography. It is not an anatomical imaging method. In this case, it was able to overcome the chaleng in the assessment due to high calcium load and make a correct prediction.

Conclusion:

Cardisiography may be a promising method in CAD screening with high sensitivity. It may prevent unnecessary angiography in selected patient groups.

Legends:

Figure 1: Cardisiography report (left) and coronary angiography images of LAD (right)

References:

- [1] 1. Braun T, Spiliopoulos S, Veltman C, Hergesell V, Passow A, Tenderich G, et al. Detection of myocardial ischemia due to clinically asymptomatic coronary artery stenosis at rest using supervised artificial intelligence-enabled vectorcardiography - A five-fold cross validation of accuracy. J Electrocardiol. 2020;59:100-5
- [2] 2. Sabarudin A, Sun Z. Coronary CT angiography: Diagnostic value and clinical challenges. World J Cardiol. 2013 Dec 26;5(12):473-83.

Keyword: *CT angiography, Artificial intelligence, Vectorcardiography*

ID: 210

Topic:

Cardiology > Transcatheter tricuspid valve repair and replacement

Presentation Type:

Oral Presentation

Is Global Longitudinal Strain Able To Predict Afterload Mismatch In Percutaneous Mitral Repair?

Assoc. Prof. Attaullah Khan Niazi*
King Edward Medical University Lahore

79 yo, male, BMI 23.95

Htn, severe COPD

No CAD

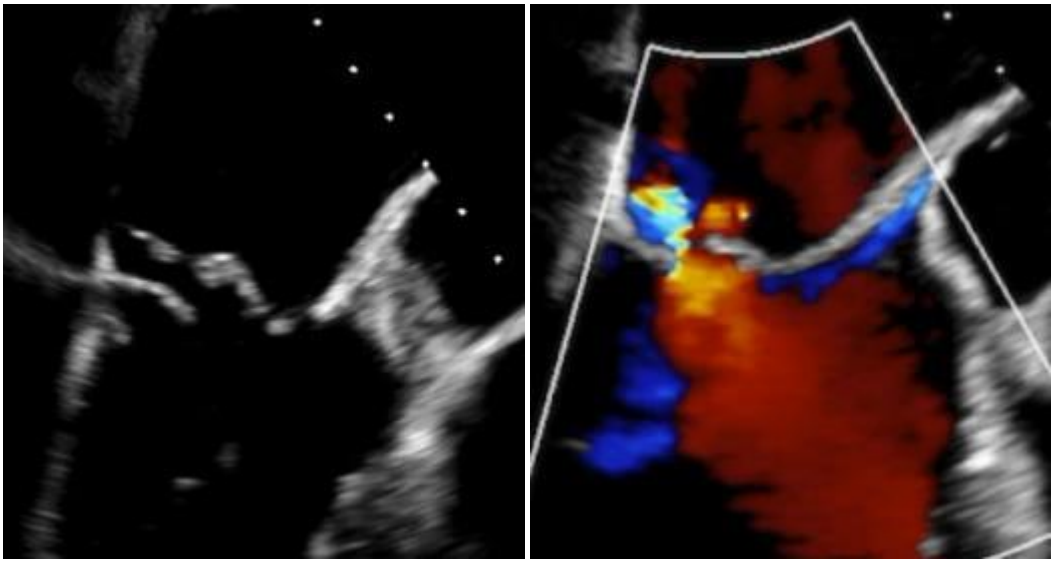
TEE:

o Severe PMR (A2 flail)
o Moderate FTR & AR
o Dilated & mildly impaired

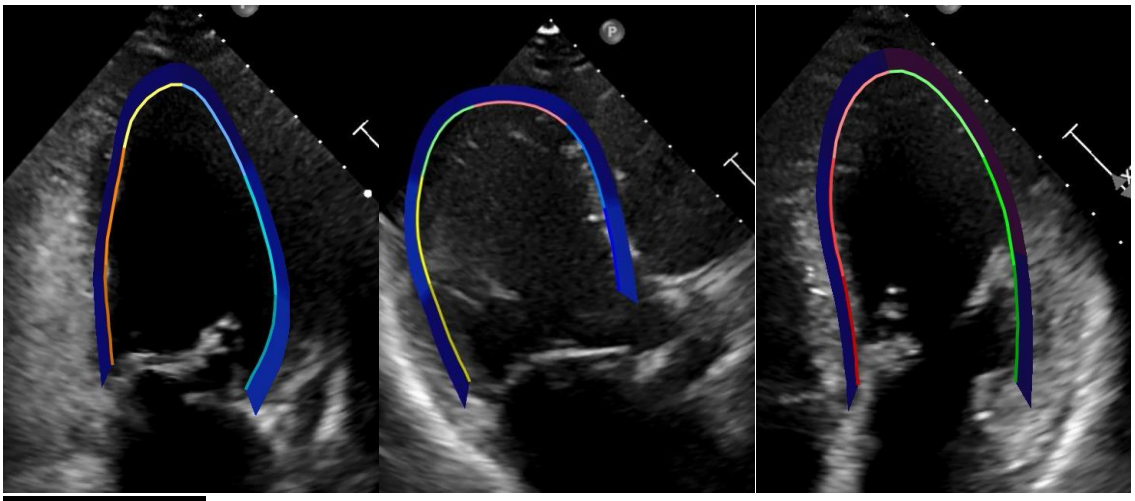
RV (EDD 49 mm, FWLS -15%) o sPAP 76 mmHg

NYHA Iib

STS m: 5.017%

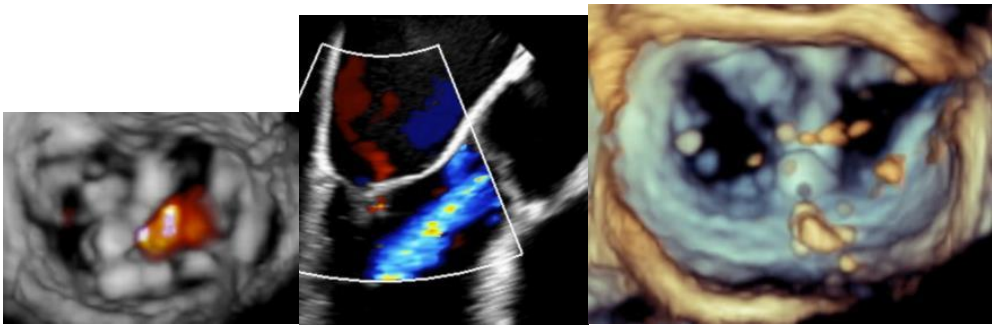


LV speckle tracking analysis

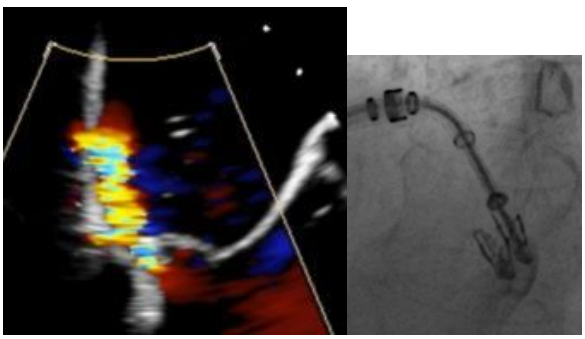


Dilated LV (EDD 57 mm, TSV 64 ml), LVEF 60%, but impaired GLS (-16.3%)

MitraClip procedure



Persistence of posterior jet/LAM prolapse
LAP 50/3 (18) mmHg



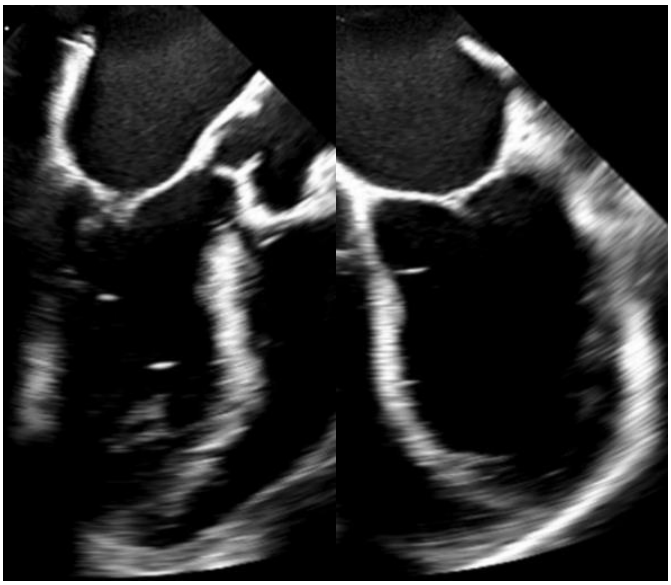
Central XTW implant (clip #1)

Medial XTW

(clip #2)

LAP (7) mmHg No V-wave Grad 2 mmHg

Acute afterload mismatch



LVEF 60→30% Treatment options?

Dobutamine + no ICU

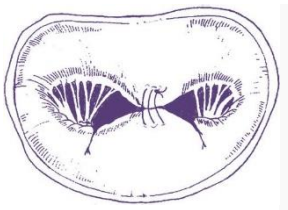
Epinephrine 0.05 mcg/kg/min + ICU

IABP→moderate AR

Conclusion

Acute & long-term MitraClip afterload mismatch outcomes are still debated1,2

Surgery



GLS < -20%

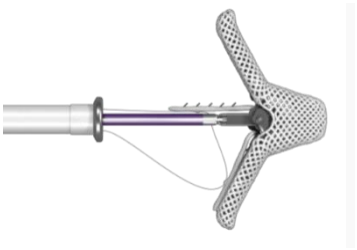
long-term LV dysfunction3

A multiparametric approach including GLS analysis should become a common practice to predict LV dysfunction after MitraClip

1Jogani S, et al. Afterload Mismatch (...) J Invasive Cardiol. 2020
2Melisurgo G, et al. Afterload mismatch after MitraClip (...) Am J Cardiol. 2014

3Citro R, et al. GLS predicts outcome after MitraClip (...). J Cardiovasc Med. 2017 4Witkowski TG, et al. Global longitudinal strain predicts left ventricular dysfunction after MV repair. EHJ CV Imaging. 2013

TEER



GLS < -9%

no LV remodeling + long-term cardiac death & re-hosp4

Keyword: *mitral repair, mitralclip*

ID: 35

Topic:

Cardiology > Chronic heart failure

Presentation Type:

Oral Presentation

Assessment Of Newly Diagnosed COPD Patients Without Concurrent Comorbidities Regarding Subclinical Left Ventricular Dysfunction By Speckle-Tracking Echocardiography

MD Mutlu Cagan Sumerkan[*] [1] **,** MD Mustafa Ilteris Bardakci[2] , MD Mufide Arzu Ozkarafakili[2] , Assoc. Prof. Kudret Keskin[3] , Prof. Nurcan Arat[3]

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Objective: COPD and heart failure (HF) represent two entities of a growing global burden that share common clinical and etiological characteristics. The timely identification of HF is imperative for effective management and treatment. Therefore, this study aimed to investigate subclinical left ventricular dysfunction (LV) and structural features by conventional and speckle-tracking echocardiography (STE) methods in COPD patients as a function of the severity stages.

Methods: This is a prospective cohort study with 46 (54,1%) newly diagnosed patients with COPD without comorbidities (formerly diagnosed with confounders for evaluation of cardiac performance (arrhythmias, diabetes, dyslipidemia, elderly age, hypertension, renal failure, cardiovascular or valvular disease)) (age 46,800 ± 4,670 years, 30 (65,2%) males), and 39 (45,9%) age and sex-matched control smokers (age 45,260±4,778 years, 24 (61,5%) males). COPD patients are classified and compared with Global Initiative for Chronic Obstructive Lung Disease (GOLD) stages. Complementary electrocardiography and laboratory testing were performed.

Results: Contrary to conventional echocardiographic parameters, STE revealed significant impairment of the LV basal circumferential strain among COPD patients compared to control smokers (-21,20% ±3,89% vs. -23,70 ±5,75, p=0,003) and gradually reduced with the severity of COPD GOLD (p=0,007), indicating LV dysfunction. Regarding the evaluation of global circumferential or longitudinal LV strain, COPD patients did not vary significantly compared to controls (p=0,10, 0,57) or throughout the stages of COPD GOLD (p=0,13, 0,20). In multiple linear regression analysis, the spirometry parameters (FEV1(L),FEV%, FVC(L), FVC%, FEV1/FVC) predicted BCS (p= 0,023).

Moreover, right bundle branch block rhythm was observed more frequently (11 (23,9%) vs. 1 (2,6%), p=0,005), and the tricuspid annular plane systolic excursion level was significantly lower (2,360±0,283cm vs. 2,523±0,334cm, p=0,017) among COPD patients. And results are associated with the degree of COPD GOLD severity (p=0.02), indicating right ventricle (RV) dysfunction.

Conclusions: COPD seems to be accompanied by impaired subclinical RV and regional-level LV deformation properties that worsen in stages of COPD GOLD.

ID: 61

Topic:

Cardiology > Cardiac imaging - Echocardiography

Presentation Type:

Oral Presentation

The Relationship Between Smoking and Right Ventricular Strain in Healthy Adults

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Introduction:

Chronic smoking may affect the right ventriclular function. The standard echocardiography may not show early right ventricular functional changes, and a more sensitive measure is needed. The aim of this work was to evaluate the subtle subclinical effects of chronic smoking on the right ventricular function.

Method:

The study includes 153 patients who admitted to cardiology outpatient department for routine control between 2021 December and 2022 July.

The demographic data and smoking history were obtained from hospital examination forms. Right ventricle strain measurements were evaluated offline from hospital data. The relationship between smoking and strain parameters was evaluated with an independent sample t-test.

Results:

Clinic were included in the study. Of these patients, 69 (%45.1) were female and 84 (%54.1) were male. The mean age of patients was 35.19 ± 9.76. The rate of patients who smoked was lower (%60.1). All of the patients were healthy adults and had no conditions which may effect the right ventricle strain values.

	Non-Smoking (N=92)	Smoking (N=61)	t	p
RV-GLS	-26.09 (5.22)	-23.51 (7.51)	-2.503	0.013

Discussion:

Our study showed that smoking is associated with subtle subclinical dysfunction of the right ventricle which can be detected by speckle tracking echocardiography, Identification of these changes can facilitate smoking cessation programs to encourage smokers to quit smoking before the development of clinical diseases.

ID: 146

Topic:

Cardiology > Cardiac imaging - Cardiac MRI

Presentation Type:

Oral Presentation

Comparing Clinical And Cardiac Magnetic Resonance Imaging Findings Of Patients With Acute Viral Myocarditis vs. Systemic Autoimmune Diseases Related Myocarditis

MD Aslı Gülfidan[*] [1] **,** MD Gündüz İncesu[1] , MD Emine Şebnem Durmaz[2]
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OBJECTIVE
Myocarditis with/without pericardial involvement is common in patients with systemic autoimmune diseases and may be the initial clinical presentation. Patients with elevated cardiac and inflammatory biomarkers with a history of recent viral infection are commonly arbitrarily diagnosed with acute viral myocarditis without the need of cardiac biopsy. This study aims to compare the clinical and cardiac magnetic resonance imaging(CMRI) features of patients with viral myocarditis and autoimmune disease-related myocarditis.

METHODS
The diagnosis of myocarditis was made according to the WHO definition. Patients with elevated cardiac and inflammatory biomarkers with recent viral infection who had CMRI were accepted as acute viral myocarditis and constituted group 1. Patients on the active phase of a previously diagnosed systemic autoimmune disease who had cardiac involvement according to cardiac biomarkers were constituted group 2. CMRI features, including functional paratemers, the presence, pattern and the distribution of late gadolinium enhancement(LGE) were assessed. Myocardial edema was diagnosed by the detection of regional or global increase of T2 signal intensity. In addition, serum biomarkers (high-sensitive CRP, high-sensitive TnT and pro-BNP levels) were compared between groups.

RESULTS
There were 41 patients with acute viral myocarditis and 36 patients with autoimmune disorders. Although LVEF was numerically lower in group 1 patients, there was no statistically significant difference between groups (p: 0.434). However, end-diastolic and end-systolic volumes were significantly higher in group 1 patients. The presence of pericardial effusion was also similar between groups. Myocardial edema was present in 26.8 % of group 1 patients and 16.7% of group 2 patients. LGE was observed in 48.8% of group 1 patients and 44.4 % of group 2 patients, and there was no statistically significant difference between groups (p: 0.704). However, the pattern of LGE was remarkably variable in group 2 patients; there were 6(16.6%) patients with transmural LGE, and 11 patients with subepicardial LGE (30.5 %). On the other hand, the vast majority of group 1 patients demonstrated group 1 mid-myocardial LGE, with only a few showing strating subepicardial LGE. There was no significant difference between groups with respect to troponin levels(p: 0.606), pro-BNP levels(0.804), and Hs-CRP levels(p: 0.176).

CONCLUSIONS

Our results demonstrated that CMRI features, including myocardial edema and LGE are comparable in patients with various types of myocarditis. However, the pattern of LGE is variable in patients with autoimmune disorders, and patients with atypical LGE with a pre-diagnosis of acute viral myocarditis should be undergone extensive rheumatological investigation.

Figure 1. Cardiac MRI images showing evidence of acute myocarditis a.Global high signal intensity on the T2-weighted spin-echo image (signal intenstiy ratio (myocardium/skeletal muscle) >2) b.Midwall LGE of the septal and lateral wall.

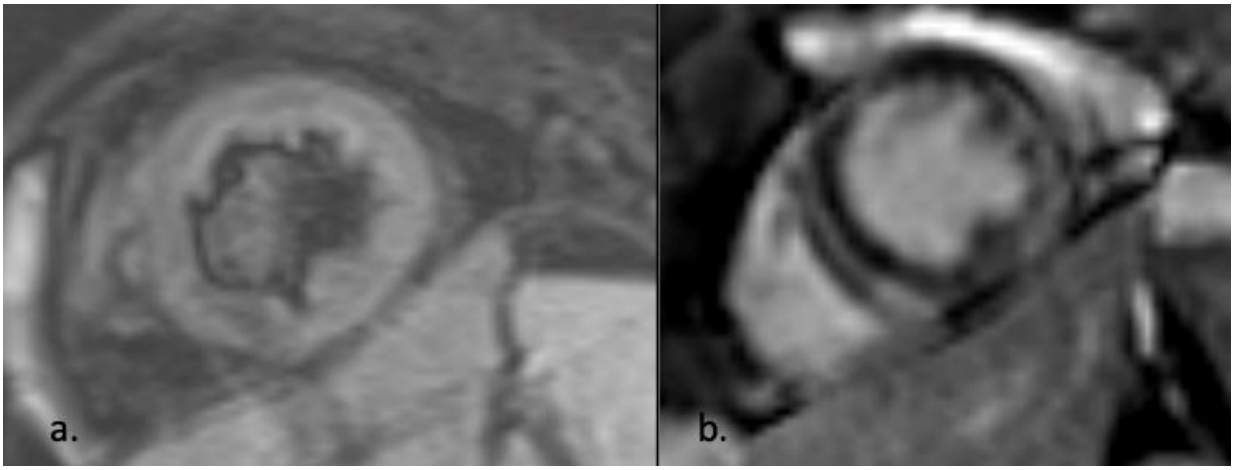

Table 1. Clinical, echocardiography and cardiac magnetic resonance imaging findings of groups			
	Acute Viral Myocarditis, n:41	Other, n:36	p value
LV Ejection fraction % (IQR)	57 (14,25)	62 (11)	0,434
LV End-diastolic volume index (mL/m2) (IQR)	62,1 (17,10)	50,6 (18,7)	**0,003**
LV End-systolic volume index (mL/m2) (IQR)	24,1 (11,75)	19,4 (11,6)	**0,024**
Myocardial mass index (g/m2) (IQR)	33,6 (15,85)	29,2 (13,6)	**0,020**
Maximal left ventricular wall thickness (mm) (IQR)	10 (1)	11 (1,75)	0,471
Pericardial effusion (Yes/No) (%)	17,1	19,4	0,788
Regional or global increase of T2 signal intensity (Yes/No) (%)	26,8	16,7	0,283
Late Gadolinium Enhancement (Yes/No) (%)	48,8	44,4	0,704
Left ventricular subepicardial LGE enhancement (Yes/No) (%)	35	50	0,285
Age (Years)	39±17	46±13	0,240
Gender (Male) (%)	25 (60,97)	21 (58,3)	0,813
Creatinin (IQR)	0,78 (0,32)	0,77 (0,36)	0,085
Albumin	4,1 ± 0,27	4,04 ± 0,38	0,907
CRP (IQR)	5,95 (4,75)	5,9 (4,03)	0,176
WBC (IQR)	5,900 (1,600)	6,300 (2,475)	0,879
Pro-BNP (IQR)	107,5 (361)	104 (376)	0,804
Troponin (IQR)	0,021 (0,204)	0,014 (0,123)	0,606
NYHA-1 (%)	84	96,3	0,141
LV End-diastolic diameter (mm) (IQR)	45 (5)	44 (4,5)	0,237
LV End-systolic diameter (mm) (IQR)	28,0 (3)	27,5 (2)	1,000
Diastolic disfunction (%)	3,3	4,2	0,872
Tricuspid regurgitation velocity (m/s)	2,3 (0,3)	2,3 (0,2)	0,892

Oral Presentation Session

Current Perspectives in Heart Failure

Date: 06.11.2023 Time: 15:30 – 16:30 Hall: 6

ID: 28

Topic:

Cardiology > Chronic heart failure

Presentation Type:

Oral Presentation

Predictors Of Kidney Function Outcomes In Type 2 Diabetes Mellitus Patients With Chronic Heart Failure Treated With Dapagliflosin

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Background: Sodium-glucose cotransporter 2 inhibitors (SGLT2i) had a favorable impact on the kidney function in heart failure (HF) patients, while there is no clear evidence of what factors predict this effect. The aim of the study was to identify plausible predictors for kidney function outcome among HF patients and investigate their association with SGLT2i.

Methods: We prospectively enrolled 480 patients with established type 2 diabetes mellitus (T2DM) and concomitant chronic HF I-IV New York Heart Association functional classes and followed them for 52 weeks. In the study, we determined the kidney outcome as a composite of a sustained declined in estimated glomerular filtration rate by 40% from baseline, or newly end-stage of kidney disease, or kidney replacement therapy. The relevant medical information, measurement of the biomarkers (N-terminal natriuretic pro-peptide, irisin, apelin, adropin, C-reactive protein, tumor necrosis factor-alpha) were collected at baseline and at the end of the study.

Results: The composite kidney outcome was detected in 88 (18.3%) patients of entire population. All patients received guideline-recommended optimal therapy, which was adjusted to phenotype / severity of HF, CV risk and comorbidity profiles and fasting glycaemia. We noticed that irisin ≤ 4.50 ng/mL at the baseline and the increase in irisin serum levels ≤ 15% added more valuable predictive information than the reference variable. Yet, the combination of irisin ≤ 4.50 ng/mL at the baseline and the increase in irisin serum levels ≤ 15% (AUC = 0.91; 95% CI = 0.87–0.95) improved discriminative value of each biomarker alone.

Conclusions: we suggest that low levels of irisin and its inadequate increase during administration of SGLT2i are promising predictors for unfavorable kidney outcome among T2DM patients with concomitant HF.

Keyword: *Heart failure, Type 2 diabetes mellitus, Chronic kidney disease, Kidney outcomes, Biomarkers*

ID: 217

Topic:

Cardiology > Other

Presentation Type:

Oral Presentation

TurkerNeXt: A Deep Learning Approach for Automated Heart Failure Diagnosis Using X-Ray Images

Assoc. Prof. Türker TUNCER[1] , Assoc. Prof. Sengul DOGAN[1] **, Prof. Mehmet Ali Kobat**[* 2]

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Objective: The primary objective of this research is to demonstrate the power of the proposed new generation deep learning model to automatically diagnose heart failure using XRay images.

Methods: This research presents an innovative deep learning model, TurkerNeXt, designed to automatically diagnose heart failure using X-ray images. We collected a comprehensive dataset comprising four classes: (i) Heart failure, (ii) Coah, (iii) Covid-19, and (iv) healthy. TurkerNeXt, a lightweight convolutional neural network (CNN) with 5.7 million learnable parameters, was proposed for classifying these disorders. The model incorporates a novel block that fuses an attention block and ConvNeXt block, and leverages activation functions such as GELU and Leaky ReLU, along with layer normalization and batch normalization. A deep feature engineering model was developed based on the pretrained TurkerNeXt, utilizing 16 patches and a raw image to generate 17 informative feature vectors. An iterative feature selector was then applied to choose the most informative features, followed by classification using a support vector machine classifier.

Results: TurkerNeXt demonstrated outstanding performance, achieving 100% training accuracy and 90.19% validation accuracy. The TurkerNeXt-based deep feature engineering model achieved an impressive testing accuracy of 97.36%.

Conclusion: The results clearly demonstrate that our proposed TurkerNeXt model is a highly accurate deep learning model, with a remarkable testing accuracy of 97.36%. Moreover, the findings highlight the successful detection of heart failure using our machine learning approach with superior classification performance. This research provides a strong foundation for the automated diagnosis of heart failure, offering promising avenues for future medical applications and research.

Keyword: *heart failure, TurkerNeXt, Deep learning, Automated diagnosis, artificial intelligence*

ID: 155

Topic:

Cardiology > Chronic heart failure

Presentation Type:

Oral Presentation

Core–Hand Temperature Difference: ANew Poor Prognostic Marker in Patients with Heart Failure With Reduced Ejection Fraction?

MD Şahbender Koç*

Ankara Ataturk Sanatoryum EAH

Parameters	**NYHA4** n:80	**NYHA3** n:82	**p**
Age, year**(**median-IQR)	68(65-72)	65(62-72)	0.112*
Gender F n,%	40(%50)	40(%48.7)	0,877 #
M n ,%	40(%50)	42(%51.2)	
BMİ kg/m^2	26(23-26)	26(25-28)	0.087*
Echocardıography			
EF %	35(30-40)	35(30-40)	0.317*
SPAPmmHg	50(50-55)	50(50-60)	0.297
LAi mm^2/l	38(35-40)	38(34-41)	0.753
RVD mm	42(40-44)	40(38-44)	0.024
RV/LV>1 n, %	38(%47.5)	35(%42.6)	0.538#
TY (grade2-4) n, %	42(%52)	40(%48.7)	0.636
MY(grade2-4) n, %	44(%55)	45(%54.8)	0.988
Pretibial edema >2 n,%	8(%10)	48(%58.5)	0.000
Pleural effusion n, %	7(%8.75)	18(%22)	0,035 ᵀ
Temperature Measurements			
CoreT°C	36.2(35.5-36.5)	36.5(36.2-36.8)	**0.000***
HHT°C	29(28-30)	30(29-31)	
LHT°C	26(24-27)	29(28-30.2)	
MHT°C	27(26-28.5)	29.2(28-31)	
HTC°C	3(2-4)	1(0-2)	
CT-MHT°C(mean±Std)	8.7±1.5	7.1±1.7	0.000§

OBJECTIVE

People with heart failure have a limited exercise potential, and they are often unable to perform sustained exercise that wouldsignificantly increase their core temperature. With reduced muscle mass and minimal flow in inactive muscle, limb muscles can be expected to be colder than the muscles of healthy people in the same cold-to-neutral environments.

METHODS

This study included 80 patients withNew York Heart Association (NYHA) class4(group1) and 82 patients with NYHAclass3(group2) heart failure with reduced ejection fraction (HFrEF); all patientshad similar basic characteristics and advanced heart failure echo findings.

The mean age was 68(range 65–72) years in group 1and65(range 62–72) years in group 2. Thefemale/male ratio was 40/40 for group 1 and40/42 for group 2. The mean ejection fraction of both groups was 35% (range 30%–40%).

The study was carried out in December 2022 and January andFebruary 2023, when the average outdoor temperature was determined to be 2.5°C,0.2°C, and 3.4°C, respectively. The air temperature of the room where the study was carried out was 21°C.

Core body temperature measurements were made with an infrared thermometer. Hand temperature measurements were recorded with a Flir C5 Infrared Thermal Cameraafter patients had been at room temperature for 30 minutes.

RESULTS

The mean ± standard deviation core–hand temperature difference (C-HTD) was 8.7°C±1.5°C in group 1 and 7.1°C±1.7°C in group2(p<.000). The change in hand temperature was3°C (range 2–4°C) in group 1and1°C (range 0–2°C) in group 2 (p<.000).

CONCLUSIONS

'The sensitivity of a C-HTD > 7.7°C to detect group 1 was 75% (95% confidence interval 68%–83%).We propose that C-HTD could be used as a prognostic marker.

References:

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- [2] Balmain BN, Jay O, Sabapathy S, Royston D, Stewart GM, Jayasinghe R, Morris NR. Altered thermoregulatory responses in heart failure patients exercising in the heat. Physiol Rep. 2016 Nov;4(21):e13022. doi: 10.14814/phy2.13022. Epub 2016 Nov 15. PMID: 27905297; PMCID: PMC5112500.

Keyword: *Core–Hand Temperature, Heart Failure With Reduced Ejection Fraction, NYHA class3/4*

ID: 211

Topic:

Cardiology > Acute heart failure

Presentation Type:

Oral Presentation

In Hospital Mortality in Acute Heart Failure with Idiopathic Cardiomyopathy and Type II Diabetes

MD Mohammed Al Jarallah[1] **, MD Rajesh Rajan[* 1] ,** MD Raja Dashti[1] , MD Bassam Bulbanat[1] , MD Mustafa Ridha[2] , MD Kadhim Sulaiman[3] , MD Wael Al-Mahmeed[4] , Assoc. Prof. Ahmad Al-Saber[5] , Prof. Zhanna Kobalava[6] , MD Prashanth Panduranga[3] , MD Khalid F. AlHabib[7] , MD Jassim Al Suwaidi[8] , MD Haitham Amin[9] , MD Salem Mohammed Alajmi[10]

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Background: Clinical characteristics and outcomes in patients with Type 2 Diabetes (T2DM) and Acute Heart Failure (AHF) patients with idiopathic cardiomyopathy are not well known.

Methods: We analysed data from 509 consecutive patients with idiopathic cardiomyopathy presenting with AHF to 47 hospitals in seven Middle Eastern countries (Saudi Arabia, Oman, Yemen, Kuwait, United Arab Emirates, Qatar and Bahrain) between February and November 2012. All patients were stratified according to T2DM. Analyses were performed using univariate and multivariate statistical techniques.

Results: The mean age of the cohort was 52.0 ±14.8 years. Of the 509 patients, 123 (24.2%) had T2DM and had a higher incidence of major stroke than the non-diabetic group (11.4% vs 2.8%; p=0.001). Diabetic patients were also more likely to be associated with hypertension than those without diabetes mellitus (78.9% vs 21.8%; p<0.001) Multivariate logistic regression demonstrated that those with cardiogenic shock (adjusted odds ratio (aOR), 59.3; 95% confidence interval (CI): 20.1-207; p=0.001) and non-invasive ventilation (NIV) (aOR, 4.19; 95% CI: 1.33-13.1; p=0.013) were associated with higher odds of all-cause in-hospital mortality. However, age (aOR, 1.00; 95% CI; 0.96-1.03; p=0.792), T2DM status (aOR, 0.43; 95% CI; 0.10-1.51; p=0.207), and atrial fibrillation (aOR, 3.95; 95% CI: 0.82-17.2; p=0.07) were not associated with higher odds of all-cause in-hospital mortality.

Conclusion: In AHF patients with idiopathic cardiomyopathy, T2DM was not associated with higher odds of all-cause in-hospital mortality. Patients on NIV and cardiogenic shock were demonstrated as independent predictors of increased in-hospital mortality.

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Keyword: *Heart failure, Middle East, diabetes mellitus, mortality, idiopathic cardiomyopathy, Arab*

Poster Session

ID: 48

Topic:

Cardiovascular Surgery > Thoracic and thoracoabdominal aortic dissections and aneurisms

Presentation Type:

Poster

Evaluation of Long-Term Cerebrovascular Problems in Type 1 Aortic Dissection Patients

MD Dilşad Amanvermez Şenarslan* **,** Assoc. Prof. Funda Yıldırım , MD Aylin Yıldız , Prof. Ömer Tetik
Manisa Celal Bayar University Cardiovascular Surgery

BACKGROUND: Outcome and management differ depending on localisation and extent of aortic dissection. Malperfusion sydrome may be associated with reduced survival for patients with acute type 1 aortic dissection. Coronary and neurologic malperfusions may present high-risk subgroups. Malperfusion syndromes may benefit from immediate open aortic repair to restore true lumen perfusion.

METHOD: A total of 81 patients were analysed retrospectively in the study who underwent surgery between 2013 and 2023 in our third-care hospital. From 81 type 1 aortic dissection patients, 12 patients had total arch replacement, 16 patients had Bentall operation and the others had ascending aorta and hemiarch replacement. From these 81 dissection patients, the cerebrovascular complications were evaluated in the follow-up period at least two years after primary surgery.

RESULTS: The two patients had cerebrovascular events at the long-term follow-up period.

CONCLUSIONS: We should follow up the type 1 dissection patients who had the false lumen pathologies of the arch branches more curiously. The cerebrovascular event due to the false lumen thromboembolic sources are the main reason for these events.

Keyword: *aortic dissection, cerebrovascular events*

ID: 52

Topic:

Cardiovascular Surgery > Peripheral artery disease and treatment

Presentation Type:

Poster

Embolectomy In Mesenteric Ischemia

MD Izatullah Jalalzai* **,** MD Yasin Kılıç , MD Ebubekir Sönmez , MD İbrahim Pir , Prof. Bilgehan Erkut
Ataturk University Research Hospital

OBJECTIVE: Arterial embolectomy is modern technique for the treatment of clinically and symptomatic acute arterial embolism. We conducted a retrospective research on 12 patients who underwent embolectomy procedures at the superior mesenteric artery origin and had intestinal embolism.

METHODS: Prior to surgery, computed tomographic angiography was used to make the diagnosis in all patients. The diagnosis was confirmed during surgery. During surgery superior mesentric artery was observed and selective thromboembolectomy was performed using 3F and 4F Edward Fogarty embolectomy catheters.

RESULTS: In 66% of patients who underwent embolectomy, the viability of the gut was restored (100% if the symptomathology lasted less than 12 hours, 56% if it lasted between 12 and 24 hours, and 18% if it lasted longer than 24 hours). The mortality rate and the length of the symptoms were associated. Mortality was around 57% in all individuals.

Conclusions: All patients with unexpected, nonspecific abdominal discomfort and a history of cardiovascular illness should undergo a mesenteric angiography in order to get an early diagnosis, which is the only approach to increase the survival rate.

ID: 75

Topic:

Cardiovascular Surgery > Coronary bypass surgery

Presentation Type:

Poster

Spontaneous Dissection Of Coronary Artery "Lupudic Origin": A Rare Cause Of Acute Coronary Syndrome

MD Abir Riache* **,** Prof. Djamal Kebour
Cardiac Surgery Departement Of Algiers

Backround
Spontaneous coronary dissection SCAD, described for the first time in 1931, corresponds to the non-traumatic and non-iatrogenic appearance of an intraparietal hematoma, of which systemic inflammatory diseases are among the etiologies of the SCAD reporting to us. The case of an adult patient presenting an acute coronary syndrome discovered during his hospitalization for the management of his lupus disease operated in our department

Material and methods
The 32-year-old patient with a history of systemic lupus and hospitalized in internal medicine for the management of systemic lupus during his patient hospitalization presented with acute coronary syndrome TTE: septal hypokinesia,minimal pericardial effusion.
Scintigraphic aspect in favor residual ischemia of 3 to 4 segments / 17.

Coronarography: spontaneous dissection at the level of the proximal anterior interventricular coronary artery taking the origin and the proximal part of the well-developed first Diagonal artery ; in whom a double bypass has been performed on anterior interventricular coronary and diagonal artery

Result
Patient operated at our department in whom we performed a double bypass on anterior interventricular coronary and diagonal artery with good post-operative with good LV function at TTE out day 5 postoperative control at 6 months good function LV

Conclusion
Spontaneous coronary dissection SCAD should be suspected before any acute coronary syndrome in an adult patient without cardiovascular risk factors presenting with a systemic inflammatory disease and requiring regular follow-up, or conservative initial treatment should be preferred in the majority of cases.

ID: 85

Topic:

Cardiovascular Surgery > Thoracic aortic aneurysm and dissection

Presentation Type:

Poster

A Rare Case Of Aberrant Right Subclavian Artery With Type B Aortic Dissection

MD Rajeev Thilak Chellasamy*
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An aberrant right subclavian artery is a rare aortic arch anomaly where the right subclavian artery arises from the proximal part of the descending thoracic aorta and distal to origin of left subclavian artery. It usually courses behind the esophagus. Type B aortic dissection along with aberrant right subclavian artery is not common. A middle aged man presented with complaints of epigastric pain and on evaluation was found to have aberrant right subclavian artery with type B aortic dissection. A total arch replacement with frozen elephant trunk surgery and an extra-anatomic bypass of right subclavian artery was performed. Type B aortic dissection is more often an incidental finding and its association with aberrant right subclavian artery is unusual. Such association should be identified and treated accordingly to avert clinical complications.

Keyword: *Aortic Dissection, Aberrant right subclavian artery*

ID: 106

Topic:

Cardiovascular Surgery > Peripheral artery disease and treatment

Presentation Type:

Poster

Subclavian Arterial Pseudoaneurysm Secondary To Granulomatous Vasculitis

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Objective: Although false aneurysms of the femoral artery have been well described, a false aneurysm of the subclavian artery is a rare entity which can result from penetrating or blunt trauma, iatrogenic causes or endovascular therapeutic procedures. The proximity of the false aneursym should make the treatment challenging, potentially requiring open repair with reconstruction.

Methods: A 25-year-old female patient admitted to our outpatient clinic with the complaint of a pulsatile mass extending from the neck to the right supraclavicular region which has been increasing in size in the last six months. Before applying to our outpatient clinic, a tru-cut biopsy was performed from the existing mass in another center, but no results were obtained. Contrast enhanced thoracic and neck computed tomographic angiography revealed a 43x45x50 mm mass enclosing the mid-portion of the right subclavian artery with a 45x11 mm pseudoaneurysm formation. The vertebral artery arised 12 mm proximally to the pseudoaneurysm.

Results: After a multidisciplinary evaluation including vascular surgery, thoracic surgery and neuroradiology, the patient was operated on under general anesthesia. The mass surrounding the right subclavian artery which was 50x45x40 mm in diameter was excised completely. A 7-mm ringed polytetrafluoroethylene graft interposition was performed after the complete resection of the mass. Nervus laryngeus recurrens monitorization was performed during the procedure. Pathological examination of the mass was reported as a right subclavian arterial pseudoaneurysm secondary to a granulomatous vasculitis. The postoperative period was uneventful.

Conclusions: Pseudoaneurysms of subclavian artery impose a major surgical challenge, especially when originating from the proximal third. Large pseudoaneurysms may rupture or produce signs and symptoms of compression. Several options should be available for intervention like open surgical resection and vascular reconstruction, endovascular exclusion and stent-graft implantation based on comorbidities, clinical presentation and anatomic characteristics.

Keyword: *granulomatous vasculitis, peripheral arterial disease, subclavian arterial pseudoaneurysm*

ID: 118

Topic:

Cardiovascular Surgery > Endovascular surgery

Presentation Type:

Poster

Both Renal And Splenic Artery Aneurysm Togetherness And The Combined Percutaneous Interventional Treatment Options

MD Seran Gülbudak* **,** Assoc. Prof. Serkan Ketenciler
Cemil Taşçıoğlu Şehir Hastanesi Kalp ve Damar Cerrahisi

ABSTRACTİON

Visceral artery aneurysm are known a rare disease and incidentally discovered while a routine radiological examination.The guidelines suggest their treatment when the arterial wall diameter larger than 2 cm or 3 times exceeding main artery.Endovascular interventions are preferred treatment that have less morbidity and mortality than surgery option.Furthermore the procedure is not require done by under general anesthesia.On the other hand the process technic choice is due to the surgeon experience.

METHODS

Renal artery aneurysms, frequently associated with hypertension, account for 25% of visceral artery aneurysm. For narrow-necked saccular aneurysms coil embolization remains the most used endovascular technique to exclude the aneurysm and maintain regular flow in the main artery. For renal fusiform aneurysms involving distal branches, embolization with coils or liquid embolic agents (or particles) can be performed with acceptable minimal parenchyma sacrifice due to poor collateral formation.

In our case both renal and splenic artery aneurysms are involved.Endovascular management with coiling and/or stenting are chosen according to size of aneurysm and collateral overflow.

Splenic artery aneurysms represent 60% in all visceral artery aneurysm. A strong correlation with female gender, pregnancy and portal hypertension has been demonstrated. Most of them (75%) are distally located, 20% in the middle third, 5% in the proximal tract. Visceral artery aneurysms or pseudoaneurysms of the middle-third are often caused by pancreatitis. In case of fusiform aneurysm, an endovascular repair with covered stent or a stent-assisted coil embolization may represent the first option but it is technically achievable only in case of proximal or intermediate location of the aneurysm, especially when dealing with markedly tortuous vessels.

RESULTS

In this case, both splenic and renal artery aneurysm embolisation are done in two steps.In the first step ,the celiac artery is selected for cannulation to reach wide-necked saccular aneurysms of the spleen.Micro-meshed flow-diverting stent is used to embolize the splenic aneurysm sac.In the second step, left renal artery aneurysm sac catheterized first and then coil embolization is done.Following steps,left renal artery aneurysm catheterised and micromeshed flow-diverting stent is used to collapse the aneurysm sac. This represents important endovascular alternative options to simultaneously exclude the aneurysm and preserve the renal vascularisation. At the end of the procedure, taking control view and both splenic and renal arteries flowing are continued and the aneurysm sacs are totally closed.

CONCLUSION

Endovascular procedure selections include different options that choose the best strategy depending on the involved visceral artery, aneurysm characteristics, the clinical scenario and the operator experience. Tortuosity of aneurysm almost always makes embolization the only technically feasible option. Embolization with coils (alone or associated with other embolic agents) represents one of the most widely used endovascular techniques, especially in emergency settings, and has a moderate theoretical risk of ischemia. Endovascular repair with a covered stent represents an ideal solution to exclude the aneurysm and preserve the parent artery, but it is feasible in less than half of cases. Stent-(or balloon-) assisted coil embolization is particularly suitable for complex aneurysms involving bifurcations or multiple ramifications.Future perspectives include ever more accurate planning of the interventional procedures (CT reconstructions, artificial intelligence), enhanced and more controllable occlusive capacity of embolic agents (coils combined with EVOH non-adhesive embolic agents), more flexible and lower-profile stent-grafts without shape memory, suitable for the tortuous visceral arteries repair and less expensive neuro-interventional devices and flow-diverting stents.

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Keyword: *Endovascular, Visceral aneurysm, Coil embolisation, Micro-mesh stents*

ID: 145

Topic:

Cardiovascular Surgery > Aortic valve surgery

Presentation Type:

Poster

Late Endocarditis on Aortic Prosthesis Complicated by an Infectious Aneurysm of the Right Sinus Ruptured in the Right Atrium: A Case Report

Assoc. Prof. Redha Lakehal* **,** Prof. Radouane Boukarroucha
Faculty Of Medicine Constantine 03 Algeria

Introduction: Endocarditis on aortic prosthesis that we all fear as patients with heart valve prosthesis, is a rare disease less than 1% of cases. However, its evolution is very unfavorable when it occurs. The appearance of a fever, often insidious, is a sure sign of the disease. Diagnosis is based on blood cultures and echocardiography. This clinical case is an opportunity for us to recall the seriousness of this condition both for patients and for cardiac surgeons.

Methods: We report the case of an adult aged 51 with two mechanical mitro-aortic prostheses implanted in 2001 presenting endocarditis on aortic prosthesis complicated by aortic leak, AVB and stroke leaving as a sequela a hemiplegia with infectious aneurysm of the right sinus ruptured in the RA in cardiac decompensation with persistent fever and orthopnea despite well-conducted triple anti-staphylococcal antibiotic therapy with clinical examination: aortic systolic murmur with crackling rales. Chest X-ray: cardiomegaly, flaky opacities, echocardiography: large aneurysm on the right coronary side fistulized in the RA, disinsertion of the aortic prosthesis with grade IV para-prosthetic aortic leak, LV: 52/32 mm, an undilated RV, an EF of 64, and finally a SAPP of 68 mmHg. Positive blood cultures: staphylococcus. Intraoperative exploration: voluminous vegetation next to the exit orifice of the aorta-RA fistula, disinsertion of the aortic prosthesis on the peri-annular abscess and vegetation on the aortic wings, destruction of the mitro-aortic junction with the presence of a fistula aorta-RA. He benefited from explantation of the aortic prosthesis, vegetation sent to bacteriology, reconstitution of the aortic annulus on the RC-LC side by a dacron patch, closure of the entry orifice of the fistula on the aortic side by separate points and reconstruction of the mitro-aortic junction with a triangular dacron tube, implantation of an aortic prosthesis in the annular position and finally closure of the orifice of the fistula on the auricular side with a dacron patch under cardiopulmonary bypass.

Results: The postoperative follow-up was simple.

Conclusion: We underline the major interest of the prevention and the essential treatment of any infectious hearth, in particular ENT and dental, at the carriers of cardiac prostheses.

ID: 157

Topic:

Cardiovascular Surgery > Ascending Aorta Surgery

Presentation Type:

Poster

Concomitant Pulmonary Thromboendarterectomy And Supracoronary Ascending Aorta Replacement: A Case Report

MD Osman Fehmi Beyazal* **,** MD Mustafa Karaarslan , Prof. Nihan Kayalar , Prof. Mehmed Yanartaş
İstanbul Başakşehir Çam and Sakura City Hospital

Background

Pulmonary thromboendarterectomy (PTE) is the treatment of choice for patients with operable chronic thromboembolic pulmonary hypertension (CTEPH). PTE with additional cardiac procedures has been reported to be safely applicable. However, there are not enough publications in the literature regarding the treatment strategy of CTEPH patients with ascending aortic aneurysms. In this case report, we present a successful case of concomitant PTE and supracoronary ascending aorta replacement (SCAAR).

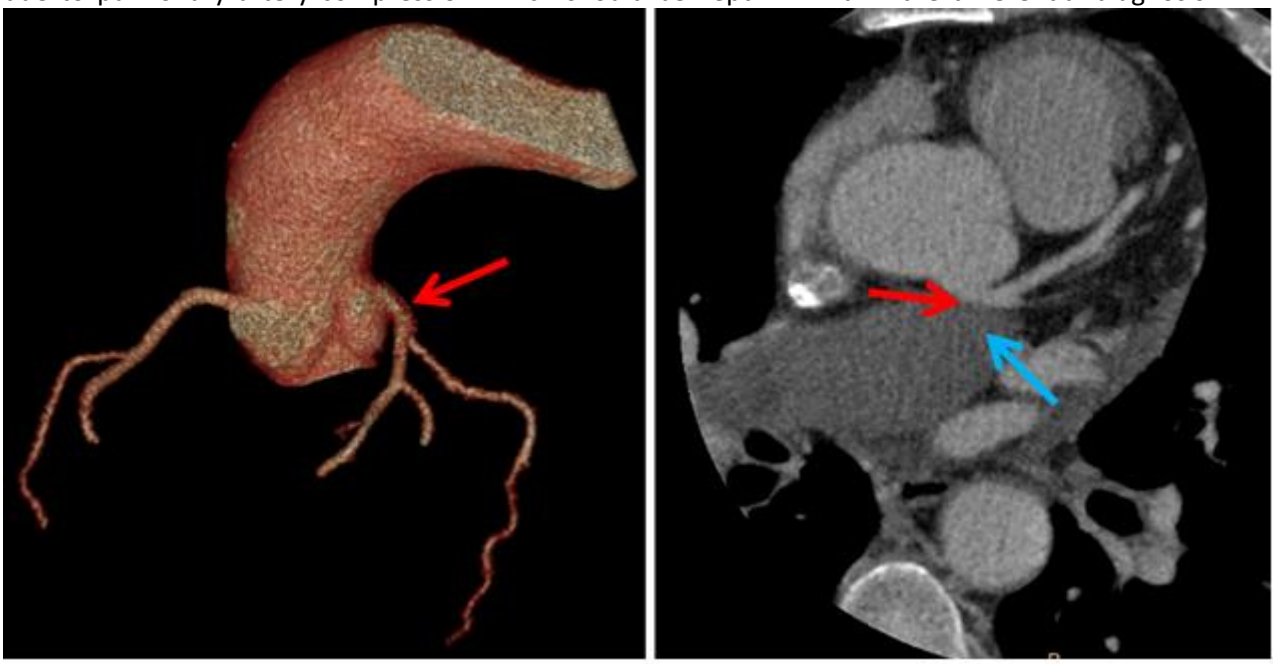
Case report

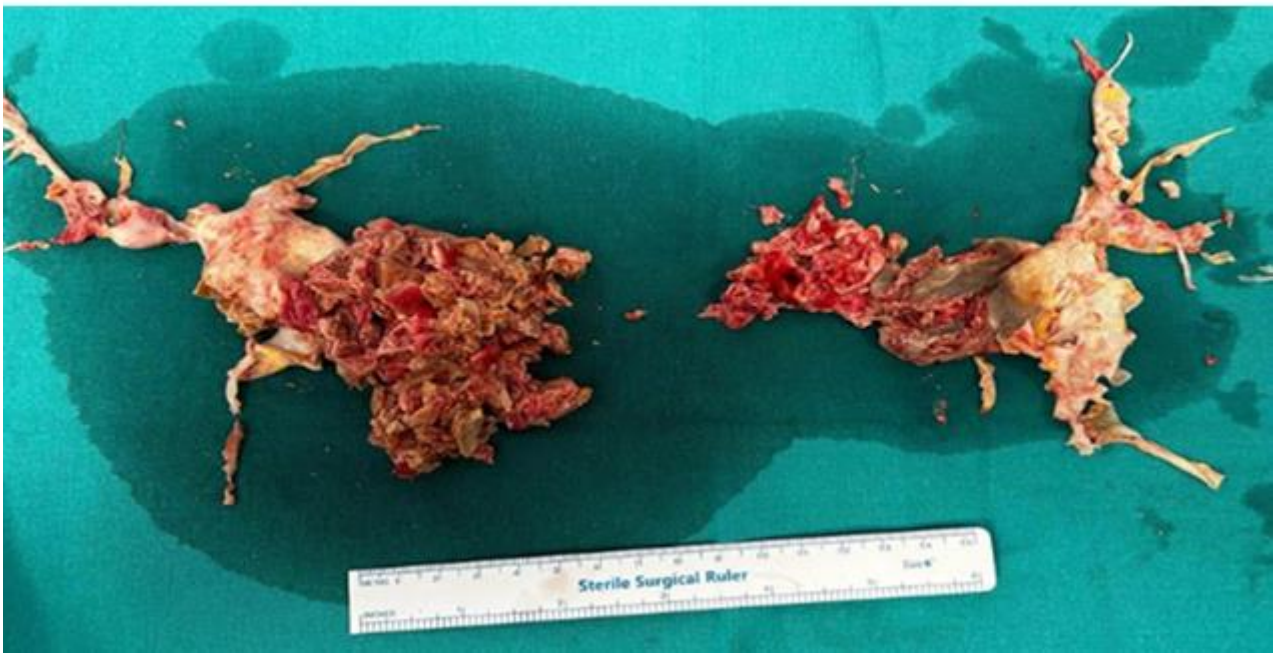
A 55-year-old male patient was admitted to our clinic with a complaint of progressive dyspnea. Two years ago, there was a thrombus that started from the proximal part of the right pulmonary. He applied to our clinic again due to the progression of dyspnea in the last 6 months. In transthoracic echocardiography (TTE), LVEF was 60%, sPAP was 73 mmHg, right heart chambers were dilated, and TAPSE was 19mm. Pulmonary computed tomographic angiography (CTA) revealed a 16mm thrombus at its widest point extending from the main pulmonary artery to both pulmonary arteries. No critical lesion was detected in coronary angiography (CAG), but a lesion was seen in the LMCA exit site and proximal, which was thought to be due to pulmonary bifurcation and right pulmonary artery compression. Intravascular ultrasonography and coronary CTA revealed external compression. In addition, the ascending aorta was 47 mm in CTA. As a result of right heart catheterization; mPAP was 78 mmHg, PVR was 22 W, and CO was 2.8 L/min. After total circulatory arrest (TCA), an endarterectomy was performed on the upper, middle, and lower lobe arteries, respectively. In the warming phase, the aneurysmatic aorta segment was resected and SCAAR was performed with a 32 mm Intergard graft. Cross-clamp time was 117 min, cardiopulmonary bypass time was 335 min, and TCA time was 33 min. The patient was extubated on the 2nd postoperative day and was discharged on the 7th day after being prescribed warfarin. As a result of TTE at the postoperative 1st week, LVEF was 40%, sPAP was 20 mmHg, and TAPSE 12 mm. He was followed without any complications in the 3 months.

Conclusion

To the best of our knowledge, our case is the first successful simultaneous PTE and SCAAR operation reported in the literature. These surgeries can be performed concomitantly, safely, and effectively in CTEPH patients with AAA. CTEPH patients may have a stenosis-like appearance in the coronary arteries

due to pulmonary artery compression which should be kept in mind in the differential diagnosis.





ID: 158

Topic:

Cardiovascular Surgery > Tricuspid valve surgery

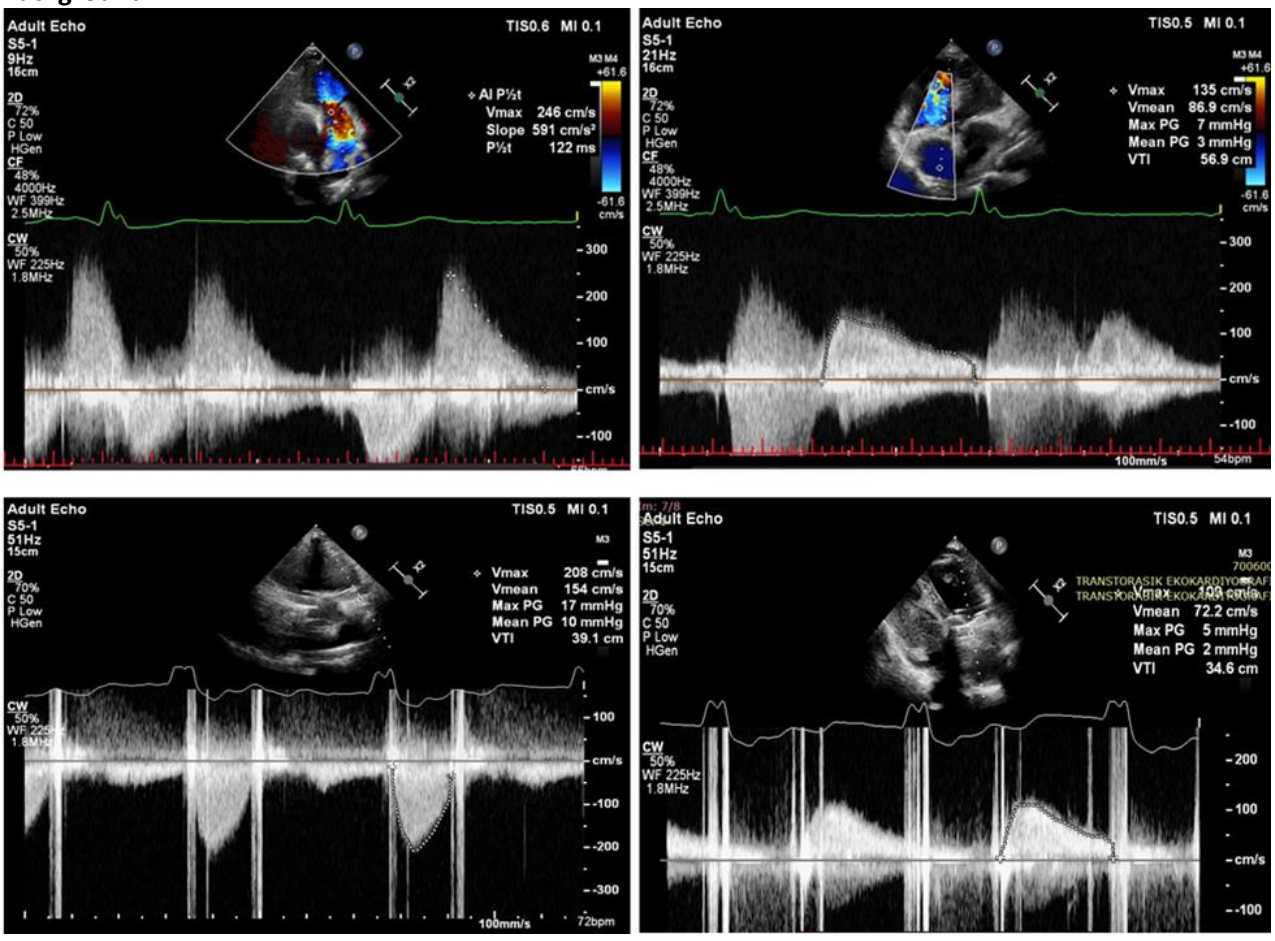
Presentation Type:

Poster

Redo Tricuspid And Pulmonary Valve Replacement With On-X In Renal Transplant Patient: A Case Report

MD Osman Fehmi Beyazal* **,** MD Koray Apaydın , Prof. Mehmed Yanartaş , Prof. Nihan Kayalar
İstanbul Başakşehir Çam and Sakura City Hospital

Background



Surgical treatment is recommended in patients with severe tricuspid regurgitation (TR) and severe pulmonary regurgitation who are symptomatic. Although renal transplant patients are a high-risk patient group due to the immunosuppressive drugs they have taken, heart valve surgeries can be performed with acceptable mortality and morbidity. We present a case who underwent tricuspid ring annuloplasty (TRA) before being followed up with renal transplantation and then successfully performed redo tricuspid valve replacement (TVR) and pulmonary valve replacement (PVR).

Case report

A 47-year-old female patient presented with shortness of breath, and pretibial edema. She had a history of TRA 9 years ago and a renal transplant 8 years ago. Transthoracic echocardiography (TTE) revealed severe TR and severe PR. No pathology was detected in coronary angiography. She was using prednisolone, tacrolimus, mycophenolic acid, and tenofovir for renal transplant and hepatitis B. His immunosuppressive drugs were stopped and he was operated on under methylprednisolone.

After redo sternotomy, it was seen that the tricuspid valve was repaired with a pericardial patch and ring annuloplasty was performed. TVR was performed with a 27/29 mm On-X mechanical valve. After pulmonary arteriotomy, PVR was performed using a 23 mm On-X mechanical valve with a pericardial patch. Cross-clamp time was 114 min, and cardiopulmonary bypass time was 147 min. After the operation, there was a total drainage of 300 ml, and no blood products were used. In the TTE performed one week later, the tricuspid and pulmonary metallic valves were functioning normally. Renal and liver functions were normal at follow-up. Treatment with methylprednisolone was continued, and after the 2nd day, the preoperative drugs were started again by adjusting the appropriate dose. However, during the follow-up period, aphthous ulcers began to develop in his mouth, which later decreased with the local drugs given. The patient was taken to the service on the 2nd postoperative day and was discharged on the 12th day after being prescribed warfarin without any complications. No cardiac or renal complications were detected during the 4-month follow-up period.

Conclusion

In renal transplant patients, redo TVR and PVR operations can be performed effectively and safely with the On-X valve. Postoperative results are better in patients with stable preoperative graft functions. Care should be taken against infections that may occur in the postoperative period, and the doses of immunosuppressive drugs should be carefully adjusted.

Keyword: *tricuspid valve replacement, pulmonary valve replacement, renal transplant, On-X mechanical valve*

ID: 187

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Poster

Which Type Of Surgery Yields Superior Outcomes When Operating Repeatedly On Patients With Critical Lower Limb Ischemia?

MD Giurikhan Magomedova* **,** MD Nargiz Mamedova , MD Mariia Vladimirovna Ananeva
B.V. Petrovsky National Research Center of Surgery, Moscow, The Russian Federation

AIM: A study aimed to evaluate the efficacy of profundoplasty and femoral-popliteal bypass surgery in patients undergoing repeated arterial reconstructions for critical lower limb ischemia.

M/M:

A study were included 43 patients, all patients were re-operated for critical lower limb ischemia. Patients are divided into 2 groups. The I group were included 21 patients who underwent profundoplasty and the II group were included 22 patients who underwent repeated femoral-popliteal bypass surgery.Decision of surgical treatment tactics was based on the results of CT angiography of the lower limb arteries. For all patients were performed duplex scanning.

RESULTS:

In the I group the average index ABI was 0.59‡0.06 In the immediate postoperative period and in the II group ABI was 0.76‡0.11 (P<0.05). In the II group 2 patients had bypass thrombosis in the immediate postoperative period, and therefore a thrombectomy was performed. In the II group a bypass thrombosis was observed in 6 (27.3%) patients, no thrombosis was detected in the group of patients with deep femoral artery plasty. During 1 year, there were 6 cases of amputation in the second group.

Long-term result (in 3 years) : In the I group ABI was 0.68‡0.09; in the II group ABI was 0.54‡0.08 (P>0.05).In the I group (profundoplasty) reocclusion of the reconstruction zone was not observed and 10 patients had reocclusion in the group with repeated femoral-popliteal bypass surgery in 3 years after surgery . Only two cases of amputation was observed in the I group, 7 cases in the second group .

Survival in the first group was 92.9%, in the second group 84.1% (P>0.05) in a year. In three years in the first group was 71.4%, in the second group II was 56.8% (P<0.05).

CONCLUSIONS: Profundoplasty is the effectiveness operation of choice for patients with critical lower limb ischemia during repeated arterial reconstructions.

ID: 188

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Poster

A New Method For Predicting The Results Of Femoropopliteal Bypass Surgery In Patients With Diabetes Mellitus (A Mathematical Formula)

MD Ye Hao Ran[*] [1] **,** MD Nargiz Mamedova[2] , MD Giurikhan Magomedova[2] , MD Mariia Vladimirovna Ananeva[2]

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[2] *B.V. Petrovsky National Research Center of Surgery, Moscow, The Russian Federation*

Objective: To create a mathematical formula for assessing the patency of a synthetic graft in the postoperative period after femoral-popliteal bypass surgery (FPB) in patients with diabetes mellitus (with satisfactory distal runoff).

Materials and methods: The study included 60 patients with femoral-popliteal segment TASC II B and C lesions, assessed using the Rutherford scale (1-4.5 points), who underwent FPB surgery. The patients were divided into two groups: Group I, consisting of 22 patients with graft thrombosis, and Group II, consisting of 38 patients with patent grafts (at 6 months).

Results: Through binary logistic regression analysis of comorbidities and risk factors, inclusion parameters were determined, including smoking (p=0.02 OR=0.35 95%CL:0.18-0.68), high C-reactive protein (p=0.009 OR=0.44 95%CL: 0.32-0.82), and diameters of anterior tibial artery (ATA) (p=0.001 OR=0.65 95%CL:0.28-0.68), posterior tibial artery (PTA) (p=0.001 OR=0.26 95%CL:0.19-0.41), and peroneal artery (PA) (p=0.001 OR=0.56 95%CL:0.27-0.62).

The mathematical formula obtained is as follows:

$$P = \frac{1}{1+e^{-(9,77-0,67X_1-1,06X_2-0,87X_3-0,71X_4-1,61X_5-1,01X_6)}}$$

(X1- Hyperlipidemia, X2 - Smoking, X3 - Elevated C-reactive protein, X4 - Diameter of ATA, X5 - Diameter of PTA, X6 - Diameter of PA, e @ 2.718)

p<0.05 indicates high graft patency within 6 months;

p>0.05 indicates low graft patency within 6 months.

Conclusions:

The use of the proposed formula in vascular surgery will allow for predicting surgical treatment outcomes in patients with diabetes mellitus in the preoperative period. This, in turn, will facilitate the process of selecting the management approach for patients with diabetes mellitus and increase the effectiveness of surgical treatment.

ID: 192

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Poster

A Novel Non-Invasive Method In Order To Rule Out Coronary Artery Stenosis Prior To Peripheral Arterial Surgery: Artificial Intelligence Analyzed Vectorcardiography

Prof. Arda Özyüksel[*] [1] **,** MD Esad Çekin[2] , MD Baran Şimşek[3] , Prof. Gero Tenderich[4]
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[3] *Department of Cardiovascular Surgery, Kolan Hospital, Istanbul, Turkey*
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OBJECTIVE

Atherosclerosis and associated coronary artery disease may complicate the stenosis of larger sized arteries such as abdominal aorta, ileac and carotid arteries. Undetected stable coronary artery disease may increase the morbidity and mortality of such surgical interventions. In traditional medical approach, a coronary angiography is usually performed prior to peripheral arterial revascularization in order to rule out coronary arterial involvement. Herein, we would like to share two cases whom an artificial intelligence (AI) analyzed vectorcardiography was used for the abovementioned purpose. The sensitivity of AI-assisted Cardisiography in order to exclude stable coronary artery disease is 97% for males and 90% for females.

METHODS

Cardisiography focuses on spatial and temporal heterogeneity of cardiac excitation using vectorcardiography with a five-fold nested cross-validation in comparison to angiographic findings[1]. Two patients, one male with the diagnosis of Leriche Syndrome and one female with bilateral carotid artery stenosis were evaluated with AI-assisted Cardisiography prior to coronary angiography. Cardisiography revealed no significant probability with regard to vectorcardiography and AI based supervised machine learning algorhythms. Afterwards, conventional coronary angiographies were performed and any stenosis in the coronary vascular bed was excluded.

Case-1: 42 years old male who had symptoms and clinical findings of Leriche Syndrome (claudication, erectile impotence and diminished peripheral pulses) (Figure-1). Following preoperative evaluation, an aorta-bifemoral bypass graft was interposed uneventfully.

Case-2: 55 years old female patient was admitted to our clinic with dizziness and transient ischemic attack. Carotis artery angiography revealed critical stenosis at the left and moderate stenosis at the right internal carotid arteries (Figure-2). A carotid endarterectomy and saphenous vein patch plasty were uneventfully performed.

RESULTS

Coronary artery involvement in peripheral arterial disease is an important association, since ruling out a critical coronary artery stenosis is deemed mandatory prior to revascularization of carotid arteries, abdominal aorta, ileac arteries and distal branches. AI-assisted Cardisiography may be used as a non-invasive alternative method in the diagnosis of stable coronary artery disease, especially when surgery for carotid artery stenosis is based on Doppler ultrasonographic findings alone (i.e., without performing CT angiography or conventional angiography prior to surgery).

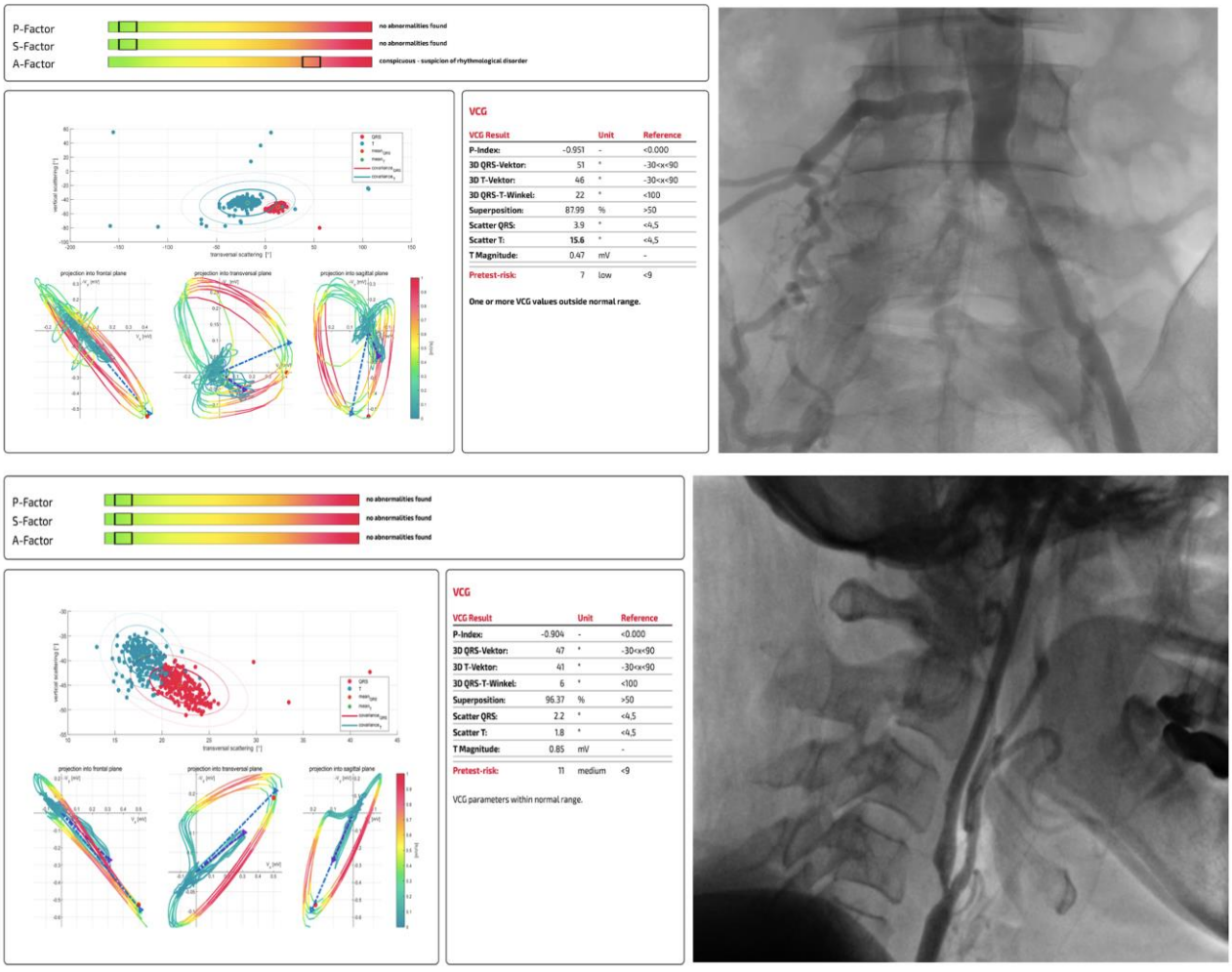
CONCLUSIONS

AI-assisted Cardisiography may be used as an alternative non-invasive method in order to rule out stable coronary artery disease in patients undergoing peripheral vascular surgery, decreasing the need for conventional angiography. Further large-scale clinical trials will be needed, before further assumptions can be drawn.

Legends:

Figure-1: AI-assisted Cardisiography Analysis (left) and abdominal aorta-ileac involvement in Leriche Syndrome (right).

Figure-2: AI-assisted Cardisiography Analysis (left) and internal carotid artery stenosis (right).



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Keyword: *vectorcardiography, ischemic heart disease, artificial intelligence, peripheral arterial disease*

ID: 213

Topic:

Cardiovascular Surgery > Peripheral artery disease and treatment

Presentation Type:

Poster

An Interesting Pseudoaneurysm in a Pediatric Patient

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[1] *Ministry of Health City of Hospital /Adana*

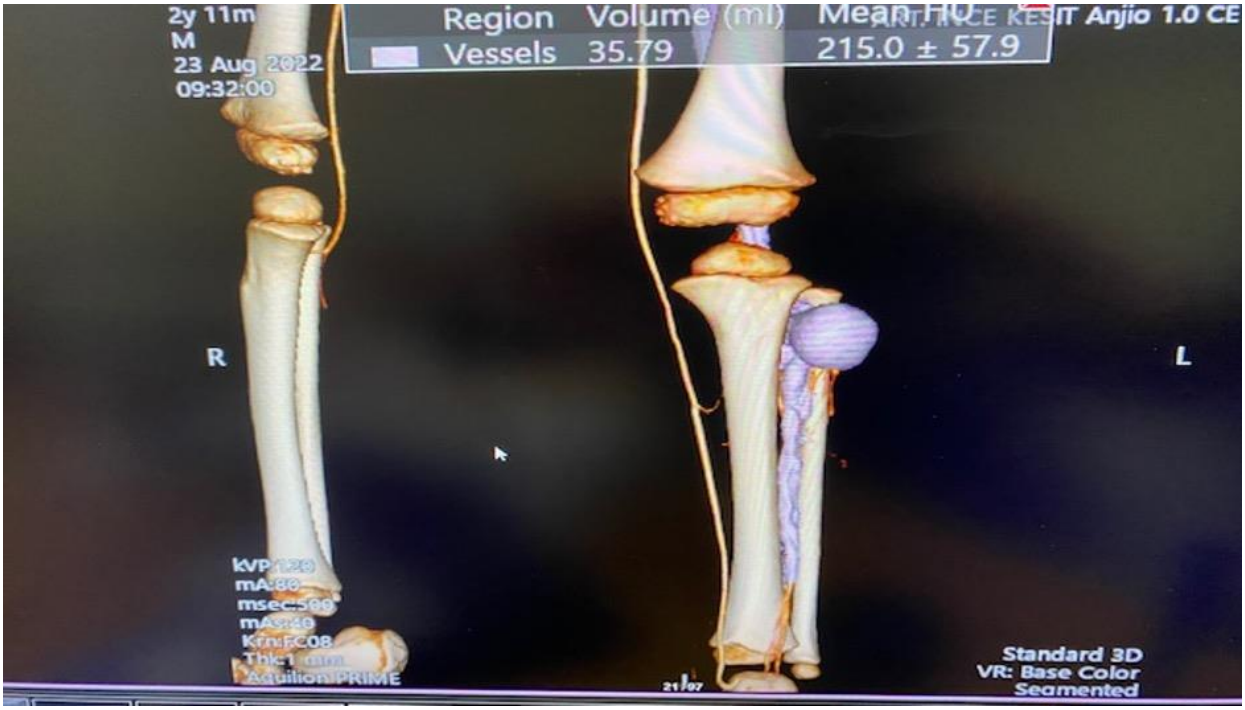
[2] *University of Cukurova,Faculty of Medical, Department of Cardiovascular Surgery-Adana/ Turkey*

OBJECTİVE: A 3-year-old boy patient, who applied to the emergency clinic with the complaint of a glass fragment stinging in the left lower knee region about one month ago, was discharged after no active bleeding and were palpable his left lower extremşty distal pulses.

METHODS: He applied to our outpatient clinic with complaints of pain and swelling in this left leg after one month. On physical examination, the distal pulses of the left lower extremity were less palpable than the right ones. The mass was detected a pulsatile-thrill, tender with palpation of 3x2 cm, including 2 cm scar tissue belonging to the glass incision in the 1/3 proximal lateral of the left cruris. On CT angiography was showed an aneurysmatic filling of 36x 22 mm in bilobular apperance originating from the proximal part of the left anterior tibial artery was observed, and early venous return (Figure 1). The patient was operated on urgently. It was observed fistula between anterior tibial artery and anterior tibial vein and pseudoaneurysm in anterior tibial artery in operation. The fistula and pseudoaneurysm were repaired by primary suturing of the artery and vein (Figure 2a, b).

RESULTS: He was discharged on the 7th postoperative day.

CONCLUSİONS: Emergency surgery may be required, although stab wounds are asymptomatic in some cases.



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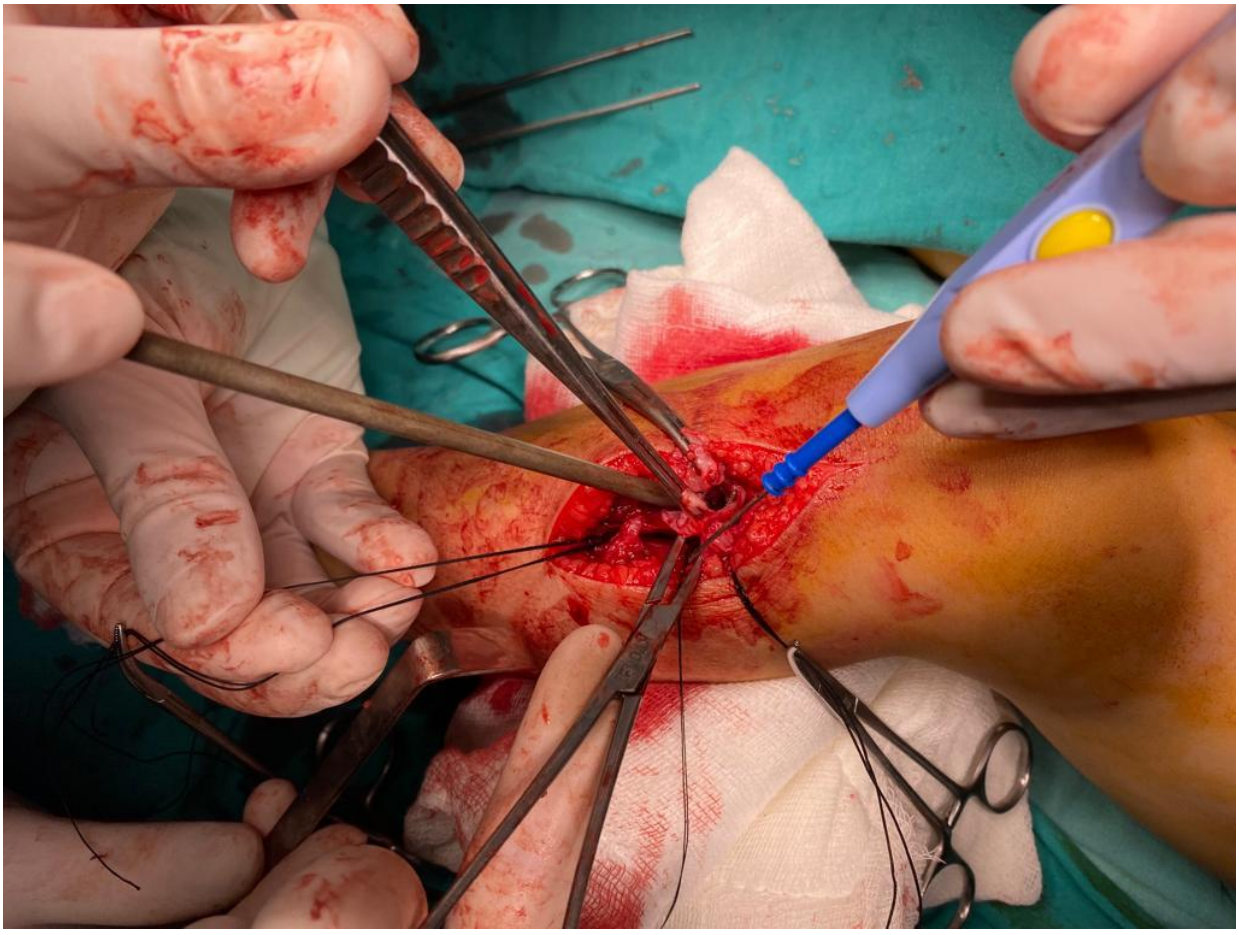
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Keyword: *Penetrating injury, Fistula, Pseudoaneuysm*

ID: 218

Topic:

Cardiovascular Surgery > Medical and surgical treatment of heart failure

Presentation Type:

Poster

Needle Mapping, A Simple Technique To Estimate Adequate Depth Of Septal Excision In Hypertrophic Cardiomyopathy

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Departement of cardiovascular surgery, Imam Khomeini Hospital Complex, Tehran University of Medical Sciences

Introduction:

Hypertrophic cardiomyopathy (HCM) is a primary myocardial disease characterized by left ventricular

hypertrophy in the absence of other etiologies. Asymmetric hypertrophy of left ventricle, especially the interventricular septum, is the hallmark of HCM[1]. Transaortic septal myectomy is standard treatment for septal reduction, especially for patients with impaired functional capacity and a subaortic pressure gradient of more than 50 mmHg at rest or after provocation[2].

For patients undergoing surgical treatment, transthoracic echocardiography (TTE) is the most commonly used imaging technique. Cardiac magnetic resonance (CMR) is not used routinely in surgical planning for most patients with HCM. Subaortic septal thickness should be reviewed for planning operation, however, length of the enlarged septum is more important than subaortic septal thickness[3].

Some surgeons, especially young and less experienced ones have cautioned against transaortic myectomy. Here we describe a simple and practical technique to estimate adequate depth of septal excision to overcome the concern of iatrogenic ventricular septal defect and/or inadequate gradient relief.

Method:

We insert a 16-20 F foley catheter through a small transverse pulmonary artery incision into the right ventricular outflow tract and inflate the balloon of catheter to push the septum toward left ventricular outflow tract. A needle for injection gauge 16 or more inserted and gradually advanced into the septum just till to balloon explosion.

The length of needle that leads to piercing and explosion of the balloon shows the maximum thickness of septum that we mark it on needle using a pen marker. Again we insert that marked needle at the same point but this time, 5 mm less than marked line on the needle, so, this is adequate depth of excision to prevent iatrogenic ventricular septal defect and/ or inadequate gradient relief. This is the basis of our needle mapping that can be done in two or more point of septum.

Conclusion:

Although this technique is not an exact computer mapping of septal thickness, however, improves surgical exposure of hypertrophied septum, and also is a simple and practical strategy especially in hands of less experienced surgeons to prevent iatrogenic ventricular septal defect and/or inadequate gradient relief.

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ID: 241

Topic:

Cardiovascular Surgery > Thoracic and thoracoabdominal aortic dissections and aneurisms

Presentation Type:

Poster

State Of Hemorrhagic Shock After Rupture Of An Abdominal Aortic Aneurysm In A Woman With No Medical History: A Case Report

Assoc. Prof. Redha Lakehal* **,** Prof. Boukarroucha Radouane
Faculty of medicine Constantine 03

Introduction: The rupture of an aneurysm of the abdominal aorta is so serious, that it is better to detect the aneurysm before it manifests itself, in order to be able to monitor it, and if necessary operate it "quietly". Rupture of the aneurysm is a progressive complication. The risk of breakage becomes significant when the diameter is greater than 50 mm. The rupture most often occurs in the abdominal cavity, causing massive bleeding, which is often fatal. Sometimes the rupture is less important and allows an emergency intervention, after a transfer to a vascular surgery department. We report a case of an unprecedented woman with hemorrhagic shock following a ruptured abdominal aortic aneurysm.

Methods: We report the observation of a 50-year-old woman urgently evacuated from a peripheral health facility following the discovery of a ruptured abdominal aortic aneurysm during pain-motivated abdominal angioscan. excruciating abdominal pain associated with shock. On reception, the patient was in shock with impregnable tension and extreme skin-mucous pallor, transferred quickly to the operating room, the patient suffered a recovered cardiac arrest, after induction an emergency thoracotomy and clamping of the descending thoracic aorta, a Median laparotomy and clamping of the abdominal aorta under renal and the two iliac arteries, exploration revealed a large left prerenal hematoma and a rupture of the abdominal aorta on the left lateral wall on a thickened aortic wall. At the time of the exploration, the patient had a deactivation of the cardiac pump, which was not recovering despite an untimely vascular filling.

Results: The patient had a deactivation of the cardiac pump following a state of refractory hemorrhagic shock. A sample of the abdominal aortic wall was taken and sent for anatomo-pathological study.

Conclusion: Serious progressive complication. Factors that increase the risk of rupture are: a growth rate greater than 10 mm in 1 year, smoking, arterial hypertension, obstructive pulmonary disease, the sacciform nature of the aneurysm, and finally with a diameter equal to the female sex. The death rate is high after rupture. Treatment can be endovascular or surgical.

ID: 243

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Poster

Total Section Of The Humeral Artery During A Fall On A Sharp Part Of A Mirror: About A Case

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Introduction: Open vascular trauma is relatively frequent. It can affect the functional and vital prognosis of the limbs. They are always associated with lesions of the soft parts or neighboring organs. The clinical presentation is variable. The aim of this work is to show a domestic accident in a child type total section of the humeral artery by a piece of a mirror.

Methods: We report the observation of a 08-year-old girl victim of a fall on a sharp part of a mirror without bone damage to the forearm with abolition of the left radial pulse with well-colored left hand and forearm. Without sensitivomotor disorders for more than 24 hours. Intraoperative exploration: Loss of humeral arterial substance of 03 cm with retracted and thrombosed ends without damage to the median nerve and without venous damage. The procedure consisted in reestablishing humeral arterial continuity through the saphenous vein after preparation of the humeral arterial ends with immobilization of the upper limb by a plaster splint.

Results: The postoperative consequences were simple.

Conclusion: Open vascular trauma can reveal itself either by hemorrhage or by ischemia. The exploration of the humeral artery should be systematic after open dislocation of the elbow. The presence of a lesion of a vessel should be suspected and explored in front of an opening in the path of a vascular axis. Treatment is appropriate for vascular lesions and possibly associated lesions. It is conventional surgical or endovascular. The urgency of its implementation depends on the intensity of the hemorrhagic shock or the downstream ischemic repercussions. Walkman syndrome can be even postoperatively.

ID: 254

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Poster

An Unusual Cause Of Abdominal Pain: Case Report Of A Superior Mesenteric Artery Syndrome

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Background: Superior mesenteric artery (SMA) syndrome, also known as Cast Syndrome or Wilkie's Syndrome, is an infrequent yet serious cause of acute abdomen resulting from proximal obstruction of the small bowel. The condition arises due to the compression of the third part of the duodenum positioned between the aorta and SMA, occurring at a narrow angle and distance. Rapid weight loss leading to the loss of the intervening mesenteric fat pad is the predominant cause of SMA Syndrome, although other factors as corrective spinal surgery for scoliosis have been implicated. Despite its rarity, SMA syndrome can lead to significant morbidity if not promptly diagnosed and managed.

Methods: We present a 20-year-old female patient who was referred to our clinic with a 4-month history of upper abdominal pain and vomiting. The pain was gradual in onset and worsened in the supine sleeping position but improved when lying on the left side. She experienced non-projectile, green to yellow vomitus with partial digestion, usually occurring after meals and accompanied by nausea. The patient reported a history of rapid weight loss, accounting for nearly 25% of her total body weight over four months. She had undergone a previous open cholecystectomy, which did not resolve her symptoms. CT imaging revealed a reduced aortomesenteric angle of approximately 19.7 degrees and a decreased aortomesenteric distance of 5.21 to 6.35 mm, confirming the diagnosis of SMA syndrome.

Results: Initial conservative management, including dietary modifications and the administration of pramine, did not lead to significant improvement. As the patient declined total parenteral nutrition (TPN) despite hospital admission, a nasogastric (NG) tube was inserted with IV fluid. However, conservative management failed to alleviate her symptoms, prompting surgical intervention. A gastrojejunostomy (Braun anastomosis) was successfully performed, resulting in a marked improvement in the patient's symptoms and nutritional status. Subsequent follow-up evaluations at six months revealed sustained improvement and a healthy weight gain.

Conclusion: SMA syndrome is a rare but significant condition that can mimic various gastrointestinal disorders, making its diagnosis challenging. Early recognition and accurate diagnosis are crucial to prevent serious complications and initiate appropriate management. Conservative measures are the first-line approach, but in cases of treatment failure, surgical intervention, such as gastrojejunostomy, can yield favorable outcomes. Physicians should maintain a high index of suspicion for SMA syndrome, particularly in patients with unexplained upper abdominal pain and significant weight loss, to ensure timely intervention and improve patient outcomes.

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Keyword: *Superior mesenteric artery syndrome, SMA syndrome, wilkie's syndrome, aortomesenteric angle, weight loss*

ID: 273

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Poster

Pleuro-Pericardial Window For Recurrent Malignant Pericardial Effusion

MD Ghebouli Khalil* **,** MD Tchouar Samir , MD Belbachir Bachir , MD Lembarki Faycal , MD Hidouche Farouk , MD Mebarki Nadjib , Prof. Medjdoub Yacine Miloud
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Background Malignant pericardial effusion is a pathological accumulation of fluid in the pericardial cavity occurring in patients with different types of cancer. The optimal treatment of malignant pericardial effusion for patients who develop tamponade or a pre-tamponade clinical condition remains controversial. Nonetheless, it should ensure complete and permanent drainage with minimal discomfort and risk to the patient. Multiple treatment options for pericardial effusion are present, among them the pleuro-pericardial window. A pericardial window is a cardiac surgical procedure to create a fistula – or "window" from the pericardial space to the pleural cavity. Pericardial window was first performed by Baron Dominique Jean Larrey in 1829. This study focuses on surgical approach for recurrent massive malignant pericardial effusion. Methods This is a descriptive retrospective study spread over a period of 7 years to identify 26 patients operated in our department for malignant pericardial effusion, Results This study included 26 patients with a mean age of 49 years. The primary malignancy was breast cancer in 15 cases (57.69%), lung cancer in 7 cases (26.92%), lymphoma in 3 cases (11.54%), and cancer cervix in 1 case. The surgical approach was anterior thoracotomy in 15 cases, and video-assisted thoracoscopic surgery in 11 cases. The chest tube duration ranged from 2 to 6 days for patients treated with VATS approach against 3 to 9 days for patients treated with thoracotomy approach. Histopathology of the pericardial specimen was positive for malignancy in 19 cases (73.08%) and revealed non-specific pericarditis in 7 cases (26.92%). We did not record postoperative mortality, but at 4 months postoperatively, 2 patients were dead due to progression of their primary malignancy, and one patient developed recurrence. Conclusion We concluded that thoracoscopic pleuropericardial window is an excellent treatment option for recurrent massive malignant pericardial effusion with the same results as thoracotomy but with a short hospital stay and more comfort for the patient

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Keyword: *pericardial effusion, pleuropericardial window, anterior thoracotomy, surgery*

ID: 274

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Poster

Surgical Of Mediastinal Cyst: Analysis End Results Of 16 Cases

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Abstract: Mediastinal cyst, are rare benign malformations lesions. Their origin is essentially congenital grouping several varieties according to their tissue origins. They can also be secondary to inflammatory conditions and which pose a problem of differential diagnosis with other cysts. This is the case with mediastinal hydatid cysts, which are frequent mainly in countries where hydatid is endemic. Our objective is to review the main mediastinum cysts and their diagnostic and therapeutic approach through a retrospective study, within the thoracic surgery department, over a period of six years. Patients and methods: This is a descriptive retrospective study spread over a period of 7 years to identify 16 patients operated in our department for mediastinal cyst Results: During this period, 16 patients were monitored and treated for mediastinal cyst. They were 8 men and 8 women, aged between 23 and 69 years with a mean age of 35.5 years. The clinical symptomatology was dominated by the mediastinal syndrome (cough, dyspnea and chest pain). All our patients had received a frontal chest X-ray and a chest CT scan Anterior mediastinum cysts represent 62.5% of cases; those of the middle mediastinum represent 12.50% of cases, and 25% for the posterior mediastinum. The etiologies were represented by : Bronchogenic cysts : 50 %, Hydatid cysts : 18.75 %, Pleuropericardial cysts :12,5%, Thymic cysts : 12.5%, and Cystic lymphangioma in 6.25%, Surgery indicated in all patients with excellent results. Discussion Mediastinum cysts are a rare entity, hydatid etiology remains quite common in our context. The radical and complete excision of the mediastinal cyst is the only definitive curative treatment. It is indicated for all cysts excepted asymptomatic pleuropericardic cyst. Analysis of the surgical specimen makes it possible to establish the etiological diagnosis

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Keyword: *mediastinal cyst, surgery, complications*

ID: 275

Topic:

Cardiovascular Surgery > Other

Presentation Type:

Poster

Management Of Cardiac Wound: Case Report

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Introduction Wounds of the cardiac area are serious surgical emergencies whose mortality is essentially linked to the delays in treatment; it is the surgical emergency par excellence. We define through this observation modalities of cardiac wound management with a special emphasis on the initial direction of the patient toward a surgical service, rapid diagnosis, and surgical treatment. Case: We report a 26-year-old man, admitted to the emergency department with cardiac wound caused by a knif, inflicted by him self for suicide. The patient was admitted rapidly to the operating room and was approached by anterior thoracotomy. No major event was noted post operatively and the patient leaved the department on day 8. Conclusion: Patients with cardiac wounds should be transported to the nearest surgical hospital.

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Keyword: *Heart, Cardiac wound, Cardiac surgery*

ID: 277 - 19th UCCVS - Poster

A First In Aterectomy Device Atherectomy That Works From 0.035mm Guide Wire?

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Use of 0.035 Hydrophilic wire-operated atherectomy in SFA and ILIAC artery lesions

Peripheral Atherectomy devices generally work over a 0.014 or 0.018 mm guide wire. Since these wires are very thin, they can be bent during the advancement of the atherectomy device, and sometimes the tip may break off. Since the iliac region does not provide sufficient support in the curved areas of the iliac artery, it can cause dissection or even rupture in the iliac artery. On the other hand, changing 0.014 wires after passing the lesion with 0.035 wires causes additional expense. Moreover, the advancement of 0.014 wires in completely occluded SFA lesions can cause problems. Also, in corssover procedures, the thin wire does not carry the device when crossing.

In this study, Peripheral Atherectomy (Uprooter Peripheral Atherectomy System, Mavera) device was used as operating with both 0.014 and 0.035 hydrophilic guide wires. While atherectomy operating over 0.014 wire was used in a total of 25 patients (Uprooter Peripheral Atherectomy System, Mavera), atherectomy operating with 0.035 wire (Uprooter) was used in 14 patients. Patients were treated with Peripheral Atherectomy System (Mavera). Although atherectomy device working with 0.035 wire has not yet been developed all over the world, Uprooter Peripheral Atherectomy System was produced for the first time in our country as Mavera (Uprooter Peripheral Atherectomy System, Mavera) .

ID: 279 - 19th UCCVS - Poster

Our Experience Pharmacomechanic Thrombectomy Case In Deep Vein Thrombosis

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Süleyman Demirel University Medicine Faculty Cardiovascular Surgery

Pharmacomechanical Thrombectomy is a current treatment approach in acute iliofemoroal DVT. However, it is important that the cases are acute. The devices used in cases exceeding 15 days can remain in the vein by holding on to the fibrin ligaments. Pharmacomechanical devices, especially used over the guide wire, provide us with easy use in practice. The passage of devices can be difficult. From time to time, cava filters may need to be inserted in addition to pharmacomechanical treatment, especially in cases with pulmonary embolism risk.

Pharmacomechanical DVT treatment (Peripheral vascular Longıtudınal Pharmacomechanic Thrombolysis/Thrombectomy Catheter Mavera) was applied to 25 DVT cases in our clinic, and all of the cases were acute DVT. In only 2 cases, a temporary filter was inserted into the inferior venous cava (Effacer Perıpehral Vascular Thrombolysıs Catheter with Filter, Mavera). The venous flow of the patients was fully opened. The procedure times were approximately 45 minutes from the time they were brought to the table. The Caval temporary filter was 1 day after the procedure. withdrew.

Pharmacomechanical DVT treatment has satisfactory results in acute DVT. It is an important method in the treatment of iliofemoral DVT. It reduces the risk of postphlebitic syndrome and pulmonary embolism.

ID: 280 - 19th UCCVS - Poster

Turkish Glue Is A Thermochemical Method In The Treatment Of Varicose Vein

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Süleyman Demirel Üniversity Medicine Faculty Cardiovascular Surgery

We treated varicose veins with more than 4000 glue methods. We investigated whether there was a thermal reaction due to burning and warmth under our hands during the procedure in a significant part of the patients. We used the increased saphenous vein with the permission of the patient who had bypass operation in vitro. Glu was given and pressure was created in accordance with the procedure. The temperature was obvious. Then the sections of the saphenous vein were examined histopathologically. At the end of the examination, thermal damage changes were observed, especially in the intima. These changes were similar to those in laser treatment. However, they did not progress to the media layer.

Laser therapy is a thermal method in varicose veins. However, the augmentation method used in recent years is also a thermochemical method. As with laser, ecchymosis does not develop, and the patient returns to his life in a short time and its effect begins immediately. The combination of both chemical bonding and thermal effect reduces the recurrence rates. This is the first histopathological study.

ID: 282

Topic:

Cardiovascular Surgery > Covid-19 and cardiovascular surgery

Presentation Type:

Poster

Analysis Of The Demographic Characteristics During The COVID-19 Pandemic In Coronary Artery Bypass Grafting Patients

MD Ogtay Musayev[*] [1] **,** Prof. Rafael Dashdamirov[2] , Prof. Firdovsi Ibrahimov[1] , Prof. Kamran Musayev[1] , MD Beyrek Abbaszade[1] , MD Nigar Kazimzade[1] , MD Sona Gasimzade[1] , MD Nargiz Mushtagzadeh[1] , MD Pedimat Ahmedova[1]

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Background: The COVID-19 pandemic has introduced significant challenges to the healthcare landscape, impacting patient demographics and medical interventions. This study explores the influence of the COVID-19 pandemic on the demographic profile of patients who underwent coronary artery bypass grafting (CABG) before pandemic.

Methods: A retrospective analysis was conducted on a cohort of 510 patients who underwent revascularization by CABG two years before pandemic and divided them into two groups: those who tested positive for COVID-19 (n=172) and those who tested negative (n=338). Comprehensive demographic data, including age, gender, comorbidities, and clinical variables, were collected and analyzed. Statistical comparisons were made to assess the impact of COVID-19 on the demographic characteristics of CABG patients.

Results: Our findings revealed several noteworthy trends in the demographic profile of CABG patients during the COVID-19 pandemic. While no significant differences were observed in the proportion of male patients between the COVID (+) and COVID (-) groups (73.8% vs. 78.8%, p = 0.164), patients aged over 65 years constituted 30.2% of the COVID (+) group and 33.5% of the COVID (-) group (p = 0.426).

Notably, hypertension prevalence was higher among COVID (+) patients (80.2%) compared to COVID (-) patients (72.8%, p = 0.065). Diabetes mellitus (DM) was more prevalent in the COVID (+) group (50.6%) compared to the COVID (-) group (40.8%, p = 0.036). Smoking rates were notably higher among COVID (+) patients (26.7%) compared to COVID (-) patients (36.1%, p = 0.034).

Other parameters, including hyperlipidemia (HLP), family history, chronic obstructive pulmonary disease (COPD), chronic kidney disease (CKD), peripheral artery disease (PAD), and previous myocardial infarction (MI), did not exhibit statistically significant differences between the groups.

Baseline demographic characteristics					
Parameter	**COVID (+) n=172**		**COVID (-) n=338**		**p-value**
	Number	**Percantage (%)**	**Number**	**Percantage (%)**	
Sex (male)	127	73,8	268	78,8	0,164
Age (>65)	52	30,2	114	33,5	0,426
HTN	138	80,2	246	72,8	0,065
DM	87	50,6	138	40,8	0,036
HLP	25	14,5	50	14,8	0,938
Smoking status	46	26,7	122	36,1	0,034
Family history	30	17,4	51	15,1	0,492
COPD	6	3,5	11	3,1	0,889
CKD	11	6,4	22	6,5	0,961
PAD	9	5,2	25	7,4	0,354
Previous MI	24	14,0	52	15,4	0,668

Table 1. Baseline and demographic characteristics

Note: HTN – Hypertension DM - Diabetes mellitus, HLP – Hyperlipidemia, COPD - Chronic obstructive pulmonary disease, CKD - Chronic kidney disease, PAD - Peripheral arterial disease.

Conclusions: The impact of the COVID-19 pandemic on patients who underwent CABG before pandemic is unmistakable. While gender distribution and specific comorbidities have held steady, significant shifts have occurred in age distribution, hypertension rates, diabetes prevalence, and smoking habits. Importantly, our study identifies hypertension as the demographic parameter most affected by COVID-19, with a notable increase among affected patients. Moreover, we observe a marked rise in diabetes prevalence among this cohort. Our study identifies a noteworthy observation: patients undergoing CABG who present with hypertension and diabetes represent a particularly susceptible demographic to the influence of COVID-19. This finding underscores the necessity for heightened attentiveness and tailored medical strategies when managing this patient subgroup in the context of the pandemic.

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Keyword: *coronary artery bypass grafting, covid-19, demography*

Poster Session

ID: 43

Topic:

Cardiology > PI for SHD-ASD,VSD,PDA closure

Presentation Type:

Poster

Transcatheter Repair of Traumatic Ventricular Septal Defect in a 3-Year-Old Girl Following Blunt Chest Injury

MD Sedef Öksüz[*] [1] **, Prof. Nazmi Narin[2]** , MD Kaan Yıldız[1] , Assoc. Prof. Rahmi Özdemir[2] , MD Sedat Bağlı[1] , MD Raşit Aktaş[1] , MD Akif Atlan[1] , MD İkbal Nur Şafak[1] , Prof. Cem Karadeniz[2]

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Ventricular septal defect (VSD) is the most common congenital cardiac lesion. However, acquired VSDs are rare and typically associated with blunt chest injuries. The clinical symptoms and timing of presentation can vary, making the diagnosis difficult and sometimes delayed. Closure of traumatic VSDs depends on factors such as heart failure symptoms, hemodynamics, and the size of the defect. Percutaneous closure has emerged as a viable alternative to surgical repair. In this case report, we present the case of a 3-year-old girl who presented with a traumatic ventricular septal defect (VSD) after being struck by a minibus.

Keyword: *Traumatic ventricular septal defect, blunt chest injury, transcatheter closure*

ID: 60

Topic:

Cardiology > Coronary stents and advances in stent technology

Presentation Type:

Poster

To Study Of QT Interval In Patients With Coronary Artery Disease After The Stenting Operation

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Importance of the subject. Unexpected sudden cardiac death is one of the most distressing and baffling issues in the contemporary society. A lot of risk factors for sudden cardiac death had been proposed in the past, many have been discarded for their lack of specificity. Persistent prolongation of the QT interval constitutes a further important risk indicator in people with ischemic heart disease. Based on clinical, epidemiological and experimental data, cardiac ischemia is one of the major triggering factors of malignant ventricular arrhythmia.

Terms such as "controversy" and "debate" are frequently used when describing QTc prolongation as a risk factor for death. The QT interval is the measure of time between the onset of ventricular depolarization and completion of ventricular repolarization. Prolonged QT interval is thus considered an attractive noninvasive risk factor for SCD since a delay in ventricular repolarization can provoke arrhythmias, such as ventricular fibrillation and torsade de pointes. Unfortunately, available data have yielded conflicting results, thus fueling the ongoing debate on the clinical significance of abnormal QTc prolongation.

The purpose of the study: In order to assess the formation of risks of life endangering arrythmias, the changes in the QT interval are identified via non-invasive ECG test in cardiology. We have investigated the dynamic changes in the QT interval in patients with IHD after the stenting operation.

Materials and methods: The total of 40 patients (15 female and 25 male) aged 45-65, IHD, stable angina, FC III, patients without mycardial infarction and diabetus mellitus were chosen for the sudy. The study was carried out in the second clinic of TMA, in the department of surgery and angiography in 2015-2016. SCHILLER ECG, veloergometry and the SIEMENS angiography apparatus were deployed in the research. The stents Resolute, Biomatrix, Orsiro and Xience were used in the study. QT interval was measured three days before and after the intervention and the formula of Bazett was used in this measurement.

Results: All the patients in the sample were divided into three groups based on the results of coronaroangiography. 1st group consisted of 15 patients and 75,5±2,24% stenosis was identified in the descending coronary artery, 2nd group consisted of 15 patients and 75,0±2,4% stenosis was identified in the circumflex coronary artery, 3rd group consisted of 5 patients and 76,0±1,6% and 75,2±2,4% stenosis was identified both in right and descending coronary artery, 4th group consisted of 5 patients and 78,5±1,6%, 76,2±2,6% and 68,5%±1,6% stenosis was identified right, descending and circumflex

coronary arteries. Drug-eluting stent was inserted in all patients. Recanalization rate constituted 3 balls according to TIMI. QTc accounted for 476,1±3,71 ms before the operation and 445,1±3,3 ms after the operation in 1st group patients. This indicator was 469,1±5,6 ms before the stenting operation and 432,7±5,3 ms after it in 2nd group patients. QTc was 466,2±1,3 ms before the recanalization and 462,6±3,97 ms after the operation in 3rd group patients and in the last group of patients less changes in QTc (before 480,2±1,3 ms and 476,6±3,97 ms after the operation).

Conclusion: The prolongation of the QT intervals demonstrates the process of ventricular repolarization is nonhomogenous and it illustrates the progression risk of fatal, life threatening arrythmias based on re-entry mechanism. It is evident that the noticeable reduction in QTc is being observed after recanalization in a single-vessel disease of over 70% whereas there haven't been any noticeable changes in QTc in a double, triple -vessel diseases. The decreases of QT interval may have been caused by improvements in myocardial perfusion and may prove beneficial in reducing the probability of arrhythmias occurring.

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Keyword: *CAD (Coronary artery disease);, UCD (unexpected cardiac death), MI - myocardial infarction, DM - Diabetes mellitus, LTA - life threatening arrhythmia*

ID: 62

Topic:

Cardiology > Coronary stents and advances in stent technology

Presentation Type:

Poster

An Assessment Of Dynamic Changes Of Qt Interval In Patients With Single Vessel Coronary Artery Disease After Stenting Operation

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INTRODUCTION: In order to assess the formation of risks of life-threatening arrythmias in the type of ventricular tachycardia and fibrillation, the changes in the QT interval is identified via non-invasive ECG test in cardiology. We have investigated the dynamic changes in the QT interval in patients suffering from IHD, but those who have not experienced mycardial infarction after the stenting operation in this paper.

MATERIALS AND METHODS: The total of 40 patients (15 female and 25 male) aged 45-65, IHD, stable angina, FC III, patients without mycardial infarction were chosen for the sudy. The study was carried out in the second clinic of TMA, in the department of surgery and angiography in 2015-2016. SCHILLER ECG, treadmill and the SIEMENS angiography equipments were deployed in the research. QT interval was measured three days before and after the intervention and the formula of Bazett was used in this measurement.

RESULTS: All the patients in the sample were divided into three groups based on the results of coronaroangiography. 1st group consisted of 20 patients and 75,5±2,24% stenosis was identified in the descending coronary artery, 2nd group consisted of 15 patients and 75,0±2,4% stenosis was identified in the circumflex coronary artery, 3rd group consisted of 5 patients and 76,0±1,6% stenosis was identified in right coronary artery. QTc accounted for 476,1±3,71 ms before the operation and 445,1±3,3 ms after the operation in 1st group patients, (p>0,01). This indicator was 469,1±5,6 ms before the stenting operation and 432,7±5,3 ms after it in 2nd group patients, (p>0,01). QTc was 466,2±1,3 ms before the recanalization and 432,6±3,97 ms after the operation in 3rd group patients, (p>0,01). It is evident that the noticeable reduction in QTc is being observed after recanalization in single-vessel disease of over 70%.

CONCLUSION: Life-endangering arrythmias have a principal role to play in the formation of a sudden cardiac death among patients with IHD; The prolongation of the QT intervals demonstrates the fact that the process of ventricular repolarization is nonhomogenous and it illustrates the progression risk of fatal, life threatening arrythmias based on re-entry mechanism. Positive changes in QT interval after the stenting operation reveal improvements in the electromechanical function of ventricles and the reduction in the risk of sudden arrythmic death.

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Keyword: *CAD (Coronary artery disease);, UCD (unexpected cardiac death), MI - myocardial infarction, DM - Diabetes mellitus, LTA - life threatening arrhythmia*

ID: 136

Topic:

Cardiology > Cardiac imaging - Echocardiography

Presentation Type:

Poster

Incidentally Detected Asymptomatic Right Ventricular Hydatid Cyst

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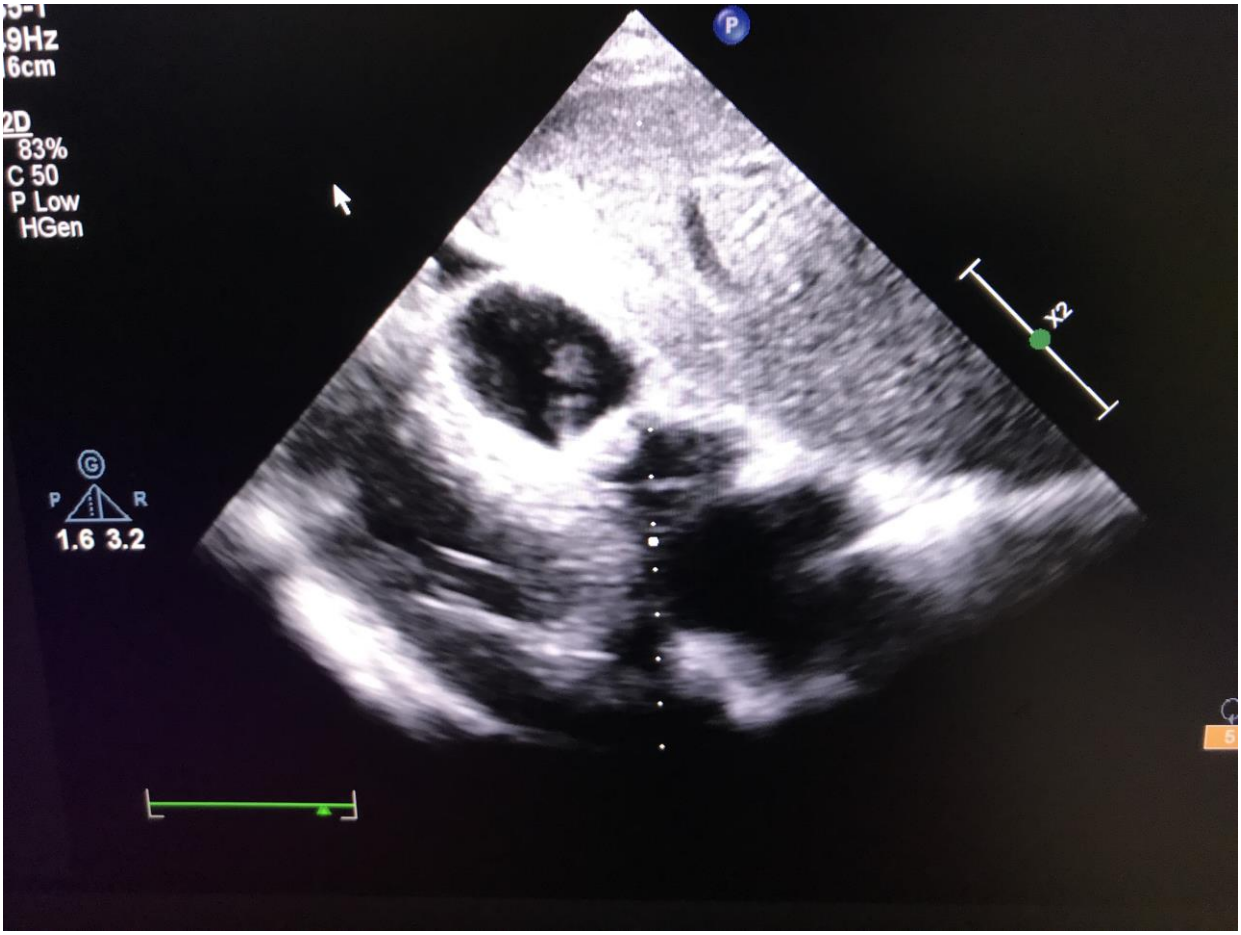
Hydatid cyst is a common parasitic disease caused by Echinococcus granulosus. Its common sites of infection are liver and lungs. Cardiac echinococcosis, although much less common, is associated with higher morbidity and mortality compared to other forms of the disease. The case we are going to present is a completely healthy and asymptomatic 30-year-old male who applied to our clinic to get medical board approval before applying for a job, and was not followed up for any disease. During the routine transthoracic echocardiographic evaluation of the patient, an image of a 32*39mm mass, with regular borders, containing multilocular structures, which is compatible with a hydatid cyst, was observed in the apex of the right ventricle. The patient, whose echocardiographic findings were confirmed in the thorax computed tomography, was referred to the cardiovascular surgery clinic with a surgical excision plan. Pathological evaluation of the surgically excised material was found to be compatible with hydatid cyst. Returning to his daily life, the patient has completely normal cardiac function in the first year of the operation and is asymptomatic.



References:

Surgical treatment of hydatid cysts of the heart: a report of 3 cases and a review of the literature
Cardiac hydatid cyst in the interventricular septum: A literature review
Isolated cardiac hydatid cyst

Keyword: *hydatid cyst, cardiac echinococcosis, right ventricle*

ID: 144

Topic:

Cardiology > Diseases of aorta

Presentation Type:

Poster

Acute aortic dissection on ascending aortic aneurysm in a patient with Marfan disease: about a case.

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Introduction: The syndrome of Marfan is a rare genetic disease. It is characterized by the attack of one or more bodies and can in particular cause skeletal disorders (big size, scoliosis), ophthalmologic (ectopia of the crystalline lens), cardiac (dilation of the aorta). The prevalence of the syndrome of Marfan is estimated at a person on 5000. The goal of this work is to show the gravity of this disease.
Methods : We report the observation of a young woman aged 36 years at the family history of Marfan (two brothers : major form , 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. Chest angioCT: Aortic dissection on expansion aneurysmal of sinus of Valsalva at 69/67 mm. Chest x-ray; scoliosis. Clinically: marfanoid aspect with signed kyphoscoliosis, anachnodactylie , adolichosteomelie ,thumb and wrist myopia and dislocation of cristallin . Biology is correct.
Results: The decision of medicochirurgical staff is challenged this patient considering the importance of thoracic malformations and deterioration of her general state.
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 root of the aorta and the mitral valve, the eye and the musculo-skeletal elements.

ID: 228

Topic:

Cardiology > Diseases of aorta

Presentation Type:

Poster

A Rare Case of Asymptomatic Ductus Arteriosus Aneurysm

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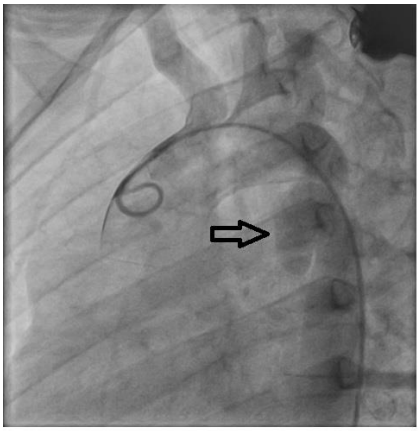
Introduction: Ductus arteriosus aneurysm (DAA) is characterized by a localized saccular or tubular dilation of the ductus arteriosus. Although DAA may be identified in infants, children and adults, case reports suggest that the most common age of diagnosis is less than two months. Various theories have been proposed regarding the pathogenesis, such as delayed closure of the aortic end of the ductus arteriosus and congenital weakening of the ductal wall. We wanted to present a case of asymptomatic ductus arteriosus aneurysm, which is rarely detected in childhood.

Case: An 8-year-old male patient had a murmur between both scapulae, and echocardiography showed descending aorta tortuosity and a gradient of 25 mmHg was obtained. CT angiography was performed with the suspicion of aortic coarctation. After the left subclavian artery exit, a lobulated diverticulum on the medial anterior wall of the aorta and narrowing in the main lumen were detected. His physical examination revelaed no difference in lower and upper extremity blood pressure. The lesion was visualized by catheter angiography and pressure records were taken. In the injection made into the ascending aorta, an appearance compatible with a ductal aneurysm was observed in the distal of the left subclavian artery. The diameter of the transverse aorta was 19.8 mm proximal to the left subclavian artery, and the diameter of the descending aorta adjacent to the lesion was 11.4 mm. The pressure was 125/92 mmHg proximal and 110/90 mmHg distal to the aneurysmatic region. The patient was asymptomatic and a clinical follow-up decision was taken at the Pediatric Cardiology-Cardiovascular Surgery Council.

Discussion: Ductus arteriosus aneurysm may be observed in patients with connective tissue disorders such as Marfan, Ehlers-Danlos and Larsen syndromes. Previous reports suggest that congenital DAA encountered postnatally may be associated with a high rate of severe complications. Spontaneous rupture, erosion, thromboembolism, infection and compression of adjacent structures are some of the reported complications. In children, the aneurysm is usually asymptomatic and may not be recognized until complications like infection, thrombus, embolism and sometimes rupture, develop.



Keyword: *Ductal Aneurysm, Ductus Arteriosus, Coarctation of Aorta*

ID: 286

Topic:

Cardiology > Cardiac imaging - Echocardiography

Presentation Type:

Poster

Fetal echocardiography in diagnosing congenital heart disease prenatally: a Turkey center experience

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Background: We aim to share our experience with a group of patients referred by an obstetrician or geneticist with an indication for fetal echocardiography.

Method: In this study, pregnant women who underwent fetal echocardiography in our clinic; reasons for admission, pregnancy characteristics, family history, and fetal echocardiography results were evaluated.

Results:1829 cases who underwent fetal echocardiography for any reason between January 2012 and March 2023 were included in the study. The average age of the pregnant women was 29±5.4 (16-47) and the average gestational week was 24.9±5.1 (14-40). The most common indication for fetal echocardiography was abnormal obstetric evaluation (46.7%). Of the pregnant women with obstetric anomalies, 44.2% had suspected cardiac anomalies and 2.5% had extracardiac anomalies. These indications were followed by advanced maternal age (25.2%) and fetal arrhythmia (8%), respectively.

Fetal echocardiography was found to be normal in 68.7% of the patients. Structural congenital heart diseases were categorized as common atrioventricular (AV) canal, conotruncal anomalies, septal defects, complex lesions, coarctation and aortic stenosis.

Septal defects (14.3%) were the most frequently detected fetal cardiac anomaly, while hydrops (4%) was the second most common. Aortic coarctation and stenosis were detected in 3.4% of the fetuses. These were followed by conoturuncal anomalies (2.7%), complex lesions (2.5%) and common AV canal (1.5%). Also arrhythmia was detected in 2.8%.

A higher rate of anomaly was detected in pregnant women with anomaly detected in obstetric evaluation, with a history of recurrent abortion, and in pregnant women evaluated with fetal arrhythmia indications ($p<0.05$).

Conclusıons: Early diagnosis of congenital heart diseases is of great importance in determining the necessary medical or surgical treatment methods in advance. Fetal congenital heart disease can be identified reliably by prenatal echocardiography. In the presence of congenital heart disease detected by fetal echocardiography, the necessary treatment can be provided, the necessary counseling can be given to the family, and precautions can be taken in advance for what can be done in terms of cardiac issues after birth.

Keyword: *fetal echocardiography, congenital heart diseases, obstetric evaluation*

ID: 287

Topic:

Cardiology > Covid-19 and cardiology

Presentation Type:

Poster

Evaluation of Pentraxin-3 Level in Children with Multisystem Inflammatory Syndrome

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Evaluation of Pentraxin-3 Level in Children with Multisystem Inflammatory Syndrome

Background: Multisystem inflammatory syndrome (MIS-C) in children is a newly identified syndrome associated with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Cardiac involvement occurs in 67–80% of children with MIS-C, and myocarditis appears to be the most common cardiac manifestation. Pentraxin-3 (PTX-3), an acute phase protein, is produced by the vascular endothelial cell in response to inflammatory signals. PTX3 overexpression has been shown to increase left ventricular dysfunction and myocardial fibrosis. The underlying cause of cardiac involvement in MISC, whose clinical and laboratory findings overlap with other febrile diseases, is not fully known. In our study, we aimed to investigate the role of pentraxin-3 in determining cardiac effects and assessing disease severity in patients with MISC.

Methods: There were 56 MISC patients and 26 healthy children in the study. The MISC group was divided into two groups: those with cardiac involvement (n = 34) and those without (n = 22). According to the clinical course of the disease, it was classified as mild-moderate (n=30) and severe (n=26). Blood samples were taken for PTX-3 levels from all patients before treatment and from healthy children in the control group.

Results: There was no difference between the groups in terms of age and gender (p>0.05). Plasma PTX-3 levels were found to be significantly increased in MISC patients compared to the control group (7.16±5 ng/ml versus 2.96±2.1 ng/ml, p<0.001). Median PTX-3 level was found to be significantly higher in the group with cardiac involvement than in the group without cardiac involvement [5.8 (4.5-11.3) ng/ml versus 4.12 (3.6-5.6) ng/ml, p: 0.004]. Median PTX-3 level was significantly higher in patients with left ventricular systolic dysfunction and mitral valve insufficiency than in patients without (p:0.003 and p:0.011, respectively). Median PTX-3 level in the severe group was found to be significantly higher compared to the mild group [6.23 (5.2-15.7) ng/ml versus 4.2 (3.6-5) ng/ml, p:0,0001]. Levels other than procalcitonin (BKH, CRP, ESR and interleukin-6) were found to be similar between the groups (p>0.05). While a negative correlation was detected between PTX-3 level and left ventricular ejection fraction, platelet level and lymphocyte level (p:0.0001, p:0.003, p:0.048, respectively); a positive correlation was found B-type natriuretic peptide, troponin, CRP and procalcitonin (p:0.0001, p:0.041, p:0.0001, p:0.0001, respectively).

Conclusion: High PTX-3 levels in MISC patients may help predict the clinical course of the disease and cardiac involvement. However, prospective studies with large participation are needed on the subject.

Keyword: *Multisystem inflammatory syndrome in children, Pentraxin 3, Child*