

Session Title: **Campfire Discussions: Challenging Clinical Cases in Heart Failure and Cardiomyopathies**

Session Time: Friday, September 20, 2024, 8:30 am - 9:20 am

Presentation Number: 08-05

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: ENFERMEDAD DE DANON: UNA PERSPECTIVA REVELADORA

Author Block: sandy jimenez, Pamela Pina Santana, Cesar J. Herrera, CEDIMAT Cardiovascular Center, santo domingo, Dominican Republic, INTEC, santo domingo, Dominican Republic

Background: Danon disease is a rare and serious genetic condition that predominantly affects the heart and musculoskeletal system. It arises from pathogenic variants in the gene encoding lysosome-associated membrane protein 2 (LAMP2), located on the Xq24 region of the X chromosome.

Case: A 16-year-old female with no past medical history, presented with sudden onset right-sided hemiparesis; a brain MRI demonstrated an ischemic/embolic stroke. During evaluation, her ECG showed a wide QRS complex (178 ms) with RBBB.

Abstract Body: **Decision-making:** An echocardiogram depicted severe concentric LV hypertrophy with global hypokinesis (LVEF 30%). Subsequent CMR imaging showed transmural late gadolinium enhancement sparing the septal wall, suggestive of Danon disease. Additionally, two apical thrombi were seen, explaining the prior embolic stroke. Genetic testing reported a heterozygous pathogenic variant in the LAMP2 gene, confirming the diagnosis.

Conclusion: Cardiac transplantation is the only viable therapeutic option currently available for this condition. However, in resource-limited settings such intervention is not feasible. Therefore, the diagnosis of Danon disease carries an inevitably fatal prognosis unless transplantation is performed. From a psychosocial and economic standpoint, this diagnosis poses a

challenge for both the family and the healthcare system.

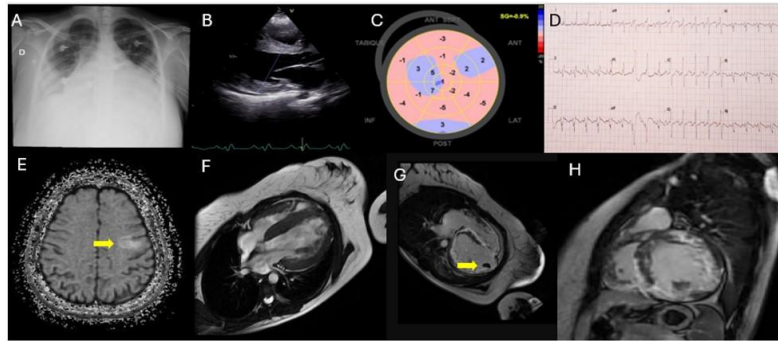


Figure 1. A) Chest X-ray showing cardiomegaly and bilateral pleural effusions. B) Parasternal long axis view demonstrating severe hypertrophy of the left ventricular walls and mild pericardial effusion. C) Global Longitudinal Strain of 0.9%, indicating marked myocardial deformation abnormalities D) EKG showing Complete Right Bundle Branch Block, ventricular repolarization disorder. E) Brain MRI showing acute frontal left stroke (yellow arrow). F) Four-chamber CMR view without gadolinium G) Four-chamber view revealing biventricular and transmural late gadolinium enhancement sparing the septal wall with apical thrombi, (yellow arrow). H) Short axis view CMR imaging showing diffuse late gadolinium enhancement in the left ventricle sparing the septal wall.

Session Title: **Campfire Discussions: Challenging Clinical Cases in Heart Failure and Cardiomyopathies**

Session Time: Friday, September 20, 2024, 8:30 am - 9:20 am

Presentation Number: 08-09

Topic 1: Heart Failure and Cardiomyopathies

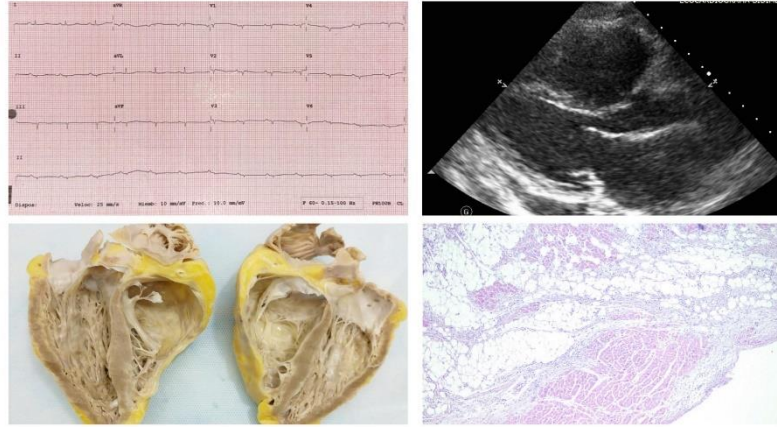
Publishing Title: CARDIAC CONUNDRUM: THE ENIGMA OF ARRHYTHMOGENIC CARDIOMYOPATHY

Author Block: Diana L Mondragon-Bustamante, Josemaria Cruz-Leon, Amada Alvarez-SanGabriel, Maria L. Loreda-Mendoza, Alberto Aranda-Fraustro, Alexandro Franco-Estrada, Carlos A. Guizar-Sanchez, Juan C. DelaFuente-Mancera, Maria Aguilar-Serrano, Francisco M. Baranda-Tovar, Antonio Jordan-Rios, Instituto Nacional de Cardiologia Ignacio Chavez, Mexico City, Mexico

Abstract Body: **Background:** 30-year-old female diagnosed with dilated cardiomyopathy in June 2023 presented with SCAI C cardiogenic shock eight months later. **Case:** The patient presented to the emergency department in cardiogenic shock, with elevated TnT, NTproBNP, and arterial lactate levels. 2DEcho showed severe biventricular dysfunction and systemic venous congestion. VA-ECMO support was initiated, complicated by electrical instability. Due to the lack of recovery, an urgent heart transplant was proposed and performed without complications. The postoperative course was favorable. Pathology demonstrated findings consistent with hot-phase of biventricular arrhythmogenic cardiomyopathy (hpAC). Her clinical course has been favorable, without histopathological rejection.

Decision-making: AC can present as a hot-phase, which can be mistaken for fulminant myocarditis. Differential diagnosis should be performed using cardiovascular MRI and genetic tests as the first option, with endomyocardial biopsy as a secondary option. In this case, these tests were not performed due to hemodynamic instability or unavailability, making AC treatment challenging in developing countries. Although the epsilon wave on ECG is pathognomonic, it is uncommon in the hpAC.

Conclusion: hpAC should be suspected in young patients with fulminant myocarditis and electrical instability. Treatment should be aggressive with circulatory support as a bridge to transplantation, often the only option in low-middle-income countries.



Session Title: Campfire Discussions: Challenging Clinical Cases in Heart Failure and Cardiomyopathies

Session Time: Friday, September 20, 2024, 8:30 am - 9:20 am

Presentation Number: 08-07

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: ENDOMYOCARDIAL FIBROSIS COMPLICATED BY LEFT VENTRICULAR THROMBUS AND MYOCARDIAL INFARCTION

Author Block: Nicolás Ariza, Claudia Patricia Jaimes, Daniel Isaza-Restrepo, La Cardio, Fundación Cardioinfantil, Bogota, Colombia

Background: Endomyocardial fibrosis (EMF) is a rare cause of restrictive cardiomyopathy endemic in Africa and South America. Potential complications of EMF include heart failure, thromboembolic events and arrhythmias.

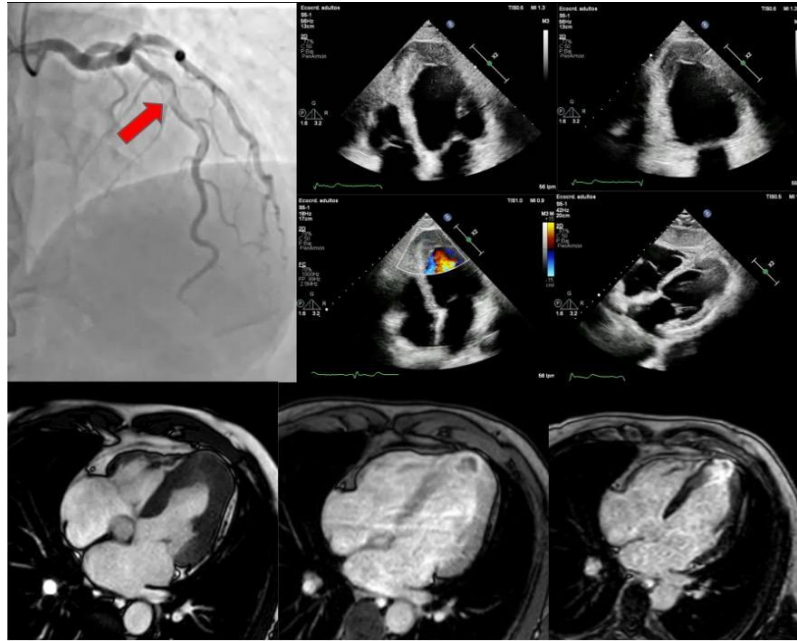
Case: A 55-year-old male with no prior history presented with acute chest pain. Initial ECG showed anterior ST elevation. Coronary angiography revealed acute thrombus in LAD artery. Echocardiogram showed mild systolic dysfunction of the LV with apical obliteration, thrombus and moderate biatrial enlargement. CMR revealed preserved LV systolic function, apical obliteration with LGE in a non-CAD distribution involving the entire apex and a thrombus layer covering the scar tissue. A second transmural LGE area was found in the septal apical segment.

Abstract Body:

Decision-making: Diagnostic and therapeutic interventions included PCI with a DES deployed in LAD. The diagnosis of EMF was supported by two major criteria: obliteration of LV apex and presence of thrombus; and a minor criteria: enlarged atria with normal sized ventricles. Oral anticoagulation and DAPT were initiated. Parasitic infection and systemic diseases were ruled out, with no eosinophilia in serial examinations. Dietary consultation was provided.

Conclusion: EMF is a rare disease with multiple cardiovascular manifestations that include thromboembolic events of cardiac origin, with

potential risk of coronary compromise. Clinical suspicion and image findings are essential for diagnosis and the treatment of complications.



Session Title: Campfire Discussions: Challenging Clinical Cases in Interventional and Ischemic Heart Disease

Session Time: Friday, September 20, 2024, 9:30 am - 10:20 am

Presentation Number: 12-09

Topic 1: Ischemic Heart Disease

Publishing Title: MINOCA AS A PRESENTATION OF RIGHT CORONARY ARTERY ANEURYSM IN A 37 YEAR OLD WOMAN

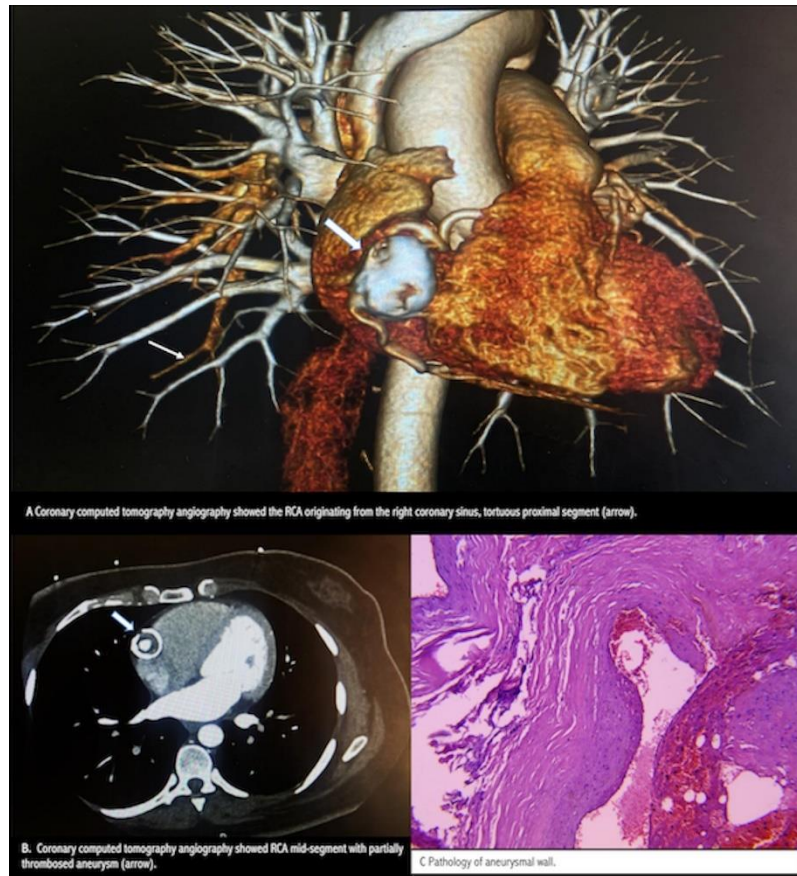
Author Block: Karen Lorena Castillo Soto, Oddir Jauregui Ruiz, Eva Palacios, Castro R. Amalia, Jorge Alberto Meza Chacon, Jesus Miguel Rodriguez Chavez, Unidad Medica de Alta Especialidad, Hospital de Cardiologia no. 34 IMSS, Monterrey, Mexico

Abstract Body: **Background:** 37 year old female with history of 2 successfully pregnancies with a significant history of smoking (1.7 packs/year), diabetes and recently diagnosed dyslipidemia.

Case: A 37 year old woman with a history of smoking, diabetes, and dyslipidemia experienced chest pain radiating to her neck and jaw. An electrocardiogram revealed ST-segment elevation in the inferior leads. Angiography revealed a left system without angiographic lesions and right coronary artery (RCA) with an aneurysmal lesion in the vertical segment, without significant angiographic lesions, with a patent vessel. She was diagnosed with Myocardial Infarction with Non-Obstructive Coronary Arteries (MINOCA). A coronary CT angiography revealed a partially thrombosed aneurysm in the RCA originating from the right coronary sinus, with a tortuous proximal segment, a mid-segment with a partially thrombosed aneurysm, a calcified outer edge measuring 23 x 21 mm, a length of 35 mm (image A and B).

Decision-making: She successfully underwent myocardial revascularization and exclusion of the RCA. Pathology showed medial layer hyperplasia, recent hemorrhage with hyaline changes, and mild chronic inflammation in fibroadipose tissue (image C).

Conclusion: Coronary artery aneurysms are rare, with an incidence of 0.3 to 5.3%. The occurrence of MINOCA due to a RCA aneurysm is uncommon, these cases require careful diagnosis and management, especially in young patients with cardiovascular risk factors.



Session Title: Campfire Discussions: Challenging Clinical Cases in Interventional and Ischemic Heart Disease

Session Time: Friday, September 20, 2024, 9:30 am - 10:20 am

Presentation Number: 12-07

Topic 1: Interventional and Structural

Publishing Title: LATE OCCLUSION OF THE LEFT MAIN CORONARY ARTERY AFTER TRANSCATHETER AORTIC VALVE IMPLANTATION(TAVR) TREATED WITH CHIMNEY TECHNIQUE

Manuel De Jesús Castillo Montes, Vidal Jose Gonzalez Coronado,

Author Block: ALEJANDRO ALCOCER, Hospital Regional 1ro de Octubre. ISSSTE, Ciudad de México, Mexico

Background: 65yo male patient who underwent TAVR and 36 hours later presented chest pain and a high-risk pattern ECG performed invasive angiography coronary (ICA) with occlusion of the left ostium using chimney technique.

Case: 65yo male patient with severe aortic stenosis and hipertension, scheduled for TAVR. A #26 balloon-expandable valve was placed, progressing favorably. 36 hours after the procedure at night he presented anginal chest pain, elevation of the ST segment in aVR and ST depression in 6 leads and High-sensitivity troponin I 751 ng/L, concluding NSTEMI-ACS.

Abstract Body: **Decision-making:** ICA was performed showing neoseno with defect partial filling. Left Main Artery (LMA) bifurcated, adequate caliber and path, without significant angiographic lesions, anterograde flow with partial filling defect, Left Anterior Descending (LAD) vessel of adequate caliber and trajectory with anterograde flow with filling defect in its proximal portion, so it was decided to place a 4.5x26 mm direct drug-eluting stent impacting from the LMA/LCX bifurcation to the LMA ostium protruding into the aorta (technique chimney), optimizing stent with the same stent balloon. Intra-vascular ultrasound was performed observing stent underexpansion, so it was decided to optimize again with a 5x8 mm NC Balloon to distal and proximal

LMA with TIMI 3 flow.

Conclusion: Acute ostium occlusion should be suspected in case of angina, hemodynamic instability or electrocardiographic changes after TAVR, even after the first 24 hours.



Session Title: Campfire Discussions: Challenging Clinical Cases in Valvular Heart Disease

Session Time: Friday, September 20, 2024, 2:20 pm - 3:10 pm

Presentation Number: 23-09

Topic 1: Valvular Heart Disease

Publishing Title: UNLOCKING THE VALVE, SUCCESSFUL THROMBOLYSIS IN HIGH-RISK PATIENTS

Author Block: Iván Arcadio Ovalles Brito, Patricia Severino, Sandy Jimenez, Miguel Delgado, Santiago Mena, Elvis Rivera, Cesar Herrera, CEDIMAT, Santo Domingo, Dominican Republic, INTEC, Santo Domingo, Dominican Republic

Background: Background: Mechanical mitral valve thrombosis (MMVT) is a severe complication that occurs annually in 0.3-1.3% of patients, associated with significant morbidity and mortality. It results from inadequate anticoagulation, hypercoagulable states, or endothelial injury, leading to thrombus formation, causing stenosis or obstruction.

Case: A 57-year-old woman with a mechanical mitral valve replaced 16 years ago was transferred to our center with acute pulmonary edema. Physical examination revealed the absence of a metallic click at the apex. A transesophageal echocardiogram confirmed thrombus causing severe mitral prosthetic stenosis with a mean gradient of 14.5 mmHg.

Abstract Body:

Decision-making: Considering the high surgical risk, as per Society of Thoracic Surgeons criteria, conservative management with thrombolysis was chosen. An ultra-slow alteplase infusion protocol was used, reducing the mean gradient to 7 mmHg without bleeding complications. The patient was discharged with no symptoms and reinforced warfarin dosing.

Conclusion: This case illustrates that thrombolysis with alteplase is a viable and effective treatment for high-risk surgical patients with MMVT. Several studies have demonstrated its efficacy, highlighting reduced complications, shorter hospital stays, and improved survival rates, especially with the ultra-slow infusion protocol. Further refinement and dissemination of these

therapeutic approaches are recommended to optimize outcomes in high-risk patients.

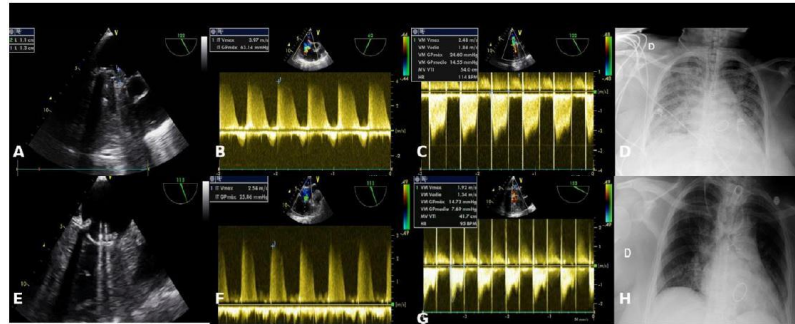


Figure 1A: Transesophageal echocardiographic view showing a mechanical disc valve with limited movement of the anterior disc due to an adherent, iso-echogenic, mobile mass (11mm x 13mm), suggestive of a thrombus. Figure 1B: Short-axis view showing mild to moderate tricuspid regurgitation flow by continuous Doppler, with a peak gradient of 63mmHg. Figure 1C: Mitral valve Doppler recording a maximum velocity of 2.48 m/s and a mean gradient of 14.5 mmHg. Figure 1D: Anteroposterior chest radiograph showing diffuse alveolar opacities and cardiomegaly, with postoperative changes from cardiothoracic surgery. Figures 1E-H (post-thrombolysis): show improvement in transvalvular gradients and reduction of pulmonary congestion.

Session Title: Campfire Discussions: Challenging Clinical Cases in Valvular Heart Disease

Session Time: Friday, September 20, 2024, 2:20 pm - 3:10 pm

Presentation Number: 23-05

Topic 1: Valvular Heart Disease

Publishing Title: INFECTIOUS ENDARTERITIS, A FEARED COMPLICATION OF AORTIC COARCTATION

Author Block: Oscar De Jesús Gamboa Hernández, Aldo Emir Martínez Sarabia, Ángel Garrido Urincho, Ricardo Arturo Villamarin Velásquez, María Alexandra Arias Mendoza, Rodrigo Gopar Nieto, De la Mora Cervantes Regina, Michel Alberto Aros Pérez, INSTITUTO NACIONAL DE CARDIOLOGIA "IGNACIO CHAVEZ", Mexico, City., Mexico

Background: Congenital heart diseases are common in our region, however, infectious endarteritis in aortic coarctation (CoA) is rare due to early diagnosis and intervention since childhood. There are very few reported cases in the literature, and most are in pediatric ages.

Case: A 24-year-old male with no significant medical history began his symptoms 14 days prior to seeking medical attention, presenting with fever, dermatosis, and dyspnea. Upon arrival at the hospital, he was found to have a holosystolic murmur in the mesocardium and purpuric lesions on his lower limbs. Initial laboratory tests showed neutrophilia and elevated acute phase reactants.

Abstract Body:

Decision-making: Transthoracic and transesophageal echocardiogram showed bivalve aorta, severe aortic and mitral insufficiency with vegetations, periaortic abscess, perimembranous ventricular septal defect, and CoA with infectious endarteritis. Computed Tomography (CT) revealed pleural effusion and splenic infarcts. During anesthesia for surgery, the patient had hypotension and cardiorespiratory arrest. Finally he died.

Conclusion: CoA, a congenital aorta narrowing, may present in adulthood with hypertension and murmurs. CoA patients are high-risk for infectious

endocarditis, especially with a bicuspid aortic valve. This case underscores the importance of early detection and multidisciplinary management of congenital heart defects to prevent severe complications like infectious endarteritis.

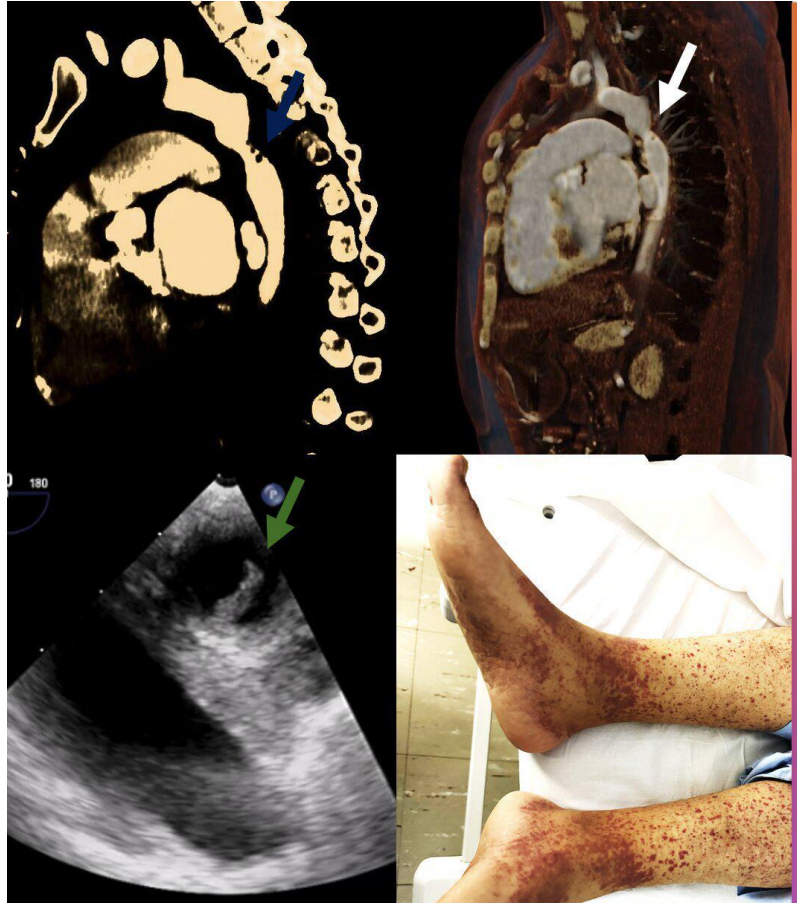


FIG 1. (A) CT scan, sagittal view, displaying the aortic coarctation and aortic vegetations (blue arrow). (B) CT scan, 3D reconstruction, showing CoA (white arrow). (C) Transesophageal echocardiogram (ETE), axial view showing vegetation adhered to the wall of the descending aorta (green arrow). (D) View of pigmented purpuric macules coalescing into purpuring plaques on lower extremities.

Session Title: Campfire Discussions: Challenging Clinical Cases in Valvular Heart Disease

Session Time: Friday, September 20, 2024, 2:20 pm - 3:10 pm

Presentation Number: 23-07

Topic 1: Valvular Heart Disease

Publishing Title: THE ORDER OF THE FACTORS DOES ALTER THE PRODUCT. MULTIVALVULAR ENDOCARDITIS IN A YOUNG MAN WITH AORTIC COARCTATION

Author Block: Liseth Hernandez Gonzalez, Jose Briseno, Daniel Manzur Sandoval, Isaac Espinosa Caleti, Ricardo Sánchez Moreno, Alexandra Arias-Mendoza, Francisco Baranda, Jose Carlos Campos Barba, Stephanie Angulo, Edgar Garcia, National Institute of Cardiology Ignacio Chavez, Mexico City, Mexico

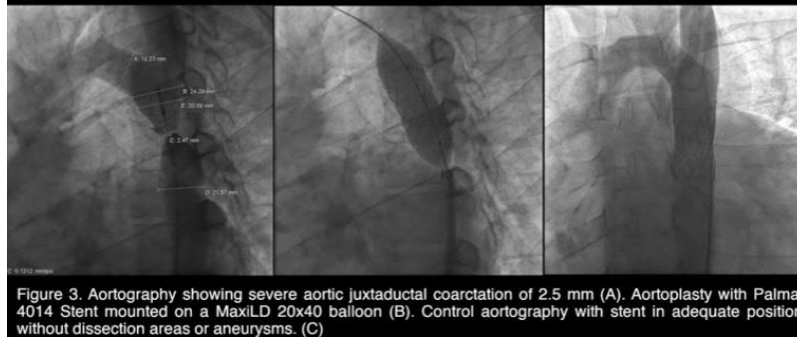
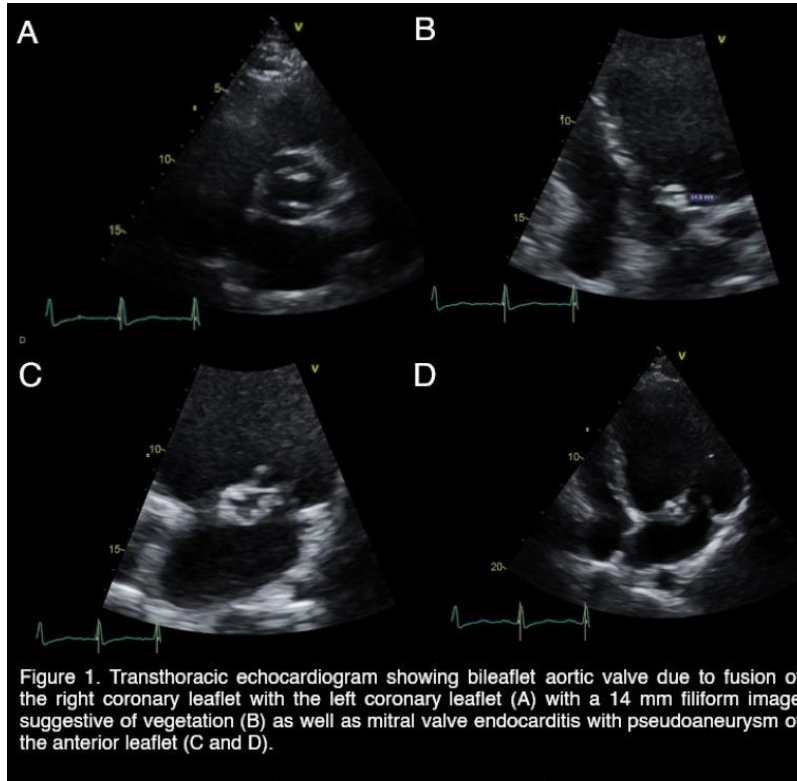
Abstract Body: **Background:** A young man with hypertension presents with due to fever and clinical signs of heart failure. Multimodal imaging was performed documenting aortic coarctation and mitroaortic endocarditis.

Case: A 27-year-old man with hypertension came to the ER with high fever, predominantly in the evening, for three months and dyspnea. On examination, he had elevated blood pressure, tachycardia, and tachypnea with a systolic murmur on the left lower sternal border. Additional tests showed leukocytosis, increased inflammatory markers, and positive blood cultures for Streptococcus sanguinis. TEE confirmed severe aortic insufficiency complicated by an abscess at the mitroaortic junction, with a 12 x 11 mm vegetation. Aortic angiotomography revealed juxtaductal aortic coarctation with collateral pathways and subclavian artery dilation but no other significant abnormalities.

Decision-making: We opted for endovascular repair first followed by aortic and mitral valve replacement. The patient recovered well without signs of device infection. Follow-up showed improved clinical status and normal valve function.

Conclusion: Although the association of AoCo with bileaflet aorta has been reported, the presence of AoCo with superimposed bacterial endocarditis is

very rare. In this case despite the high risk of infection of the device, we considered that it benefited from performing the endovascular repair of the aortic coarctation before surgery, obtaining favorable results.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 1

Topic 1: Electrophysiology

Publishing Title: EFFICACY AND SAFETY OF PULMONARY VEIN CRYOABLATION WITH CONSCIOUS SEDATION PROTOCOL

Author Block: Jesús Alberto Martínez Álvarez, Ayrtón Jairo Arenas Romo, UMAE H.E. 71 IMSS, Torreon, Mexico

Background: Atrial fibrillation (AF) is the most prevalent sustained atrial arrhythmia in the general population; There is expected to be an increase in incidence in the coming years. AF increases the risk of stroke morbidity and mortality secondary to thrombus formation. Cryoablation of pulmonary veins is an effective therapeutic alternative in AF to restore sinus rhythm, however there is little evidence on the efficacy and safety of cryoablation with conscious sedation protocols.

Objective: To report the safety and efficacy in the follow-up of pulmonary vein cryoablation in patients with AF performed during the year 2022 with conscious sedation protocol in our center.

Abstract Body: **Methods:** During the year 2022, 28 pulmonary vein cryoablation procedures were performed under conscious sedation in patients diagnosed with paroxysmal and persistent symptomatic persistent AF refractory to antiarrhythmic drugs, older than 18 years. Sedation was performed with midazolam 1 mg and fentanyl 100 mcg in all patients. After the procedure, follow-up was performed at 3 and 6 months to assess baseline rhythm with Holter.

Results: At 6 months follow-up 96.4% of the cases remained in sinus rhythm. The mean age was 52.8 years, 76% of them male. During the procedure, temperatures of $-44^{\circ}\pm 10^{\circ}\text{C}$ were obtained during cryoenergy applications. Two cases presented reversible diaphragmatic paralysis without sequelae.

There were no major complications. Bidirectional block of the pulmonary veins was achieved in 100% of the cases. One patient presented recurrence of AF during follow-up, which evolved to permanent AF. Withdrawal of anticoagulation and antiarrhythmic drugs was possible in 96.4% of cases.

Conclusion: In patients with AF, pulmonary vein cryoablation therapy has proven to be a safe and effective procedure. Cryoablation of pulmonary veins with conscious sedation protocol is a safe and effective procedure during at least the first 6 months of follow-up.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 2

Topic 1: Electrophysiology

Publishing Title: PREDICTIVE FACTORS FOR HEMORRHAGIC EVENTS IN PATIENTS WITH NON VALVULAR ATRIAL FIBRILLATION

Author Block: Frank Valdez Baez, [Laura Valdez](#), Rebecca M. Puello Núñez, Laiden Suarez Fuster, Juanico Cedano Ramirez, Gissel M. Santana Mejia, Merejo Catherine, Ernesto Diaz Alvarez, Dominican Institute of Cardiology Association, SANTO DOMINGO, Dominican Republic

Background: The use of anticoagulants in non-valvular atrial fibrillation (NVAf) increases the risk of major bleeding, with several contributing factors identified. Objective: To explore clinical and demographic variables that influence the occurrence of hemorrhagic events in patients with NVAf

Methods: A retrospective analysis of 608 prospectively recruited patients from 2017 to 2021 for oral anticoagulation with NVAf was conducted, of which 432 were analyzed after excluding 176 due to lack of follow-up or not receiving anticoagulant treatment

Abstract Body: **Results:** The average follow-up was 922.64 days, and the average age was 74.44 years, with a slight female predominance (52.08%). Warfarin was the most used treatment (62.27%), followed by Apixaban (28.47%) and Rivaroxaban (9.26%). The majority, 86.34%, had no significant clinical events. 13.66% experienced some event, with hemorrhagic events in 28 patients (6.48%), divided into minor hemorrhages (42.86%), non-major clinically relevant (NMCR, 32.14%), and major (25%). The total bleeding incidence rate, for direct oral anticoagulants (DOAC) and Warfarin was 1.62, 1.40, and 1.72 per 1,000 patient-days, respectively (p=0.239). Only one patient (0.23%) suffered a stroke. The results highlighted the relevance of previous bleeding history and specific hemoglobin levels. Previous bleeding presented an

adjusted odds ratio (OR) of 10.63 (95% CI: 2.09 - 54.05, $p = 0.004$), and hemoglobin levels between 8-12 g/dL an OR of 3.98 (95% CI: 0.86 - 18.47, $p = 0.078$). In the unadjusted analysis, previous gastrointestinal (GI) and genitourinary (GU) bleeding showed an OR of 5.51 and 7.59 respectively, both with $p < 0.001$, and previous use of clopidogrel was associated with an OR of 4.29 (95% CI: 1.12 - 16.36, $p = 0.033$). No significant association was found between the type of anticoagulant and the risk of hemorrhagic events with OR 1.16 (95% CI: 0.15 - 8.74, $p=0.883$)

Conclusion: A history of bleeding, particularly GI and GU, and previous use of clopidogrel are associated with an increased risk of hemorrhagic events in patients with NVAf under anticoagulant treatment

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 3

Topic 1: Electrophysiology

Publishing Title: PREVALENCE OF INAPPROPRIATE DOSING PRESCRIPTIONS OF DIRECT ORAL ANTICOAGULANTS IN PATIENTS WITH NON VALVULAR ATRIAL FIBRILLATION

Author Block: Frank Valdez Baez, ROSA GENESIS MEJIA MARTE, Catherine Merejo, Laiden Suarez Fuster, Juanico Cedano Ramirez, Gissel Mariana Santana Mejia, Ernesto Diaz Alvarez, Mayra Maria Peña de Coó, Instituto Dominicano de Cardiología, SANTO DOMINGO, Dominican Republic

Abstract Body:

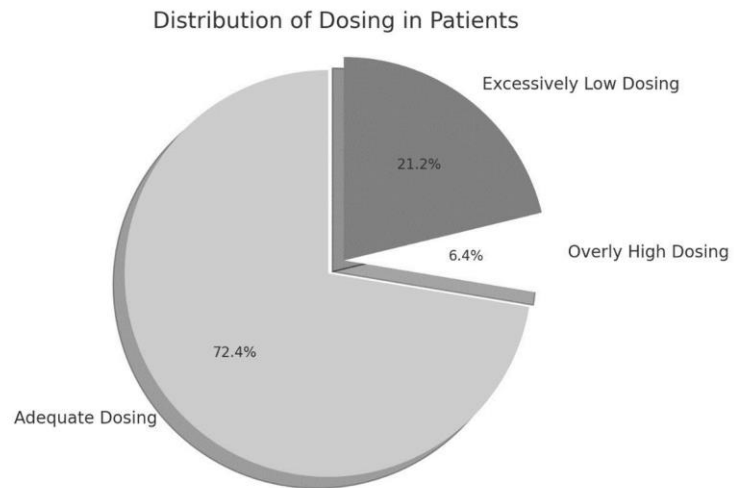
Background: Direct Oral Anticoagulants (DOACs) are vital for thromboembolism prevention in Non-Valvular Atrial Fibrillation (NVAf), yet often diverge from clinical guidelines. Objective: To quantify the prevalence and associated factors of inappropriate DOAC prescription in NVAf patients

Methods: A cross-sectional prospective study from June to December 2023 included 264 patients on DOACs, mainly Apixaban (68.18%) and Rivaroxaban (29.17%)

Results: Adequate dosing was observed in 72.3% of patients, with 53.4% on standard and 18.9% on adjusted low doses. Inappropriate prescriptions were found in 27.7%; 6.4% overly high and 21.2% excessively low. Patients with incorrect dosing were significantly older (78.75 ± 11.05 years, $p=0.012$) compared to those with proper dosing (75.31 ± 10.26 years), with no significant sex differences (53.42% male, $p=0.87$). Univariate logistic regression revealed that being over 75 years (OR 1.84, 95% CI 1.04-3.25, $p=0.037$), and 80 years or older (OR 1.82, 95% CI 1.04-3.19, $p=0.035$), and a Glomerular Filtration Rate (GFR) < 49 mL/min/1.73m² (OR 2.11, 95% CI 1.2-3.73, $p=0.01$) increased the risk of inappropriate dosing. Low doses of Apixaban (2.5 mg every 12h) and Rivaroxaban (15 mg daily) significantly reduced this risk (OR 0.11, 95% CI 0.04-

0.31, $p < 0.001$)

Conclusion: A significant proportion of NVAF patients receive inappropriate DOAC dosing, with advanced age and decreased GFR being significant predictors. No other significant variables were identified



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 4

Topic 1: Electrophysiology

Publishing Title: IMPACT OF PATIENT PREFERENCE ON RISK PROFILES IN NON VALVULAR ATRIAL FIBRILLATION WITH DIRECT ORAL ANTICOAGULANTS VERSUS VITAMIN K ANTAGONISTS

Author Block: Frank Valdez Baez, [Laiden Suarez Fuster](#), Juanico Cedano Ramirez, Catherine Merejo, Gissel Mariana Santana Mejia, Mayra Maria Peña de Coó, Ernesto Diaz Alvarez, Instituto Dominicano de Cardiología, SANTO DOMINGO, Dominican Republic

Abstract Body:

Background: Current recommendations for the prevention of ischemic events in Non-Valvular Atrial Fibrillation (NVAf) favor the use of Direct Oral Anticoagulants (DOAC) over Vitamin K Antagonists (VKA). However, patient choice between these anticoagulants can influence their ischemic and hemorrhagic risk profile. Objective: To investigate whether the preference for continuing with VKA results in a different risk profile in patients with NVAf

Methods: In this prospective and cross-sectional study at the Dominican Cardiology Institute Association, 402 patients were included (67 on VKA, 335 on DOAC). Demographic, clinical, and laboratory data were analyzed, using CHA2DS2VASc and HAS-BLED scales to assess risk

Results: The average age was higher in the DOAC group (76.96 years) compared to VKA (73.76 years, $p=0.021$), with no differences by age group ($p=0.07$). The gender distribution was 59.7% men in VKA and 51.33% in DOAC ($p=0.21$). In risk scales, DOAC showed higher averages: CHA2DS2VASc at 4.37 versus 3.79 in VKA ($p=0.008$), HAS-BLED at 1.51 compared to 1.24 ($p=0.019$). No significant differences were found in the choice of anticoagulant by thromboembolic and hemorrhagic risk ($p=0.524$ in

CHA2DS2VASC; $p=0.426$ in HAS-BLED). A history of gastrointestinal bleeding was more common in DOAC (10.03%) than in VKA (1.49%; $p=0.023$). Logistic regression analysis showed that each additional year increases the probability of using DOAC by 3% (OR: 1.03; CI 95%: 1.01-1.06; $p=0.012$), with increases of 24% in CHA2DS2VASC (OR: 1.24; CI 95%: 1.14-1.35; $p<0.001$) and 54% in HAS-BLED (OR: 1.54; CI 95%: 1.27-1.87; $p<0.001$). More than 24 months with VKA reduced the probability of choosing DOAC by 75% (OR: 0.25; CI 95%: 0.13-0.48; $p<0.001$), while less than 3 months significantly increased it (OR: 4.19; CI 95%: 2.25-7.84; $p<0.001$)

Conclusion: The choice of anticoagulant in patients with NVAF is significantly influenced by patient preference, with a tendency towards DOAC in older and higher-risk patients. Factors such as the duration of previous treatment and clinical history are decisive in this choice

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 5

Topic 1: Electrophysiology

Publishing Title: ROLE OF LOW AMPLITUDE ACTIVITY ZONES IN THE DEVELOPMENT OF ATYPICAL ATRIAL FLUTTER REGARDING A CLINICAL CASE.

Author Block: Juan Sebastian Theran León, Luis Andrés Dulcey, JAIME ALBERTO GOMEZ AYALA, Laura Yibeth Esteban, Valentina Ochoa, Jorge Andrés Hernández Navas, Andres Felipe Otero, Universidad de Santander, Bucaramanga, Colombia

Abstract Body:

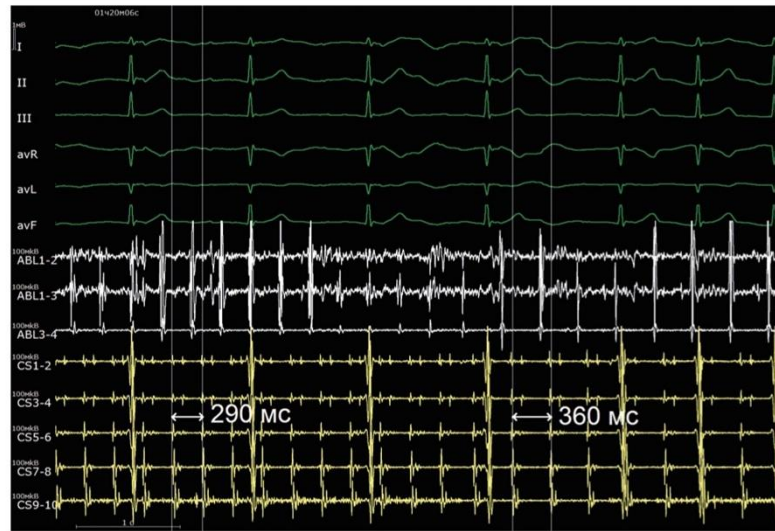
Background: Treatment of left atrial flutter is a problem that requires a deep understanding of the complex underlying mechanism of the arrhythmia. Although there is already considerable experience in understanding the mechanisms underlying atrial flutter after ablation or surgery, little is known about atypical forms of atrial flutter in patients who have not previously undergone ablation or other cardiac surgery.

Methods: We present a clinical case of interventional treatment of a patient in his sixth decade with atypical atrial flutter who had not previously undergone cardiac surgery or any type of interventional procedure.

Results: This clinical observation demonstrates the role of common zones of low-amplitude activity in the mechanism and treatment of atrial arrhythmias. Widespread areas of low-amplitude activity in the left atrium can create barriers to the spread of excitation, which can lead to atypical atrial flutter.

Conclusion: When performing a surgical intervention, high-density mapping will help visualize the mechanism of this arrhythmia. Understanding the mechanism of atypical atrial flutter will help minimize RF exposure during

treatment.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 6

Topic 1: Electrophysiology

Publishing Title: DIVERSITY IN ATRIAL FIBRILLATION TRIALS: ASSESSING THE ROLE OF LANGUAGE PROFICIENCY AS A RECRUITMENT BARRIER

Author Block: Roy Lan, Eduardo Guerrero, Paul Wang, Stanford University, Stanford, CA, USA

Background: In the United States, 67.8 million people (21%) do not claim English as their primary language. Because most U.S. clinical trials are conducted in English, language may be a potential barrier to participation in clinical trials.

Methods: We systematically assessed all completed U.S. AF trials registered in ClinicalTrials.gov with enrollment through 2021. We manually reviewed each trial's inclusion and exclusion criteria for the requirement of communicating (oral/written) in English as a prerequisite for participation.

Abstract Body: **Results:** We examined 233 AF clinical trials with a combined enrollment of 1,918,461 participants. Of these studies, 15 (6.4%) trials enrolling 470,294 participants (24.5%) excluded non-English speakers from participation. Language exclusive trials tended to be more recent ($P < 0.001$), less likely to be industry funded (13% vs. 46%; $P = 0.015$), and more focused on procedural, behavioral, or other interventions ($P = 0.018$). However, language exclusive trials were not associated with any difference in median enrollment compared to non-language exclusive trials (70 vs. 120; $P = 0.090$).

Conclusion: This study finds a small proportion of AF clinical trials with many participants excluded non-English speakers from participation. Efforts to include non-English speaking participants would increase diversity in clinical

trials.

Table. Characteristics of PROs by language accessibility

	Original Language	Available Translations
AF-Specific PROs, Mean (SD)		11.2 (8.87)
AFEQT	English	24
PACT-Q	English	14
AF-QoL	Spanish	12
AFSS	English	5
MAFSI	English	1
HF-Specific PROs, Mean (SD)		32.6 (44.58)
KCCQ	English	100
MLHFQ	English	57
QLQ-SHF	Swedish	3
LVD-36	English	2
CHAT	English	1
Generic PROs, Mean (SD)		148.8 (62.54)
EQ-5D	English	208
SF-36	English	193
SF-12	English	171
PHQ-9	English	116
DASS	English	56

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 7

Topic 1: Electrophysiology

Publishing Title: WHO ARE WE MISSING? LANGUAGE EXCLUSIVITY OF PATIENT-REPORTED OUTCOMES IN ATRIAL FIBRILLATION CLINICAL TRIALS

Author Block: Roy Lan, Eduardo Guerrero, Paul Wang, Stanford University, Menlo Park, CA, USA

Background: Patient-reported outcomes (PROs) are increasingly being used to evaluate quality of life (QoL) in Atrial Fibrillation (AF) patients. The linguistic accessibility of AF-specific PROs in clinical trials has not been studied.

Methods: We queried the ClinicalTrials.gov database for all available clinical trials that focused on AF as the primary condition from inception to November 28, 2023. We manually reviewed each clinical trial for their use of PROs and identified the 5 most common AF-specific and generic PROs. Each PRO's number of available translations and original language was manually extracted from published source articles.

Abstract Body: **Results:** A total of 233 AF clinical trials were examined. There was a significant difference in available translations for AF-specific PROs, HF-specific PROs, and generic PROs (Mean \pm SD=11.2 \pm 8.87 vs. 32.6 \pm 44.58 vs. 148.8 \pm 62.54; $P < 0.001$). The most common AF-specific PRO, the AF Effect on Quality-of-Life (AFEQT), is available in 24 translations. Only 3 of the 5 most common AF-specific PROs are available in more than 10 languages, while all 5 most used generic PROs are available in 10 or more languages.

Conclusion: Language accessibility is an underrecognized barrier to the utilization of PROs in AF QoL assessment. This may negatively affect the generalizability of AF trials focused on QoL, emphasizing the need for

increased translation and cultural adaptation efforts.

Table. Clinical trial characteristics by language exclusion

	Non-Language Exclusive (n=218)	Language Exclusive (n=15)	Overall (n=233)	p-Value
Median enrollment (IQR)	119.5 (47-405)	70 (20-160)	112 (44-402)	0.090
Enrollment Year (%)				0.0002
2002-2006	27 (12.4)	0 (0)	27 (11.6)	
2007-2011	67 (30.7)	2 (13.3)	69 (29.6)	
2012-2016	81 (37.2)	2 (13.3)	83 (35.6)	
2017-2021	43 (19.7)	11 (73.3)	54 (23.2)	
Industry-Funded (%)	100 (45.9)	2 (13.3)	102 (43.8)	0.015
Intervention (%)				0.018
Drug	92 (42.2)	2 (13.3)	94 (40.3)	
Device	80 (36.7)	6 (40.0)	86 (36.9)	
Procedure	5 (2.3)	2 (13.3)	7 (3.0)	
Behavioral	4 (1.8)	1 (6.7)	5 (2.1)	
Other	37 (17.0)	4 (26.7)	41 (17.6)	

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 8

Topic 1: Electrophysiology

Publishing Title: INEQUITIES IN ATRIAL FIBRILLATION TRIALS: AN ANALYSIS OF PARTICIPANT RACE, ETHNICITY, AND SEX OVER TIME

Author Block: Roy Lan, Ishan Paranjpe, Mohammad Saeed, Marco Perez, Stanford University, Stanford, CA, USA

Background: Despite the importance of racial and ethnic representation in clinical trials, limited data exist regarding the enrollment trends of these groups in atrial fibrillation (AF) trials over time.

Methods: We performed a systematic search of all completed AF trials registered in ClinicalTrials.gov between conception to December 31, 2023 and manually extracted composition of race/ethnicity. We calculated the participation prevalence ratio (PPR) by dividing the percentage of non-White participants by the percentage of non-White participants among the disease population (PPR 0.8-1.2 suggests proportional representation) over time.

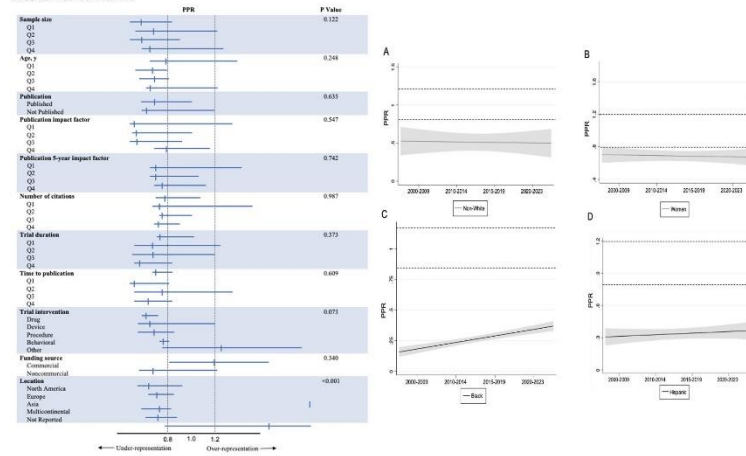
Abstract Body: **Results:** We identified 277 completed AF trials encompassing a total of 1,933,441 adults, with a median proportion of non-White at 12% (IQR: 6-27), 121 (43.7%) device-focused, and 184 (66.4%) funded by industry. Only 36.1% of trials reported comprehensive race information. Overall, non-White participants were underrepresented (PPR = 0.511; $P < 0.001$), including Black (PPR = 0.263) and Hispanic (PPR = 0.337) participants. The proportion of non-White participants did not change significantly between 2000 and 2023 (11% vs 9%; $P = 0.343$).

Conclusion: Despite greater awareness, representation of non-Whites in AF clinical trials are poor and have not improved significantly over time. These findings demand additional recruitment efforts to ensure adequate

representation of these demographic subgroups in future AF clinical trials.

Figure. Panel 1: Median non-White PPR in atrial fibrillation clinical trials. Panel 2: Trends in atrial fibrillation clinical trials over time by median PPR.

PPR, Participation to prevalence ratio. Tick marks denote median PPR and lines denote boundaries of 25th and 75th percentile of PPR values. Trials are stratified by (A) White vs. non-White; (B) sex; (C) Black; (D) Hispanic. PPR, Participation to prevalence ratio. Dotted lines indicate PPR <0.8 or >1.2, shaded areas depict 95% confidence intervals



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 10

Topic 1: Electrophysiology

Publishing Title: VENTRICULAR TACHYCARDIA ORIGINATE FROM THE LEFT AORTIC SINUS OF VALSALVA IN A PATIENT WITH SYNCOPE

Author Block: Nardia Isabel Ornelas Hernandez, Pio Iran Coria Sandoval, Hugo Enrique Coutiño Moreno, Jose Luis Morales, Atala Judith López Soto, Luis Raul Cano del Val Meraz, Mauricio Cortes, Carlos E. Guzman, Rodolfo Gaona, Iris Melina De la O Duran, Alejandro Brown Gutierrez, José Ángel González Orozco, Alfredo Hernández Mojica, José Luis Rico Rico, Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado, Saltillo, Mexico, Hospital de Cardiología Centro Médico Nacional Siglo XXI

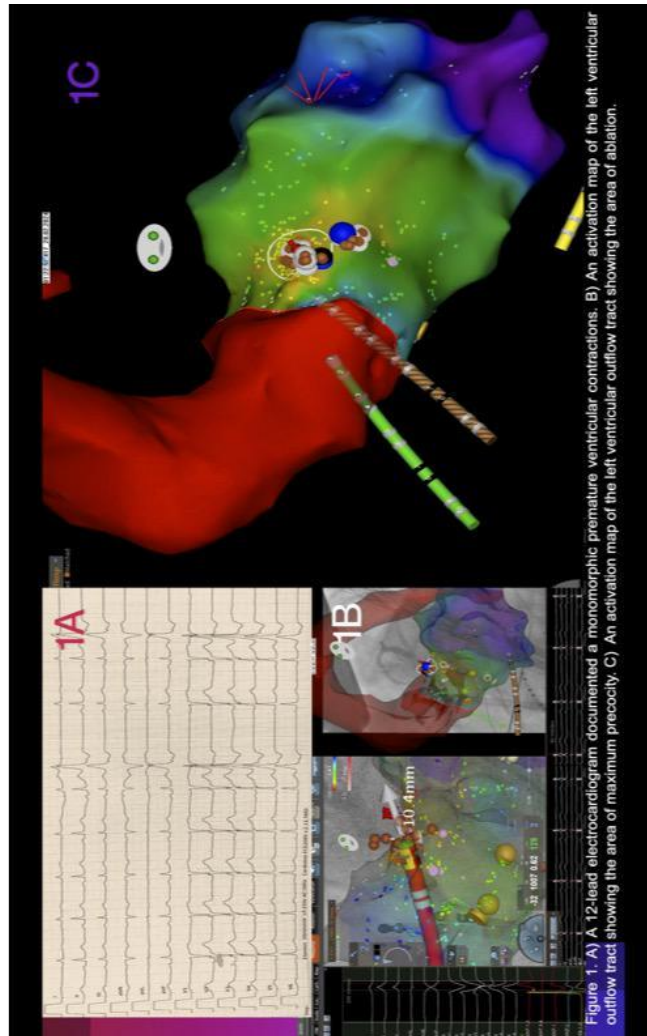
Abstract Body: **Background:** Idiopathic Ventricular Tachycardia comprises 10% of all patients referred for evaluation of ventricular tachycardia. The minority of outflow tract tachycardias originated in the left ventricular outflow tract and adjacent structures (10% to 20%).

Case: A 70-year-old male, without important cardiovascular history. His medical condition began with syncope. Electrocardiograms and Holter monitoring showed a repetitive monomorphic premature ventricular contraction and non sustained monomorphic VT (Figure 1A). The echocardiogram detected normal systolic wall motion with preserved left ventricular ejection fraction.

Decision-making: An electrophysiological study was performed with an activation map of the left ventricular outflow tract and adjacent structures showing the area of maximum precocity in the left aortic sinus of valsalva. Coronary angiography showed a 10 mm distance between the interest region and the left main coronary artery (Figure 1B). Radiofrequency was delivered on

the area of interest and a warm-up phenomenon was documented with termination of the repetitive monomorphic premature ventricular contraction (Figure 1C).

Conclusion: Idiopathic Ventricular Tachycardia is an entity that can cause syncope and hemodynamic compromise, so ablation has a great impact on the patient's prognosis.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 11

Topic 1: Electrophysiology

Publishing Title: ABLATION OF SUPRAVENTRICULAR TACHYCARDIAS USING ELECTROANATOMIC MAPPING WITHOUT FLUOROSCOPY: A TWO-YEAR EXPERIENCE

Author Block: Juan Pablo Guzman, Leandro Tomas, 4F GROUP, ARGENTINA, Argentina

Abstract Body:

Background: Despite increased availability of 3D electroanatomic mapping systems, radiofrequency ablation remains the primary method for supraventricular arrhythmia ablation in Argentina. Developing alternative methods could reduce radiation exposure while maintaining efficacy.

Methods: A retrospective study (Sep 2021 - Dec 2023) analyzed 19 high-density 3D mapping-guided supraventricular ablations out of 153 procedures. All used 3D mapping after conventional ablation recurrence. Acute success was no recurrence at 30 days. The procedure, via femoral punctures, progressed catheters guided by electrograms to the right atrium. Anatomical reconstruction identified superior vena cava anatomy, His bundle, ostium of coronary sinus, and completed atrial anatomy. The ablation catheter was placed in the objective anatomical area, coinciding with intracavitary electrograms of interest. Radiofrequency application was initiated until disappearance of clinical arrhythmia and arrhythmic substrate.

Results: Patients aged between 38 and 68 years included 8 cases of typical atrial flutter and 3 cases of atypical atrial flutter. They were distributed as follows: 8 male patients (73%) and 3 females (27%); 6 without structural heart disease (54.5%); 2 patients with idiopathic dilated cardiomyopathy (18.2%); 1 patient with an atrial septal defect (9.1%); and 2 ischemic patients (18.2%).

Additionally, there were 8 cases of intranodal reentrant tachycardia: 5 female patients (62.5%) and 3 male patients (37.5%); 4 patients without structural heart disease (50%); 4 patients with idiopathic dilated cardiomyopathy (50%); and 4 without other cardiovascular pathologies (50%). The acute success rate was 100% with no late recurrences. There were no intra- or post-procedural complications, and no significant differences in ablation times were observed (fluoroscopy vs no fluoroscopy: 97 vs 102 min).

Conclusion: 3D mapping-guided radiofrequency ablation showed efficacy and safety comparable to fluoroscopy-guided ablation in Argentina. No significant increase in procedure duration without fluoroscopy was observed.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 12

Topic 1: Electrophysiology

Publishing Title: NAVIGATING PACEMAKER SYNDROME: A CASE FOR RESYNCHRONIZATION

Author Block: carlos Mejia, Camila Perez, Luis F. Pava, Carlos E. Vesga, Fundacion Valle del Lili, Cali, Colombia

Abstract Body:

Background: Cardiac devices, including pacemakers and cardiac resynchronization therapy (CRT) devices, are essential for managing arrhythmias and improving cardiac function. Appropriate device selection is critical for favorable outcomes.

Case: A 69-year-old woman with a history of breast cancer in 2003, currently in remission, was diagnosed with third-degree atrioventricular block (AVB) three months before consultation and a Micra™ (leadless transcatheter pacemaker by Medtronic) was inserted. She presented to the Emergency Department (ED) with a 15-day history of dyspnea on mild to moderate exertion, lower extremity edema, and decreased functional class. Severe jugular vein distension, an audible S3, and cannon a waves were identified. Pacemaker syndrome was suspected. An echocardiogram showed a borderline ejection fraction (EF) and confirmed atrioventricular dissociation. Diuretic therapy was initiated

Decision-making: The choice of pacemaker can significantly impact ventricular function. While the Micra offers reduced infection risk, altered atrial sensing may cause AV dissociation leading to heart failure (HF). CRT devices can improve synchronization and ventricular function and are preferable if vascular access preservation or infection are not a main concern. In our patient, pacemaker reprogramming failed to improve atrial

sensing. A change to a cardiac resynchronization therapy (CRT) device was decided, resulting in a favorable response.

Conclusion: This case emphasizes the importance of personalized cardiac device management. In patients with complex arrhythmias and HF, transitioning to a CRT device can significantly improve clinical outcomes when the initial pacemaker therapy is inadequate.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 13

Topic 1: Electrophysiology

Publishing Title: PEDIATRIC PATIENTS WITH ANDERSEN TAWIL SYNDROME ARE LESS PREDISPOSED TO PRESENT SUDDEN CARDIAC DEATH

Author Block: Alan García, [Ricky Lemus Zamora](#), Abdul Mueez Alam Kayani, Richard Salama Frisbie, Sai Sri Venkata Yeshwanth Damalapati, Gustavo Ruiz Gonzalez, Jorge Gomez, Indiana University School of Medicine, Indianapolis, IN, USA, AdventHealth Tampa, Tampa, FL, USA

Abstract Body: **Background:** Andersen-Tawil Syndrome (ATS) is characterized by a combination of dysmorphic features, periodic muscular weakness, and ventricular arrhythmias. There is no comparative study between the pediatric and adult populations.

Methods: We searched ATS cases between 1994 and 2024 to enable a meta-analysis. Cases were selected if they presented a cardiologic affection. The comparison was performed by grouping the patients according to their age of cardiologic symptoms onset (pediatric ≤ 21). The students' t-test was used for numerical variables, and the chi-square was used for categoricals. Values of $p < 0.05$ were considered statistically significant.

Results: The studied population included 245 cardiologic-affected patients with ATS, 194 pediatric and 51 adults. Analyzing cardiologic features, pediatric patients had a higher likelihood of developing premature ventricular contractions (PVCs) than adults ($p = 0.02$). Being couplets, the more prevailing form of PVCs in pediatrics (90%) than in adults (10%) ($p = 0.005$). Ventricular tachycardias (VT) was more likely presented in pediatrics (84%) than in adults (16%) ($p = 0.008$). Although non-fatal cardiac arrest (NFCA) can occur at a pediatric age, they are less predisposed to present sudden cardiac death

(SCD) compared to adults ($p = <0.001$).

Conclusion: ATS patients debuting with cardiologic conditions in the pediatric age can suffer a higher number of NFCA episodes; however, they are less prone to develop a fatal episode of SCD compared to adults.

Table 1. Cardiologic characteristics of the study population							
Overall population (n = 245)							
	Evaluated	Affected cases	Pediatric	Adult	OR	95% CI	P value
Periodic Paralysis	239 (98)	154	128 (83)	26 (17)	1.826	0.965-3.456	0.06
Triad	239 (98)	123	104 (85)	19 (15)	1.909	1.005-3.628	0.04
Syncope	232 (95)	67	51 (76)	16 (24)	0.797	0.404-1.571	0.51
Family history of SCD	245 (100)	36	27 (75)	9 (25)	0.754	0.330-1.725	0.50
QTU Positive	188 (77)	130	100 (77)	30 (23)	0.870	0.409-1.850	0.71
Prominent U wave	188 (77)	130	100 (77)	30 (23)	0.870	0.409-1.850	0.71
Prolong QTc	209 (85)	95	69 (73)	26 (27)	0.531	0.272-1.035	0.61
PVC	240 (98)	213	174 (82)	39 (18)	2.624	1.116-6.170	0.02
High burden PVC	242 (99)	47	39 (83)	8 (17)	1.298	0.563-2.992	0.54
Bigeminism	195 (80)	122	99 (81)	23 (19)	1.409	0.700-2.835	0.33
Couplets	194 (79)	76	68 (90)	8 (10)	3.163	1.369-7.308	0.005
Polymorphic PVC	210 (86)	64	53 (83)	11 (17)	1.352	0.633-2.888	0.43
VT	243 (99)	173	145 (84)	28 (16)	2.374	1.243-4.532	0.008
NsVT	226 (92)	127	111 (87)	16 (13)	2.602	1.310-5.165	0.005
sVT	227 (93)	34	29 (85)	5 (15)	1.422	0.516-3.917	0.49
BVT	226 (92)	102	89 (87)	13 (13)	2.185	1.072-4.455	0.02
Polymorphic VT	227 (93)	50	42 (84)	8 (16)	1.294	0.558-3.003	0.54
TdP	226 (92)	12	12 (100)	0 (0)	NA	NA	0.08
VF	232 (95)	36	26 (72)	10 (28)	0.565	0.250-1.278	0.16
NFCA	245 (100)	26	19 (73)	7 (27)	0.682	0.270-1.725	0.41
SCD	245 (100)	11	4 (36)	7 (64)	0.132	0.037-0.472	<0.001
ICD	245 (100)	47	37 (79)	10 (21)	0.966	0.444-2.105	0.93

Values are n (%). BVT = Bidirectional Ventricular Tachycardia; ICD = Implantable Cardioverter Defibrillator; NA= Non-Applicable; NFCA = Non-fatal Cardiac Arrest; NsVT = Non-sustained Ventricular Tachycardia; PVC = Polymorphic Ventricular Contractions; SCD = Sudden Cardiac Death; TdP = Torsade de Pointes; VF = Ventricular Fibrillation; VT = Ventricular Tachycardia; sVT = Sustained Ventricular Tachycardia; VF = Ventricular Fibrillation.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 14

Topic 1: Electrophysiology

Publishing Title: SEX-BASED DIFFERENCES IN ELECTROCARDIOGRAPHIC PATTERNS OF PREMATURE VENTRICULAR CONTRACTIONS

Author Block: Juan Felipe Rodriguez, Whilman G. Rodriguez, Carlos Alberto Porras Meza, IPS Colsubsidio Calle 63, Bogota DC., Colombia

Abstract Body: **Background:** Premature ventricular contractions (PVCs) are a common phenomenon. Prognoses depend on the presence of structural heart disease. PVCs can present electrocardiographic patterns such as bigeminy, trigeminy, couplets, triplets, or non-sustained ventricular tachycardia. To the best of our knowledge, the occurrence of specific PVC patterns has not been associated with a determinate biological sex. It is well known that some etiologies of this phenomenon, for example, ischemic heart disease, can be more prominent in males compared to females. This study aims to identify if there are any electrocardiographic patterns independently associated with the male sex in patients with frequent PVCs during 24-hour monitoring.

Methods: Cross-sectional, observational, retrospective, single-center study. Patients who underwent 24-hour electrocardiographic monitoring between September 2023 and November 2023 were reviewed. Patients with >10 PVCs per hour were included. Participants were divided into two groups based on biological sex. Association between analyzed variables and male sex was established by bivariate logistic regression models. Variables with a significant association were included in a multivariate model.

Results: A total of 343 patients were included, 177 males and 166 females. The mean age was 69.7 (± 12.5). Mean LVEF was 55.6 (± 10.0), being higher in females than in males (58.2 ± 7.5 vs 53.1 ± 11.4 , $p < 0.01$). Ischemic heart

disease was more common in males (39% vs 27.3%, $p=0.02$). Structurally normal hearts were more common in females (63.9% vs 50.3%, $p=0.01$). Upon bivariate analysis, polymorphic PVCs, couplets, and occurrence of nonsustained ventricular tachycardia were associated with male sex (OR: 1.73, CI: 1.12-2.67, $p=0.01$; OR: 1.77, CI: 1.14-2.75, $p=0.01$; OR: 1.89, CI: 1.09-3.27, $p=0.02$, respectively). None of these parameters reached significance as independently associated variables in a multivariate analysis.

Conclusion: In our population, none of the analyzed PVC parameters were independently associated with the male sex. Polymorphic PVCs, couplets, and nonsustained ventricular tachycardia were associated with male sex in univariate analysis.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 15

Topic 1: Electrophysiology

Publishing Title: PREMATURE VENTRICULAR CONTRACTION PATTERNS ASSOCIATED WITH NONSUSTAINED VENTRICULAR TACHYCARDIA: A CROSS-SECTIONAL STUDY

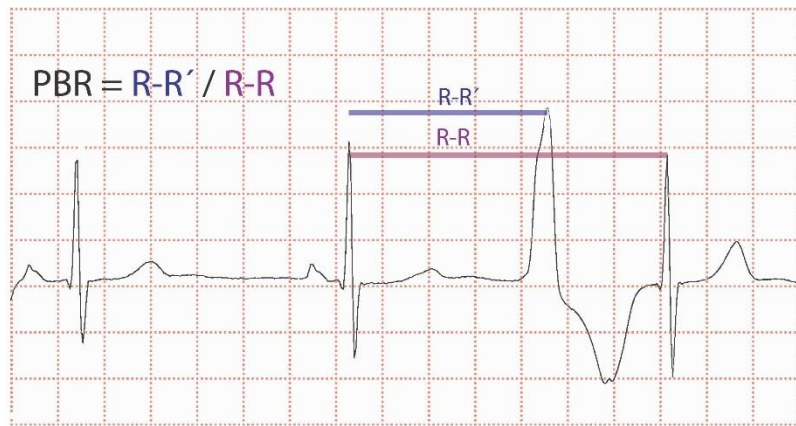
Author Block: Juan Felipe Rodriguez, Whilman G. Rodriguez, Carlos Alberto Porras Meza, IPS Colsubsidio Calle 63, Bogota, Colombia

Background: Occurrence of nonsustained ventricular tachycardia (NSVT) is associated with negative outcomes. It is not clear whether specific electrocardiographic characteristics of premature ventricular contractions (PVCs) are associated with the occurrence of NSVT. The aim of this study was to identify electrocardiographic patterns associated with the presence of NSVT during 24-hour electrocardiographic monitoring in patients with >10 PVCs per hour.

Abstract Body: **Methods:** This was a retrospective, observational, cross-sectional study. We reviewed consecutive patients who received 24-hour ECG monitoring performed at a single outpatient cardiology center. Patients who received 24-hour electrocardiographic monitoring, with a PVC burden ≥ 10 PVCs/hour were included.

Results: 343 patients were analyzed (mean age, 69.7 [12.5] years; 177 men [51.6%]). NSVT occurred in 72 patients who were compared with 271 patients without NSVT. The novel term “premature beat ratio” (Fig1), which aims to correlate the coupling interval and compensatory pause, was introduced; a value >0.5 was independently associated with NSVT according to the multivariate model (OR= 3.73, 95% CI= 1.57-8.82; P= 0.002). PVC burden (OR= 1.09, 95% CI= 1.02-1.17; P=0.006), and triplets (OR= 18.19, 95% CI= 7.32-45.18 P= 0.0) were also associated with NSVT in the multivariate model.

Conclusion: These findings suggest that in patients with frequent PVCs, PVC burden, triplets, and a premature beat ratio >0.5 are associated with the presence of NSVT.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 16

Topic 1: Electrophysiology

Publishing Title: SPEECH INDUCED ATRIAL TACHYCARDIA: A CASE REPORT

Author Block: Ricky E. Lemus-Zamora, Gustavo Ruiz, Alan García, Jorge Rafael Gomez, Jose Manzanarez-Barrera, Abdul Mueez Alam Kayani, Santiago Nava, Instituto Nacional de Cardiología Ignacio Chávez, Mexico City, Mexico, Indiana University School of Medicine, Indianapolis, IN, USA

Abstract Body: **Background:** Speech-induced ATs are rare. The mechanism involves an aberrantly conducted signal intended for speech but triggered by vagal activation, leading to increased autonomic atrial tone, resulting in AT with speech.² We present a case of a 67-year-old man presenting with episodes of AT that occurred while speaking, successfully treated by catheter ablation (CA).

Methods: A 67-year-old male with hypertension, eight months of palpitations, syncope, dyspnea, and worsening chest pain for two days. At admission, troponin > 99th percentile ULR, and ECG showed no changes. A coronary CT scan reported a 2-vessel lesion; the patient received medical management and PCI for ACS. While admitted episodes of AT triggered by speaking noted, HR up to 200 bpm, resolving with silence. The patient was unsuccessfully treated with a Beta blocker; catheter ablation of the RA and Pulmonary veins performed with no AT recurrence.

Results: Heart rate variability has been linked with swallowing, speech, etc. However, no strong correlation between voice and arrhythmia has been reported.³ Other reports have identified triggers for AT, such as swallowing or coughing.⁴ Two theories have been proposed to explain this: a central in

which supramedullary mechanisms related to speech may abnormally modulate vagal activity, rendering arrhythmias, or a peripheral that proposes that anatomical shifts of the thorax during professional voice production may alter cardiovagal modulation, facilitating arrhythmia in a predisposed heart.³ Giving is a rarity; limited information is available. Some patients treated with beta-blockers and or antiarrhythmics experience remission of AT episodes, while others are refractory, leading to CA as treatment. Data shows a higher rate of failure with pharmacological therapy in comparison with CA. One study reported that catheter ablation was the most common and successful method, resulting in remission of AT.²

Conclusion: Speech-induced atrial tachycardia is uncommon, requiring further research to determine induction mechanisms and optimal therapeutic approaches. Catheter ablation of pulmonary vein ganglionated plexi appears to be an effective treatment approach.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 17

Topic 1: Valvular Heart Disease

Publishing Title: SIMULTANEOUS LEFT AND RIGHT SIDED NATIVE VALVE INFECTIVE ENDOCARDITIS WITHOUT COMMON RISK FACTORS

Author Block: Jose Alejandro Cordova, Ana Gisselle Castillo Davila, Gabriela Dominguez Trejo, Francisco Valadez, Jose Enrique Reyna Reyna, Mauricio Cortes, Miguel Eduardo Estrella Saucedo, Hospital Regional Monterrey ISSSTE, Monterrey, Mexico

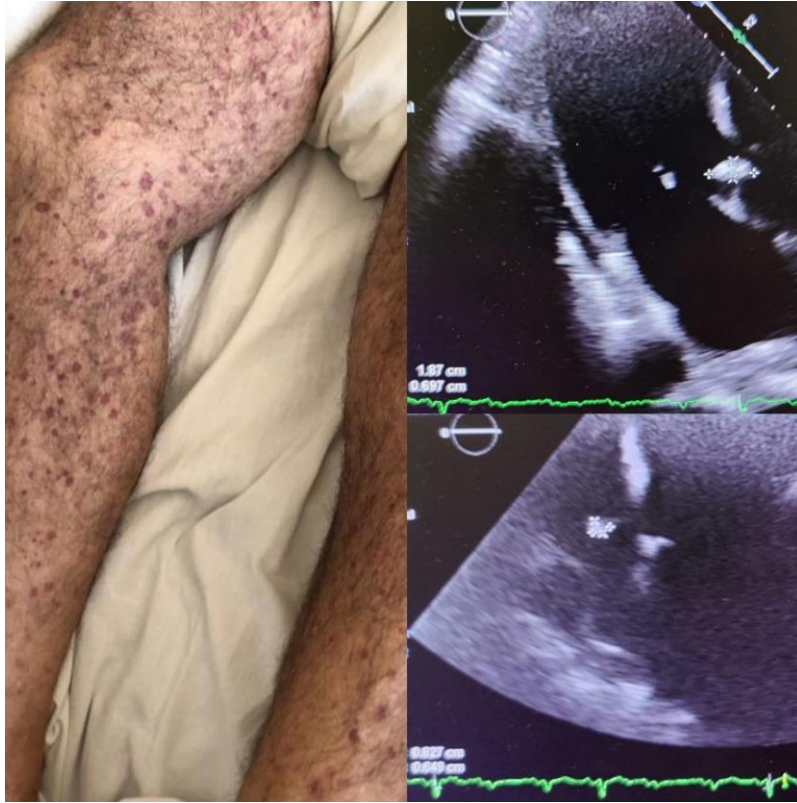
Abstract Body:

Background: Infective endocarditis represents a high mortality rate. The baseline treatment is antibiotics and sometimes valve replacement. Multivalvular endocarditis is a rare presentation with elevated risk of complications.

Case: 59 year old man with chronic back and left shoulder pain, who had received intraarticular infiltrations with unspecified analgesics. Weeks later, he developed a fever and a cardiac murmur. The patient was admitted to the ICU for acute heart failure. During the physical examination, Janeway lesions were observed on the lower limbs, and a decrescendo aortic diastolic murmur, grade III, was noted.

Decision-making: Coagulase-negative staphylococci were isolated in two blood cultures, initiating antibiotics. The echocardiogram revealed an aortic valve with a mobile mass of 18.7x6.9 mm with severe regurgitation, and a tricuspid valve with a mass of 8.3x6.5 mm with moderate regurgitation. The case was evaluated by the cardiothoracic surgery department. During surgery, vegetations were observed on all three aortic leaflets and on the septal leaflet of the tricuspid valve. Resection of the tricuspid vegetation was performed, along with aortic valve replacement using a biological prosthesis.

Conclusion: Simultaneous left and right-sided endocarditis is a rare clinical presentation, typically found in IV drug users or immunocompromised patients. In this case, where our patient had no risk factors, the clinical history and physical examination were key for a quick diagnosis.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 18

Topic 1: Valvular Heart Disease

Publishing Title: HEYDE SYNDROME: THE LINK BETWEEN CARDIOLOGY, GASTROENTEROLOGY AND HEMATOLOGY

Author Block: Juan Carlos Maldonado Chang, Jose D. Vasquez Guevara, RODOLFO Gutiérrez, Heydy I. Bautista, Hospital Roosevelt, Guatemala, Guatemala

Background: Aortic valve stenosis may be complicated by gastrointestinal bleeding from angiodysplasia in the colon and acquired von Willebrand factor deficiency. Correction of the valvulopathy can resolve the gastrointestinal bleeding and coagulopathy

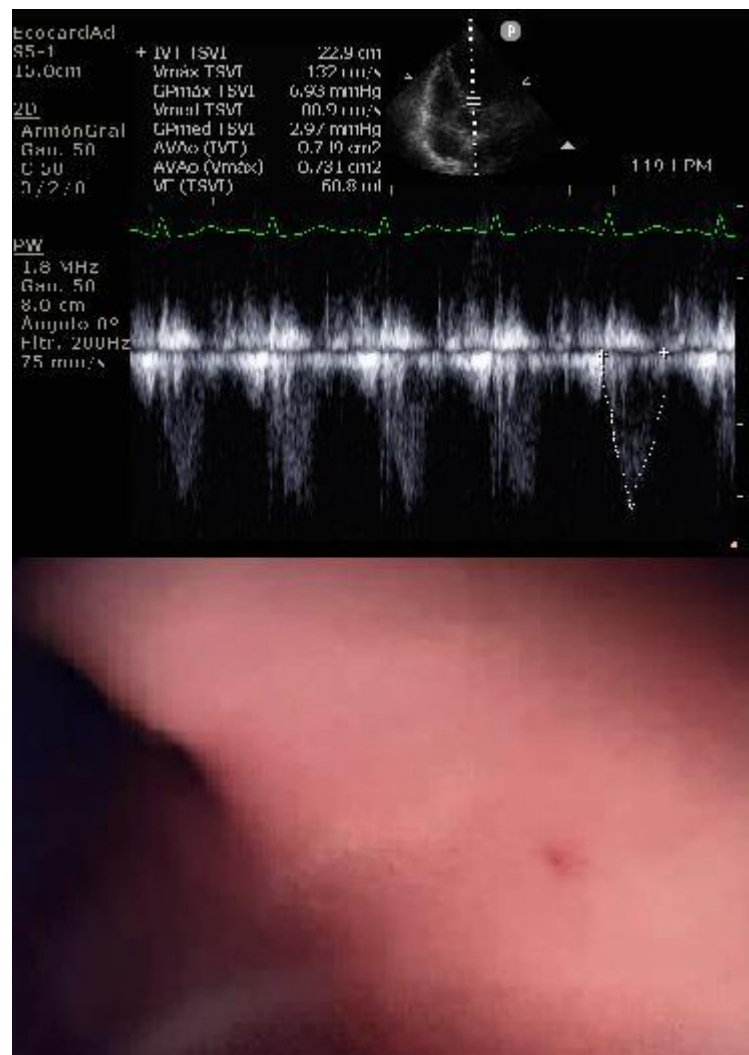
Case: A 49-year-old female was admitted with history of 1 week melena, 3 time/day, associated with dyspnea with moderate exertion and generalized pallor. Hemodynamically stable on admission, with generalized pallor, mesotelesystolic murmur that is best auscultated at the right upper parasternal border radiating to the neck, intensity 3/6 without the presence of trill.

Abstract Body:

Decision-making: Gastrocolonoscopy was performed on the patient, in which multiple angiodysplasias were shown in all sections of the colon. After stabilization of gastrointestinal bleeding, an echocardiogram was performed which showed severe aortic stenosis with an area of 0.72 cm², and subsequently, when Heyde's syndrome was suspected, studies for acquired von Willebrand disease were performed, which were positive. The patient was referred to a specialized center for aortic valve replacement, which is expected to resolve Heyde's syndrome.

Conclusion: Heyde's syndrome is estimated to be rare due to the low number of cases that are studied in depth. This pathology requires an approach to its

mechanisms, the keys to its clinical detection and its impact on the management of aortic stenosis and other entities with related pathophysiology



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 19

Topic 1: Valvular Heart Disease

Publishing Title: TRIPLE RIPPLE: A CASE REPORT OF A SUCCESSFUL THIRD CARDIAC SURGERY, FOR A TRIPLE VALVE REPLACEMENT

Author Block: David Alberto Brenes-Castro, III, Ricardo Barajas-Campos, Pamela Ramírez-Rangel, Laura L. Rodríguez-Chávez, Laura V. Torres-Araujo, Instituto Nacional de Cardiología, Mexico City, Mexico

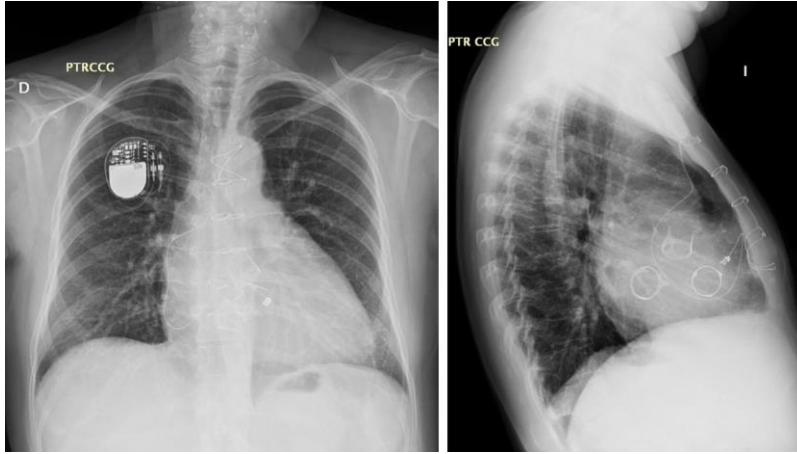
Background: This is the case of a 36-year-old female with a history of bicuspid aortic valve and native valve endocarditis which led to two heart valve surgeries including aortic, mitral and tricuspid valve replacement with bioprosthetic valves.

Case: Two months before admission she started with progressive dyspnea and signs of systemic congestion. Transthoracic and transesophageal echocardiogram showed severe valve dysfunction of all three bioprosthetic valves. She was admitted for decongestive therapy and further evaluation.

Abstract Body: **Decision-making:** Once stable, a heart team evaluation was performed given the high risk of performing a third cardiac surgery for a triple valve surgery (TVS). This time, a mechanical prosthetic aortic and mitral valve, and a bioprosthetic tricuspid valve replacement surgery was performed. She presented postoperative bleeding with surgical source control. She had a favorable clinical course and was discharged.

Conclusion: TVS and repeat valve surgery are both independently high-risk surgeries that require a thorough heart team evaluation and should be limited to high volume centers. As seen in this case, first surgery intervention and prosthetic valve choice can determine the prognosis and the need for future surgeries. Currently there is a lack of evidence-based recommendations to

guide decision-making in these patients.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 20

Topic 1: Valvular Heart Disease

Publishing Title: LEFT HEART ENDOCARDITIS ASSOCIATED WITH MUCOCUTANEOUS HEMANGIOMA

Author Block: Raúl Emmanuel Fonseca Robles, Aaron Cohen García, Rodrigo Del Angel Galvez, SR, Ramón Angel Soto Rodríguez, Aldo Emir Martínez Sarabia, Erik Emilio Sanchez Estrada, Katia Lorena Moyado Ocampo, Emmanuel Antonio Mendoza Enciso, Alexandra Arias-Mendoza, Rodrigo Gopar-Nieto, Diego Araiza Garaygordobil, Instituto Nacional de Cardiología, Ignacio Chávez, Ciudad de México, Mexico

Abstract Body: **Background:** Infective endocarditis associated with mucocutaneous tumors its attributable to bacterial translocation. There are few cases described in the literature that detail this condition.

Case: A 39-years-old man with no relevant medical history presented to emergency room with descompensated heart failure, fever, and malaise of a few days. The physical examination revealed a hemangioma on face and oral mucosa, an aortic diastolic murmur, mitral sistolic murmur and bilateral rales. Transthoracic echocardiography (TTE) and transesophageal echocardiography (TEE) revealed bicuspid aortic valve (BAV) with severe aortic regurgitation and severe mitral regurgitation with images suggestive of vegetations. Blood cultures revealed Streptococcus mitis, leading to a diagnosis of endocarditis.

Decision-making: It was decided to undergo surgical aortic and mitral valve replacement without complications. Streptococcus spp was isolated from the valve cultures.

Conclusion: There are few reported cases in the literature of endocarditis associated with vascular tumors in mocus membranes (especially in the

context of hereditary hemorrhagic telangiectasia) in patients without other risk factors and structural abnormalities such as BAV in our case. Therefore, we emphasize the importance of recognizing this unusual association in patients with tumors in such locations.



Figure 1. Up: TTE with vegetations in mitral and aortic valves. Aortic regurgitation flow in color Doppler. Down: Hemangioma on face and oral mucosa. Vegetations on surgical piece.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 21

Topic 1: Valvular Heart Disease

Publishing Title: MITRAL VALVULOPATHY, BEYOND THE EVIDENT

Author Block: Francisco Javier Galvez Retolaza, Elida María Ortega Mansilla, Ismael Guzmán Melgar, Hospital Roosevelt, Guatemala, Guatemala

Abstract Body:

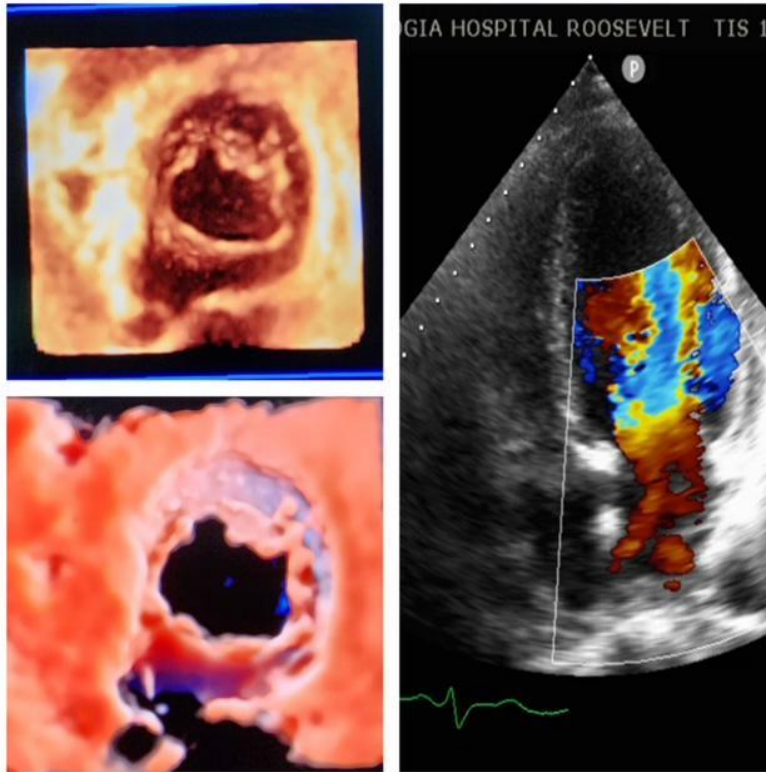
Background: Mitral regurgitation is caused by inadequate coaptation of the leaflets that make up the mitral valve allowing retrograde flow of blood from the left ventricle to the left atrium during systole. Among the multiple etiologies of this pathology, there are congenital ones such as clefts or fenestrations in the valve that can be treated with valve repair or replacement.

Case: The case of a 36-year-old male patient who was admitted for dyspnea on moderate exertion for 2 months is presented. Cardiac auscultation revealed the presence of a holosystolic murmur in the mitral focus, grade IV/VI, radiating to the axillary region. The general physical examination revealed malar erythema and oral ulcers which also led to the suspicion of autoimmune pathology.

Decision-making: Transthoracic echocardiogram revealed severe mitral regurgitation, and transesophageal echocardiogram showed two indentations in the anterior leaflet of the mitral valve. In addition, laboratory studies were performed showing leukopenia, proteinuria in 24-hour urine and elevation of anti-DNA and anti-Smith antibodies; A renal biopsy was performed finding glomerulonephritis mediated by immune complexes with a membranous pattern. Treatment was initiated for systemic lupus erythematosus, and he was presented for mitral valve repair.

Conclusion: Congenital mitral valve disorders are diagnosed mainly in the

pediatric population and are rare in adulthood. Double cleft mitral valve is extremely rare with only a few cases reported.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 22

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: ANTITACHYCARDIA ICD THERAPY IN A PATIENT WITH MULTIPLE MORPHOLOGIES OF MONOMORPHIC VENTRICULAR TACHYCARDIA REFRACTORY TO TREATMENT

Author Block: Juan Sebastian Theran León, Luis Andrés Dulcey, Jaime Gómez, Laura Yibeth Esteban, Valentina Ochoa, Jorge Andrés Hernández, Universidad de Santander, Bucaramanga, Colombia

Abstract Body:

Background: patient with structural myocardial pathology (cardiosclerosis postinfarction) with recurrent sustained paroxysmal monomorphic ventricular tachycardia (VT) refractory to recommended nominal ICD (implantable cardioverter defibrillator) settings is a rare problem. The refractoriness of recurrent paroxysms of ventricular tachycardia to therapy with TAT (antitachycardia therapy) increases the risk of repeated ICD shocks. Despite the existence of universal recommendations for ICD programming and TAT therapy, there is a need in clinical practice for individualized TAT programming in patients refractory to nominal settings. Increasing the number of TAT series and changing the algorithms allows increasing the TAT efficiency up to 80-89%. Refractoriness to standard TAT settings can also be overcome by using alternative TAT stimulation algorithms (Ramp, Burst-plus, or Ramp-plus instead of Burst), changing the stimulation interval, duration of the TAT sequence, the type of stimulation and even adding 1 or 2 additional ones. stimuli, as well as using data from the previous intracardiac electrophysiological cardiac test.

Methods: We used a clinical case of a patient with postinfarction cardiosclerosis of the fifth decade with paroxysmal monomorphic stable VT (PS-MS VT) of various morphologies.

Results: The clinical case presented of a patient with cardiosclerosis Postinfarction of the fifth decade with stable monomorphic paroxysmal VT (SM-VT) of various morphologies demonstrates that the arrhythmogenic substrate after myocardial infarction changes for a long time without new stenoses in large coronary arteries and without new episodes of acute coronary disease.

Conclusion: The efficiency of early TAT stimulation may differ for VTs of various morphologies, making it reasonable to use alternative stimulation algorithms (in addition to the standard Burst sequences recommended by the 2019 Consensus on ICD Programming) and test potential TAT algorithms. during monomorphic VT ablation . After the reprogramming, satisfactory control and evolution was achieved .

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 23

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: ORTHODROMIC ATRIOVENTRICULAR RECIPROCAL TACHYCARDIA WITH IPSILATERAL BUNDLE BRANCH BLOCK REGARDING A CLINICAL CASE

Author Block: Juan Sebastian Theran León, Luis Andrés Dulcey, Jaime Gomez, Laura Yibeth Esteban, Valentina Ochoa, Jorge Andrés Hernández Navas, Universidad de Santander, Bucaramanga, Colombia

Background: Pre-excitation syndrome is a congenital anomaly in the structure of the cardiac conduction system and consists of the presence of an additional atrioventricular connection . The possibility of assuming the presence of a pre-excitation syndrome accompanied by tachycardia based on an electrocardiogram provides a clue for the correct diagnosis and subsequent treatment of the patient.

Methods: The clinical case of a patient in her sixth decade who was admitted with previously undiagnosed paroxysms of tachycardia is presented.

Abstract Body: **Results:** During Holter monitoring, an episode of heart palpitations was recorded. When analyzing a fragment of the ECG, it was possible, calculating the duration of the tachycardia cycle, to suspect the presence of a latent pre-excitation syndrome , which was accompanied by the development of orthodromic atrioventricular reciprocal tachycardia with bundle branch block on the side of the atrioventricular connection additional (ipsilateral block). The patient underwent endocardial electrophysiological examination to confirm the presence of the bundle, followed by catheter treatment of the atrioventricular connection . A good postoperative clinical result was obtained

Conclusion: It is important to be able to make a differential diagnosis between the presence of a latent pre-excitation syndrome with the

development of orthodromic atrioventricular reciprocal tachycardia with bundle branch block on the side of the extra-atrioventricular junction and other supraventricular tachycardias with aberration along one of the branches of the beam, in order to determine the patient's management tactics and control the effectiveness of the treatment.

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Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 24

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: POST RADIOTHERAPY AORTIC STENOSIS AND ITS CLINICAL SURGICAL APPROACH, REPORT OF A CLINICAL CASE

Author Block: Juan Sebastian Theran León, Luis Andrés Dulcey, JAIME ALBERTO GOMEZ AYALA, Laura Yibeth Esteban, Valentina Ochoa, Jorge Andrés Hernández Navas, Universidad de Santander, Bucaramanga, Colombia

Background: Aortic stenosis is one of the most common heart valve pathologies, which occurs in oncology patients after radiotherapy and requires surgical treatment. However, this group of patients has a higher risk of developing intra- and postoperative complications and, therefore, the optimal method of surgical treatment of aortic stenosis in this patient cohort is transcatheter aortic valve implantation (TAVI).

Methods: Short description. A young man, in his fifth decade, was admitted to the Hospital Universitario de los Santander Bucaramanga, Colombia with a clinical picture of severe aortic stenosis. At an early age, the patient was diagnosed with lymphogranulomatosis, or Hodgkin's disease, for which he underwent radiotherapy, which in the long term was complicated by valvular pathology. After a thorough examination by the cardiac team, a high intraoperative risk was determined and endovascular correction of severe aortic stenosis was performed. The postoperative period was complicated by the development of complete atrioventricular block, which led to the installation of a permanent dual-chamber pacemaker.

Results: The clinical case presented is an example of successful surgical treatment of aortic stenosis in a patient associated with previous radiotherapy for Hodgkin's disease.

Abstract Body:

Conclusion: Endovascular aortic valve implantation is a promising approach for the treatment of patients with post-radiation aortic stenosis because this pathology is associated with anatomic and clinical risk factors unfavorable for surgical valve replacement. Despite their younger age, these patients represent a higher surgical risk category and, therefore, special attention should be paid to planning the procedure and preventing the main risks of TAVI. The present case is anecdotal due to the scarce description of this type of complications and their management.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 25

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: PATIENT-REPORTED OUTCOMES IN HEART FAILURE CLINICAL TRIALS: TRENDS, UTILIZATION, AND IMPLICATIONS

Author Block: Roy Lan, Stanford University, Stanford, CA, USA

Background: Patient-reported outcomes (PROs) are increasingly being used to evaluate quality of life (QoL) in Heart Failure (HF) patients. However, there is a limited understanding of the extent to which PROs are employed in HF clinical trials and which PROs are most used.

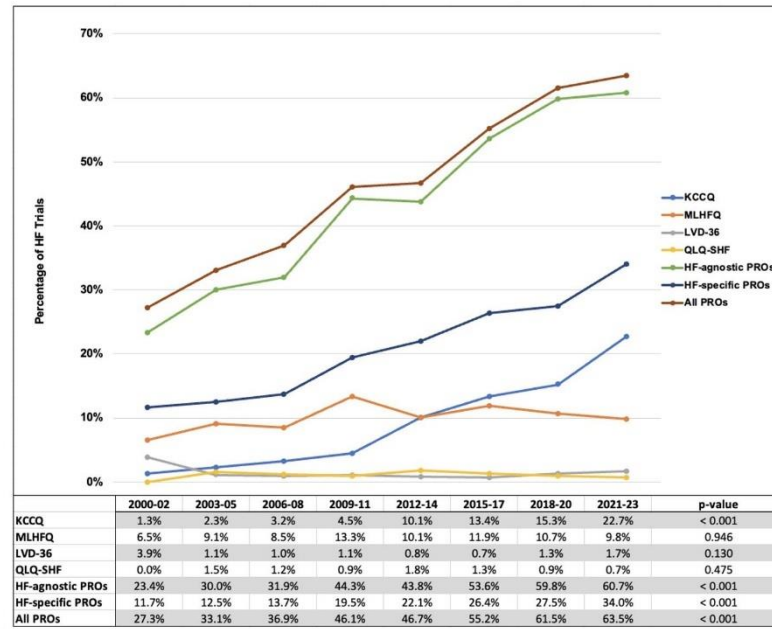
Methods: We conducted a comprehensive search of the ClinicalTrials.gov database, encompassing interventional clinical trials focused on heart failure as the primary condition of interest. This search spanned from the inception of the database until September 10th, 2023. We performed a linear regression analysis for both individual PROs and aggregated PRO groups.

Abstract Body: **Results:** Our query yielded a total of 6,152 trials encompassing 55 million participants. Of these, 2163 (51.6%) utilized at least one PRO. In total, 1,008 (24.0%) employed a HF-specific PRO and 2,056 (49.0%) employed a generic PRO. There was a significant increase in proportion of studies utilizing any PROs between 2000 and 2023 (27.3% vs. 63.5%; $P < 0.001$), HF-agnostic PROs (23.4% vs. 60.7%; $P < 0.001$) and HF-specific PROs (11.7% vs. 34.0%; $P < 0.001$). The most frequently utilized HF-specific PRO was the KCCQ and was the only HF-specific PRO to increase in use over time between 2000 and 2023 (1.3% vs. 22.7%; $P < 0.001$).

Conclusion: Our study finds that the use of PROs in HF clinical trials has significantly increased over time and are now employed in most HF clinical

trials.

Figure. Use of PROs over time in HF clinical trials.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 26

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: IMPACT OF BIOLOGICAL SEX ON HEART FAILURE EPIDEMIOLOGY LINKED TO CHRONIC OBSTRUCTIVE PULMONARY DISEASE: A BURDEN AND TREND ANALYSIS IN CENTRAL LATIN AMERICA AND THE CARIBBEAN, 2000-2021.

Author Block: Rafael Cortorreal, Penelope Medina, Universidad Iberoamericana UNIBE, Santo Domingo, Dominican Republic

Background: In Latin America and the Caribbean, Chronic Obstructive Pulmonary Disease (COPD) poses a greater burden on women. Over time, COPD can progress to Heart Failure (HF). This study aims to analyze the impact of biological sex on the epidemiology of heart failure associated with COPD in the Latin American and Caribbean regions.

Methods: Data was extracted from the Global Burden of Disease Study 2021. The analysis focused on prevalence and Years Lived with Disability (YLDs) rates, stratified by biological sex, age, year, and location from 2000 to 2021 in Latin America and the Caribbean. To examine the trend in burden, the annual percentage change (APC) was utilized.

Abstract Body: **Results:** For males, the prevalence rate of heart failure (HF) linked to chronic obstructive pulmonary disease (COPD) increased from 19.41 (95% UI: 15.38-24.29) in 2000 to 30.34 (95% UI: 22.80-39.65) in 2021, with an annual percentage change (APC) of 0.41. For females, the prevalence rate rose from 13.86 (95% UI: 10.86-17.39) in 2000 to 25.67 (95% UI: 19.25-34.40) in 2021, with an APC of 0.54. In terms of Years Lived with Disability (YLD), males showed an increase from 1.73 (95% UI: 1.14-2.38) in 2000 to 2.70 (95% UI: 1.69-3.97) in 2021, with an APC of 0.51. Similarly, females exhibited an increase from 1.24 (95% UI: 0.80-1.83) in 2000 to 2.29 (95% UI: 1.44-3.49) in 2021, with an APC of 0.68.

Conclusion: Over time, heart failure attributed to COPD has experienced an upward trend in both sexes. Despite the higher prevalence of COPD among females, the burden of heart failure remains greater in males. However, females have shown greater annual percentage changes in both prevalence and Years Lived with Disability (YLDs). These results align with current evidence highlighting the determinant role of male biological sex in cardiovascular disease.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 27

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: CLINICAL FEATURES AND OUTCOMES OF METHAMPHETAMINE-ASSOCIATED CARDIOMYOPATHY WITH LEFT VENTRICULAR THROMBUS

Author Block: Mauricio Castillo Perez, Lillian Royzman, Carlos Jerjes-Sanchez, Escuela de Medicina y Ciencias de la Salud, Tecnologico de Monterrey, Monterrey, Mexico

Abstract Body:

Background: With the emergence of methamphetamine (MA) use, cases of younger heart failure with reduced ejection fraction (HFrEF) patients secondary to methamphetamine-associated cardiomyopathy (MACM) arise.

Methods: We analyzed a case series of consecutive patients with diagnosis of MACAM with left ventricular thrombus from February 2022 to February 2024, with a six month follow-up. We described demographics, clinical presentation and outcomes.

Results: We identified six patients, primarily male (5/6) and young (23-46 years). Two had a previous diagnosis of arterial hypertension. On admission, patients referred NYHA III/IV symptoms. All patients had elevated biomarkers, including hs-cTnl (17-163) mcg/L, NT-pro-BNP (3,712-8,020) pg/mL, and D dimer (2,239-27,943) ng/mL. ECG showed deep anteroseptal Q waves and LV hypertrophy. Echocardiographic findings were severe LV dilation (LVDD 51-85 mm), reduced ejection fraction (LVEF 15-34%), left atrial enlargement, right ventricular dysfunction (TAPSE 8.6-21 mm), significant mitral and tricuspid valvular regurgitation, and pericardial effusion. All patients presented an LV thrombus, most located in the apical region ranging from 13 to 47 mm. Due to a lack of resources, no further diagnostic exams were done. All patients underwent guideline-directed medical treatment for HFrEF and oral

anticoagulation with apixaban for the LV thrombus. After 6 months, medical therapy and cease MA consumption denoted improvement in cardiac function and symptoms in two patients. One displayed complete thrombus resolution. However, patients with ongoing MA use suffered ischemic stroke (2) and/or died from cardiogenic shock upon rehospitalization (3). One withdrew from further medical attention.

Conclusion: Patients with MACM were commonly young men with severe impairment of left and right ventricular systolic function and an increased risk of developing an intracardiac thrombus; a fitting reflection of a heightened catecholaminergic state, direct myocardial injury and a prothrombotic state seen in MACM. Likely MA continued use is linked with poor outcome. A multidisciplinary approach focused on achieving abstinence is key to improving prognosis.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 29

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: GLOBAL PREVALENCE OF CONGENITAL HEART DISEASE AT ALTITUDE: A SYSTEMATIC REVIEW, META-ANALYSIS IN MORE THAN 1,000,000 PEOPLE

Author Block: Jean Pierre Eduardo Zila Velasque, Pamela Ingrid Grados Espinoza, Diana Sanchez Velazco, [Fiorella Sánchez](#), Yingyony Emilia Juárez Pérez, Ana Paula Mesta Pintado, Olenka Farfan, Manuel Rueda Camana, W. Samir Cubas, Mario J. Valladares Garrido, Red Latinoamericana de Medicina en la Altitud e Investigación (REDLAMAI), Pasco, Peru

Background: Congenital heart disease (CHD) representing a global public health problem. CHD are among the first ten causes of infant mortality in Latin. In the case of altitude, hypoxia has an impact on embryogenesis and organogenesis, including the development of the heart. Therefore, this study provides a global description of CHD in populations based at different altitudinal levels.

Abstract Body: **Methods:** We conducted a systematic where included cross-sectional and cohort studies that presented information on the prevalence of Congenital Heart Disease in people living at high altitudes worldwide. Searching was carried out till February, 2024. We included studies that assessed the prevalence of Congenital Heart Disease in altitude populations (>1500 m.a.s.l.) and these were meta-analyzed using a random-effects model. To assess the sources of heterogeneity, we performed six subgroup and meta-regression analyses.

Results: Twenty-two studies (1 180 544 participants) and from eight different countries met the inclusion criteria. The prevalence of CHD was general population was 8.97% (95% CI 3.54% - 16.53%), higher in women. The global

prevalence was at an altitude of 1500-2500 m. was 6.80%, at 2500-3500 m. was 14.47%; at 3500-4500 m. was 7.26% and at 4500 m. was 1.52%. The most frequent heart disease was Atrial Septal Defect (29.90%). The prevalence was higher in rural environments (7.86%), native people (12.70%) and American countries (32.44%).

Conclusion: We identified that the global prevalence of congenital heart disease at high altitude is 8.97%, higher in women. However, the evidence on congenital heart disease is underestimated and underdiagnosed; due to, poor access to the health system or health systems without the essential tools that are characteristic of high-altitude environments; raising concerns that we are likely facing much higher altitude-associated congenital heart disease values than is known. Therefore, it is essential to implement cardiovascular public health policies to provide effective care, maternal detection, early intervention and improved survival rates in these congenital heart diseases.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 30

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: CARDIOEMBOLIC EVENT AS A FORM OF PRESENTATION OF RESTRICTIVE CARDIOMYOPATHY

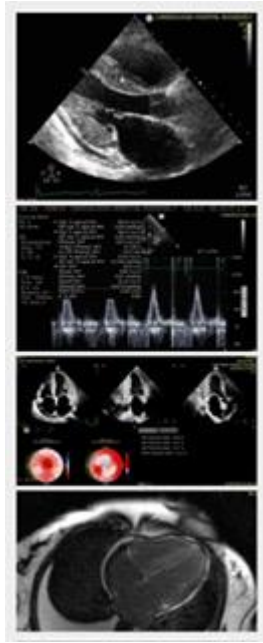
Author Block: Elida María Ortega Mansilla, Francisco Javier Galvez Retolaza, GUSTAVO SOTO MORA, RODOLFO Gutiérrez, Beatriz Dominguez, Hospital Roosevelt, Guatemala, Guatemala

Background: Cardiac amyloidosis is a condition in which the extracellular space of the heart is expanded by proteinaceous deposits of amyloid and is the cause of a type of restrictive cardiomyopathy

Case: A 42-year-old patient was admitted because of deviation of the labial commissure and left hemiparesis. The cardiac examination was normal. A diagnosis of ischemic cerebrovascular event was made, and the patient was thrombolized with alteplase; however, due to age and lack of medical history, it was decided to perform complementary studies due to the suspicion of a secondary cause

Abstract Body: **Decision-making:** The electrocardiogram showed low voltage and poor progression of the R wave. A transthoracic echocardiogram was performed, finding biatrial dilation, concentric hypertrophy of the left ventricle with a normal ejection fraction with granular and shiny texture and diastolic dysfunction with a restrictive pattern, cardiac magnetic resonance imaging showed global late gadolinium enhancement and blood and urine protein electrophoresis with elevated lambda light chain measurements. No criteria for multiple myeloma. Optimal treatment for heart failure and chemotherapy was initiated with cyclophosphamide, bortezomib and dexamethasone at the beginning and later with Daratumumab with adequate evolution

Conclusion: Cardiac amyloidosis is a pathology with characteristic patterns in cardiac imaging studies however, it is necessary to have a high clinical suspicion to adequately direct the diagnostic approach



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 31

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: MALE SURVIVOR OF ADVANCED HEART FAILURE AND KIDNEY CARCINOMA.

Author Block: Ulises Torres, Mario R. Ubaldo, Amada Alvarez Sangabriel, Juan C. De la Fuente, Carlos A. Guizar, Maribel Alvarado, Antonio Jordan, Antonio Jordan, Jose M. Cruz Leon, Diana Mondragon, Instituto Nacional de Cardiología, Mexico City, Mexico

Abstract Body:

Background: Immunosuppressive therapy has improved considerably the survival after cardiac transplantation, but its also well recognized the increased risk of complications such as infections and neoplasms. We will expose a case of Kidney neoplasm following cardiac transpantation.

Case: Male of 58 years known with hypertension, smoking habit and alcohol consumption, inhabitant of Chagas disease endemic region. First cardiovascular assesement was performed in 2020 due to exertion dyspnoea, limb edema and myalgia, later he presented with orthopnea and PND, NYHA IV functional class. An echocardiogram was performed, with dilated left ventricle, LVEF 26% severe aortic insufficiency and important Aortic root dilation, he was not considered for aortic valve replacement due to high surgical risk and symptoms worsened despite optimal medical treatment, so he was considered in cardiac transplantation program. Cardiac bicava transplantation was performed in July, 2022, immunosupresive therapy with Basiliximab, steroid an Mofetil Mycophenolate was administrated just after surgery; maintenance therapy with Tacrolimus. After 3 months of hospital discharge he came to emergency department because of pain, erythema and purulent discharge in perianal region. As part of cinical

approach a contrasted CT was performed, finding perianal abscess and a right kidney cyst with important heterogeneous enhancement

Decision-making: Urology assessment considered nephrectomy as required diagnostic and therapeutic procedure. On 2023 right partial nephrectomy was performed, with 5x5cm renal tumor as principal finding. Histopathological study reported clear cell renal carcinoma, with clean surgical edges.

Conclusion: It is well known the increased risk of neoplasms in cardiac transplantation recipients approximately 2.5-4 fold than general population, It is controversial the evidence of increased risk for neoplasm, skin cancer being the most frequent of the transplantation related neoplasms. It has to be considered the risk of heart failure in the heart graft related to chemotherapy; fortunately in this case clear cell kidney neoplasms, surgical resection in early stages can be curative.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 32

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: A HEARTBEAT FOR TWO: A SINGLE-CENTER COHORT STUDY ON PERIPARTUM CARDIOMYOPATHY IN THE DOMINICAN REPUBLIC

Author Block: Lia M. Joubert, Mariela Garcia, Sayira Mueses, Ana Noelia Verges Castro, Universidad Iberoamericana, Santo Domingo, Dominican Republic, Hospital Universitario Maternidad Nuestra Senora de la Altagracia, Santo Domingo, Dominican Republic

Background: Peripartum cardiomyopathy (PPCM), characterized by an ejection fraction (EF) $\leq 45\%$, manifests in the final months of pregnancy until the months following childbirth. Information regarding its prevalence in the Caribbean, particularly in the Dominican Republic (DR), remains scarce.

Methods: PPCM cases were retrospectively identified through physical files at an urban teaching maternity hospital in the capital of the DR from 2022-2023. Demographic data, symptoms, risk factors, and inpatient pharmacological treatment were registered.

Abstract Body: **Results:** 14 patients with a confirmed diagnosis of PPCM were identified. 57.1% of the patients were under 30 years old. 50% were Haitian and 50% were Dominican, and were predominantly of black race at 57.1%. 24.1% had chronic arterial hypertension and 13.8% had preeclampsia as the most common pathological antecedents. The most frequent EF at time of presentation was 31-40%. Only 50% of the patients were treated with renin-angiotensin-aldosterone (RAAS) inhibitors inpatient.

Conclusion: The DR has a unique prevalence and characteristics of PPCM, most likely due to the high variation in race. Also, the high presence of Haitian births in the country makes for higher likelihood of having cases of PPCM due

to its burden in this population (1 in 300 births). The management of these patients was very heterogeneous demonstrating the need to create awareness and guidelines specific for the Dominican population in the diagnosis and management of this disease.

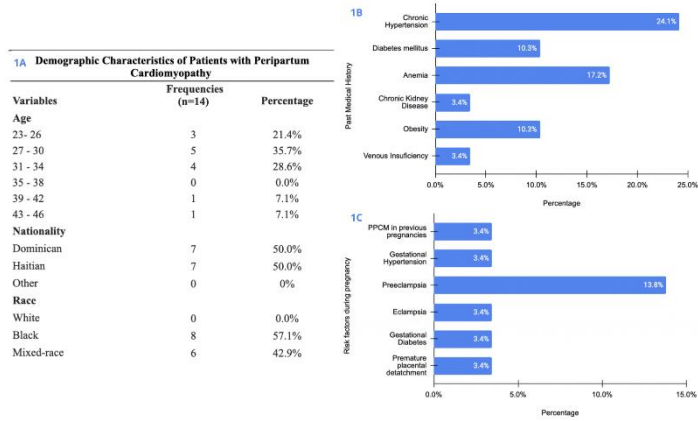


Figure 1A: Patient demographic characteristics. Figure 1B: Patient past medical history.
Figure 1C: Patient risk factors during current pregnancy and/or prior pregnancies.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 33

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: RIGHT PLACE RIGHT TIME: A CASE REPORT OF HYPERTROPHIC CARDIOMYOPATHY CULMINATING IN ABORTED SUDDEN CARDIAC DEATH

Author Block: Anna Mayfield, Jose Martinez, Instituto Cardiovascular y Torácico, Ciudad de Panama, Panama

Background: Hypertrophic cardiomyopathy (HCM) is a genetic disorder, and is the most common cause of SCD in young individuals, with an estimated incidence of 1 in 500.

Case: A 58-year-old female presented with a one week history of dyspnea, lower extremity edema and a familial history of 3 young SCD. Initial EKG showed atrial fibrillation for which the patient is hospitalized to receive standard AF and acute HF treatment. She presents with SCD due to ventricular fibrillation and was successfully resuscitated. Cardiac MRI (figure 1) consistent with HCM characteristics and a genetic test where two variants associated with the patient's phenotype were detected MYH7 and BYPC3. Definitive treatment given was a bicameral implantable cardioverter defibrillator (ICD) and optimal HF treatment. Paciente was discharged after successful placement and control of HF symptoms.

Abstract Body:

Decision-making: The most prevalent arrhythmia in HCM patients is AF, which increases the risk of sustained ventricular arrhythmias by 4.6 fold. HCM was once characterized by poor prognosis and reduced life expectancy. However, recent advancements in treatments have significantly improved management. Prophylactic ICD placement in high-risk HCM patients has significantly reduced SCD.

Conclusion: This case highlights the importance of comprehensive family

history and thorough evaluation for individuals with a history of SCD in young family members.

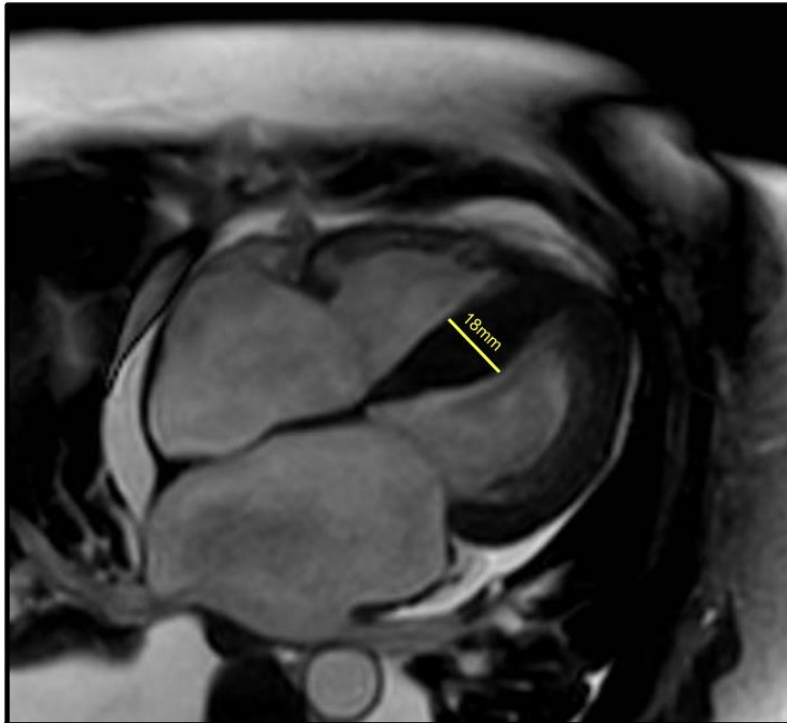


Figure 1: Asymmetric hypertrophy of the interventricular septum (18mm). Reduced ejection fraction 32%. Dilated left atrium 69ml/m².

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 34

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: INFILTRATIVE CARDIOMYOPATHY - A CASE OF CARDIAC AMYLOIDOSIS, A CONTEMPORARY DIAGNOSTIC CHALLENGE

Author Block: Marco Antonio Alonso Lima, Hector Hugo Escutia-Cuevas, Sergio Patrón-Chi, Luis Hernandez Urquieta, Hospital MAC Puebla, Puebla, Mexico, Hospital Regional ISSSTE Puebla, Puebla, Mexico

Background: Cardiac amyloidosis is a restrictive infiltrative cardiomyopathy characterized by amyloid fibrils deposition in the interstitial space between cardiomyocytes.

Case: A 50-year-old woman admitted to the emergency room with symptoms of 3 weeks' duration: rapidly progressive dyspnea, cough, edema, and orthopnea. Vitals: BP 117/78 mmHg, HR 110 bpm, RR 18 bpm. Physical exam: macroglossia, lung bilateral rales, midsystolic aortic murmur III/VI, edema +++. Lab tests: NT-proBNP 2,959 pg/ml, troponin T 67 ng/l, serum free light chains kappa (K) 17.7 mg/l, lambda (L) 1,153.5 mg/l, K/L ratio 0.02, serum/urine IFE monoclonal protein (+), transthyretin gene (-).

Abstract Body: Electrocardiogram: sinus rhythm, low QRS voltage in the frontal plane. Echocardiogram (TTE): symmetric non-obstructive hypertrophic cardiomyopathy, severe concentric left ventricular hypertrophy (LVH) with ejection fraction (EF) 75% and global longitudinal strain -12% with apical sparing, severe diastolic dysfunction. Cardiac magnetic resonance (CMR): LVH (EF 69%), RVH (EF 53%), diffuse subendocardial late gadolinium enhancement with biventricular and biatrial involvement. Cardiac scintigraphy with 99mTc-PYP followed by SPECT: Perugini grade 3 uptake, H/CL ratio at 3 hours 1.32. Biopsy of periumbilical adipose and muscle tissue:

Congo red stain with apple-green birefringence in polarized light.

Decision-making: We present a case with history, ECG, TTE and CMR highly suggestive of cardiac amyloidosis, with monoclonal protein confirming the diagnosis of amyloid monoclonal immunoglobulin light chain cardiomyopathy (AL-CM). A diagnostic challenge for the case is having a positive scintigraphy scan, suggestive of amyloid transthyretin cardiomyopathy (ATTR-CM), however, alone is neither appropriate nor valid for distinguishing ATTR-CM from AL-CM, and it could be present in >10% of patients with AL-CM.

Conclusion: Cardiac amyloidosis represents a diagnostic challenge, where cardiac dysfunction is the main determinant of morbidity and mortality. In this case, chemotherapy was initiated with Dara-CyBorD regimen for 2 weeks. Unfortunately, the patient died despite achieving early diagnosis and treatment.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 35

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: EFFECT OF INSURANCE TYPE ON OUTCOMES IN PERIPARTUM CARDIOMYOPATHY: INSIGHTS FROM A NATIONWIDE DATABASE

Author Block: Yomary Jimenez, Nelson Ivan Barrera, Salomon Chamay, Marlon Argueta, Francisco Gallegos Koyner, Alejandro Nieto Dominguez, Mushrin Malik, Manoj Ghimire, Maria Fernanda Solorzano, Roberto Cerrud-Rodriguez, St. Barnabas Hospital, Bronx, NY, USA, University of Florida, Gainesville, FL, USA

Background: Peripartum cardiomyopathy (PPCM) is characterized by systolic heart failure that occurs towards the end or in the months following pregnancy and is associated with significant morbidity and mortality. Despite its rarity, the incidence of PPCM has been increasing. Our study sought to identify outcomes of patients diagnosed with PPCM according to income levels.

Methods: Using the 2016-2020 National Inpatient Sample, we studied patients aged ≥ 15 and ≤ 55 years admitted with a primary diagnosis of PPCM. Patients were divided into three cohorts based on insurance type: Medicare/Medicaid (MM), Private (P), and Self Pay (SP). The primary outcome was overall inpatient mortality; secondary outcomes included cardiogenic shock (CS), ECMO use, left ventricular assist device use (LVAD) and heart transplantation (HT).

Abstract Body: **Results:** A total of 23,100 patients with a primary diagnosis of PPCM were identified. In-hospital mortality occurred in 1.48% of the MM cohort vs. 1.19% for P vs. 2.84% in SP ($p=0.2667$). Secondary outcomes were as follows: cardiogenic shock (6.59% MM vs. 4.1% P vs. 2.84% SP [$p=0.003$]), ECMO use (1.02% MM vs. 0.01% P vs. 0.00% SP [$p=0.4855$]), LVAD use (1.52% MM vs.

1.52% P vs. 2.13% SP [p =0.843]), and HT (0.74% MM vs. 0.79% P vs. 0.00% SP [p =0.598]).

Conclusion: There were no statistically significant differences in mortality, CS, LVAD use and HT among PPCM patients according to insurance type. ECMO use was higher in the MM insurance group compared to P and SP.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 36

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: SEPSIS STRIKES THE HEART: ADDRESSING SEPSIS-INDUCED CARDIOMYOPATHY

Author Block: Humberto de Leon-Gutierrez, Renata Quevedo Salazar, Christian Juarez-Gavino, Arturo Adrián M. Martínez Ibarra, Tecnológico de Monterrey, Monterrey, Mexico, Instituto de Cardiología y Medicina Vascular, TecSalud, San Pedro Garza Garcia, Mexico

Background: Sepsis is a life-threatening condition resulting from a dysregulated host response to infection. It can lead to profound circulatory abnormalities, including cardiogenic shock.

Case: A 41-year-old male with no past medical history presented to the emergency department with sudden dyspnea and altered mental status. Initial evaluation showed hypoxemia, tachycardia, and refractory hypotension. Blood tests revealed elevated hs-cardiac troponin and inflammatory biomarkers, respiratory acidosis, and hyperlactatemia. He was admitted to the ICU for shock management.

Abstract Body: **Decision-making:** Identifying shock's etiology was challenging. We initially ruled out STEMI, valvulopathies, and PE. A bedside transthoracic echocardiogram (TTE) reported decreased LVEF (30%). Given the strong suspicion of sepsis-induced cardiomyopathy, we started broad-spectrum antibiotics. The patient's worsening condition, in need of multiple vasopressors, mechanical ventilation and renal replacement therapy, made him a candidate for mechanical circulatory support; limited by insurance coverage. Afterward, blood cultures identified *S. pneumoniae*, allowing tailored therapy, which improved his clinical course and cardiac function, as evidenced

by a follow-up TTE with LVEF recovery to 62%.

Conclusion: Prompt diagnosis is essential for improving the prognosis of sepsis-induced cardiomyopathy. Long-term follow-up is crucial to reassess cardiac function, prevent recurrence, and manage complications.

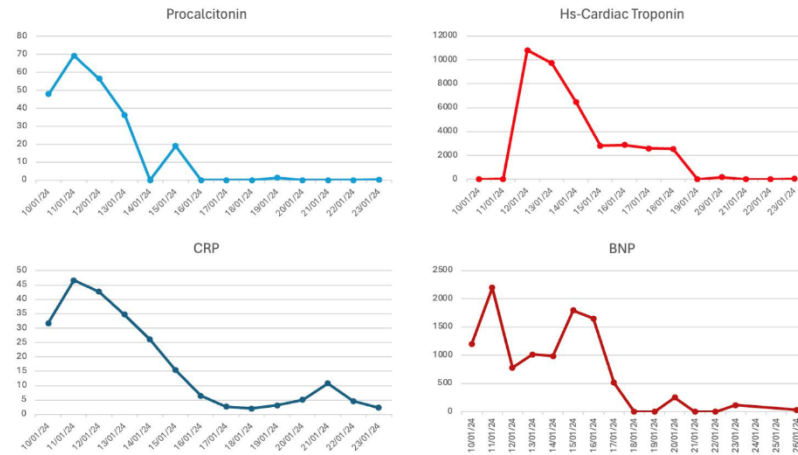


Figure 1. Graphs showing downtrending inflammatory and cardiac biomarkers.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 37

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: ROLE OF ELECTROPHYSIOLOGICAL MAPPING IN THE MANAGEMENT OF ARRHYTHMIAS IN HEART FAILURE PATIENTS

Author Block: AMAN SINHA, Shubhkamna Hrart Hospital, Gaya Bihar, India

Background: Background: Arrhythmias in heart failure patients contribute to increased morbidity and mortality. This study evaluates the effectiveness of electrophysiological mapping in managing arrhythmias in this population.

Methods: Methods: This prospective study included 150 heart failure patients with symptomatic arrhythmias who underwent electrophysiological mapping. Patients were followed for 12 months post-procedure. The primary endpoints were arrhythmia recurrence and improvement in left ventricular function, with secondary endpoints including quality of life and hospitalization rates due to arrhythmias.

Abstract Body: **Results:** Results: Electrophysiological mapping identified arrhythmogenic foci in 90% of patients. At 12 months, arrhythmia recurrence was significantly lower in the mapping group (15%) compared to the control group (35%, $p<0.01$). Left ventricular ejection fraction (LVEF) improved by an average of 7% (mean increase from 30% to 37%, $p<0.001$). Quality of life scores increased by 20 points on the SF-36 scale ($p<0.01$). Hospitalization rates due to arrhythmias were reduced from 25% to 10% ($p<0.05$). The mapping group also showed a reduction in the frequency of arrhythmic episodes (mean reduction from 4.5 to 1.2 episodes per month, $p<0.001$) and a decrease in the need for antiarrhythmic medications (40% vs. 60%, $p<0.05$).

Conclusion: Conclusion: Electrophysiological mapping is effective in

managing arrhythmias in heart failure patients, reducing recurrence rates, improving cardiac function, and enhancing quality of life. These findings support its integration into standard care protocols for these patients.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 38

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: PERCUTANEOUS MANAGEMENT OF LVAD OUTFLOW GRAFT OBSTRUCTION WITH INTRA-AORTIC BALLOON PUMP IMPLANTATION FOR HEMODYNAMIC SUPPORT

Author Block: Yomary Jimenez, Joshua Latner, Mohammed Elzeneini, Juan M. Aranda, JR, Alex Michael Parker, Mustafa Mohammed Ahmed, Mohammad Al-Ani, Edwin Molina, Juan Ramon Vilaro, III, University of Florida, Gainesville, FL, USA

Abstract Body:

Background: We present a case of a 53-year-old male patient with a history of nonischemic cardiomyopathy status post Heartmate 3 left ventricular assist device (LVAD), coronary artery disease, hypertension, who presented with fatigue, shortness of breath and fluid retention.

Case: Our patient is a 53-year-old male patient with a history of nonischemic cardiomyopathy status post Heartmate 3 left ventricular assist device (LVAD), implanted 15 months prior to presentation, coronary artery disease, hypertension, who presented with fatigue, shortness of breath and fluid retention. His heart failure symptoms did not improve despite diuretic adjustments. On admission, right heart catheterization demonstrated findings suggestive of biventricular failure and cardiogenic shock, leading to initiation of inotropic support and renal replacement therapy (RRT). On further testing, a cardiac structures computerized tomography showed LVAD outflow graft obstruction (OGO). Intra-aortic balloon pump (IABP) was utilized for hemodynamic support in the setting of OGO. His overall hemodynamics improved and there was no further need for RRT. Ultimately, patient successfully underwent heart transplant.

Decision-making: For patients with OGO the management should be percutaneous or surgical. However, we decided to support this patient with

IABP due to his rapid deterioration and need for more urgent hemodynamic support as well as to provide better end-organ perfusion, especially due to right heart failure.

Conclusion: LVAD patients with development of heart failure symptoms with or without pump alarms, should be evaluated for OGO. If an obstruction is identified, there should be discussion with the patient and Heart Team regarding different treatment options based on the patient's hemodynamic status. Due to his rapid hemodynamic deterioration and failure to improve with inotropes, our decision was to support our patient with IABP as a bridge to transplant.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 39

Topic 1: Multimodality Imaging

Publishing Title: CARDIAC AMYLOIDOSIS CHARACTERIZATION IN THE ERA OF IMAGING MULTIMODALITY

Author Block: Kenia M. Padron, Roxana Pazmino, Amalia T. Peix Gonzalez, Carlos Mirel Peñate, Aylen Perez Barreda, Sheila Hechavarría, National Institute of Cardiology and Cardiovascular Surgery, Havana, Cuba, Habana, Cuba

Abstract Body:

Background: Imaging multimodality is an emerging tool in the diagnostic, treatment selection and prognostic of the Myocardiopathies. The aim of this study was to assess the cardiac amyloidosis (**CA**) subtypes characterization versus other cardiomyopathies based on imaging multimodality

Methods: Twenty-five consecutive patients with infiltrative cardiomyopathy suspected by echocardiography were enrolled in a prospective, longitudinal study. Cardiac magnetic resonance (**CMR**) and technetium pyrophosphate (**Tc-PYP**) scintigraphy were performed. According to the international consensus, twelve were classified as transthyretin CA (**ATTR**), six as light chain CA (**AL**) and seven as **non-CA**. Descriptive statistics were done, a $p < 0,05$ was fixed as significant. Institutional Ethical Committee approved the protocol and Informed Consent was signed by the patient.

Results: Female/male proportion was 1/11 in **ATTR** ($p < 0,01$). Low voltage and atrio-ventricular block were more frequent in **AL** versus non-AC (50% vs 0%; $p < 0,01$). Pro-BNP was over 4000 uds in **CA** but lower in non-CA ($642,3 \pm 148$; $p < 0,01$). Severe diastolic dysfunction was more frequent in **ATTR** vs Non-CA: (E: $110,5 \pm 17,1$ vs $65,8 \pm 16,0$; $p < 0,001$); E/e lateral ($20,3 \pm 3,7$ vs $11,8 \pm 5,5$; $p = 0,017$) and E/e medial ($23,6 \pm 7,0$ vs $13,1 \pm 6,4$; $p = 0,014$). Left ventricular ejection fraction was lower ($46,7\%$ vs $57,0\%$; $p < 0,05$). **Non-CA** showed apical

sparring as well as **CA** ($p>0,05$). CMR showed diffuse intra-myocardial late gadolinium enhancement (patches) in 85% ATTR vs 50% AL and annular subendocardial pattern was found more in **ATTR** (2:1). Septum and papillary muscle infiltration were seen twice more in **ATTR** vs AL ($p<0,05$). The heart/lung index was higher in **ATTR** cases (1,95 vs 1,22 in AL), and grade 3 heart/ ribs relation was found in 91,6% **ATTR** in the Tc-PYP scintigraphy ($p<0,01$).

Conclusion: Imaging multimodality was useful in the characterization of CA subtypes and differentiation from other cardiomyopathies. The ATTR Cubans' patients showed: more extensive myocardial affection, septal and papillary muscle infiltration, lower left ventricular ejection fraction, severe diastolic dysfunction, grade 3 heart/ribs relation than AL and others MC types.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 40

Topic 1: Multimodality Imaging

Publishing Title: PORTABLE HANDHELD ECHOCARDIOGRAPHIC SCREENING FOR STRUCTURAL HEART DISEASE IN RIVAS, NICARAGUA

Author Block: Sugi Min, Arthur Hamilton, Marcela Osorio, Lauren A. Goralsky, Bryan Carrillo, [Kimberly Lopez](#), Marlene Roque Matamoros, René Francisco Guido, Thelsa T. Weickert, Michael Yeung, Carlos A. Espinoza, Matthew Lawlor, Columbia University Irving Medical Center, New York City, NY, USA

Abstract Body:

Background: Portable, handheld echocardiography offers numerous advantages for structural heart disease (SHD) and rheumatic heart disease (RHD) screening in low-resource settings. Previous studies estimated high burden of RHD in Nicaragua. We conducted a pilot community-based SHD screening program using handheld echocardiography in Rivas, Nicaragua.

Methods: Non-expert sonographers were trained using the GE Vscan Extend™ device and a modified version of the 2012 World Heart Federation criteria for diagnosis of RHD. Referral criteria for complete echocardiogram included the presence of a mitral regurgitant jet of >2.0 cm (MR), aortic regurgitant jet >1.0 cm (AI), or any morphologic abnormality of the mitral (MV) or aortic valve (AV), as well as left ventricular (LV) dysfunction or significant congenital disease. Participants were recruited by convenience-based sampling in communities throughout Rivas, Nicaragua. Participants were notified at the point-of-care of need for complete echocardiogram. All studies were overread asynchronously by expert readers for inter-rater reliability for meeting referral criteria for diagnostic echocardiogram.

Results: Between March 2022 and April 2023, 787 screening echocardiographic studies were performed. The median age was 35.3 years,

25% of participants were <18 years of age, and 68.5% were female. Overall, 24.9% were referred for complete echocardiogram at the point-of-care compared with 11.4% meeting referral criteria on expert review (7.7% MR, 5.4% AI, 1.7% MR and AI, 2.0% abnormal MV morphology, 1.1% abnormal AV morphology, 1.3% LV dysfunction). Negative and positive predictive values for non-expert versus expert assessment were 93% and 26%, respectively. Cohen's kappa for inter-rater reliability was 0.237, suggesting fair agreement using our referral criteria.

Conclusion: This pilot program demonstrates the feasibility of a screening program for SHD and RHD in rural Nicaragua with non-expert sonographers trained in portable, handheld echocardiography. Echocardiographic screening programs serve an unmet need in low-resource regions for diagnosis of SHD and referral to expert cardiovascular care.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 41

Topic 1: Multimodality Imaging

Publishing Title: ACUTE BRAIN ATTACK: PEERING THROUGH THE ESOPHAGEAL WINDOW IN CRYPTOGENIC ISCHEMIC STROKE

Author Block: Santiago F. Galeano-Lovera, Demilade Adedinsewo, Richard White, Mayo Clinic, Jacksonville, FL, USA

Background: The growing adoption of advanced imaging modalities, such as transesophageal echocardiography (TEE), has led to more frequent detection of cardiac structural abnormalities. While intracardiac cardiac tumors and shunts are infrequent and typically asymptomatic, their existence can precipitate severe outcomes, including stroke, myocardial infarction and sudden death.

Abstract Body: **Case:** A 69-year-old female presented with left sided facial droop, slurred speech and left arm weakness. A computed tomography angiography revealed focal occlusion of the distal right middle cerebral artery. She was initiated on thrombolytic therapy and experienced resolution of symptoms. Transthoracic echocardiogram revealed right to left shunting consistent with a patent foramen ovale (PFO). Further workup with TEE confirmed the presence of a PFO but also detected a mobile echogenic mass on the aortic valve leaflet, indicative of papillary fibroelastoma (PFE).

Decision-making: Cerebral infarction was attributed to an embolic event, with the PFO and PFE being likely culprits. Current guidelines give a conditional recommendation, low certainty of evidence, for PFO closure in adults older than 60 years, although some observational studies have shown some risk reduction in older patients. The key trials showing clinical benefit of PFO closure were in adults <60 years. For left sided cardiac tumors, such as

PFE, guidelines give a 2A recommendation for resection. Addressing the risk for recurrent stroke in this 69-year-old patient was an essential part of stroke care, as such, a multi-disciplinary team of experts including cardiology, neurology, and cardiothoracic surgery was conveyed. The decision was to proceed with surgical intervention in addition to antiplatelet therapy to achieve optimal risk reduction. The patient subsequently underwent successful surgical removal of the PFE with native valve preservation and PFO closure.

Conclusion: Cardiac PFEs and PFOs can be associated with increased stroke risk. Employing appropriate imaging techniques and timely interventions are of utmost importance in stroke management.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 42

Topic 1: Prevention and Health Promotion

Publishing Title: SURVIVAL ANALYSIS OF ANTICOAGULATED PATIENTS THE EXPERIENCE OF AN ANTICOAGULATION CLINIC

Author Block: Carlos Hernan Calderon, Osmar Perez, Tatiana Lopez, Miller Ruiz, Oscar Saenz, Daniela Gomez, Andres Bastidas, Hospital Santa Clara, Bogota DC, Colombia

Abstract Body:

Background: The anticoagulation clinic at the Santa Clara Subred Centro Oriente hospital is a strategy that was developed to reduce complications associated with anticoagulation; **Objective:** to describe the sociodemographic characteristics, indications, and overall survival according to the anticoagulant therapy of patients in an anticoagulation clinic in Bogotá.

Methods: Retrospective cross-sectional analytical observational study of patients followed in outpatient consultation in the Central Eastern Subnet, Bogotá Colombia. Sociodemographic and clinical variables were analyzed through univariate and bivariate analysis and simple logistic regression to calculate odds ratio (OR). Likewise, a survival analysis of anticoagulated patients was performed.

Results: A total of 595 patients followed up in the period studied, 53.7% corresponded to women with an average age of 62 years (+/- 14.1 years); 40% received warfarin, 19% rivaroxaban, 12.9% low molecular weight heparin, and 11.7% apixaban. The main indications for anticoagulation were non-valvular atrial fibrillation (13.7%), atrial fibrillation of valvular origin (33.4%), hypercoagulability disorder (15.1%), intraventricular thrombus (15.9%), arterial thrombosis, (9.9%) and thromboembolic events (11.09%). Factors associated with complications were atrial fibrillation of non-valvular origin

(OR: 0.007; 95% CI: 0.000; 0.04), diagnosis of thromboembolic events (OR: 11.3; 95% CI: 2.8; 44.6), HASBLED score greater than 2 points (OR: 6.9; 95% CI: 1.01;47.9). The mortality rate in the anticoagulation clinic in anticoagulated patients is 0.005 per person per year (95% CI: 0.002, 0.012).

Conclusion: The main diagnosis was non-valvular atrial fibrillation, valvular atrial fibrillation, and thromboembolic events. Most patients received warfarin and DOACs. Thromboembolic events, high HASBLED score, and high CHA2DS2VAS, were associated with complications such as bleeding and thrombotic events.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 43

Topic 1: Prevention and Health Promotion

Publishing Title: CHARACTERIZATION OF PATIENTS WITH NON VALVULAR ATRIAL FIBRILLATION IN A TERTIARY CARE CENTER IN A DEVELOPING COUNTRY

Author Block: Frank Valdez Baez, Gissel Mariana Santana Mejia, Juanico Cedano Ramírez, Catherine Merejo, Warennny Montero Morillo, Mayra María Peña de Coó, Laiden Suarez Fuster, Ernesto Diaz Alvarez, Instituto Dominicano de Cardiología, SANTO DOMINGO, Dominican Republic

Background: Non-valvular atrial fibrillation (NVAF) exhibits significant demographic and clinical variations among populations. This study aims to define the profile of patients in a tertiary-level center in a developing country, a crucial aspect for optimizing anticoagulation.

Methods: A prospective cross-sectional study was carried out in the arrhythmia and pacemaker department of the Dominican Institute of Cardiology Association between June and December 2023. Patients with confirmed NVAF through electrocardiogram or Holter monitoring, undergoing treatment or follow-up of oral anticoagulation therapy, participated.

Abstract Body: Demographic, clinical, risk, comorbidities, NVAF management, anticoagulant therapy, and recent adverse events data were collected

Results: The study involved 422 patients, with 52.61% men and 47.39% women. The average age was 76.44 years (SD=10.47), with more than 57.58% over 75 years old. The average systolic blood pressure (SBP) was 128.54 mmHg (SD=23.62), with 61.62% maintaining SBP <140 mmHg. The average weight was 72.7 kg (SD=15.86) and the average creatinine was 1.18 mg/dl (SD=0.48), with an average glomerular filtration rate of 56.96 ml/min/1.73m² (SD=24.22). 57.79% had more than 50 ml/min/1.73m². The CHA₂DS₂VASc scale averaged 4.26 (SD=1.69), with 82.23% at high risk; and HASBLED

averaged 1.47 (SD=0.84), with 88.15% at low risk of bleeding. The prevalence of hypertension was 93.36%, diabetes 19.67%, and cerebrovascular disease 20.14%. The permanent form of NVAf was the most common (59.24%).

93.36% of the patients were asymptomatic, mostly managed with pacemakers (54.27%) and beta blockers (54.98%). 95.73% received anticoagulants, predominantly DOACs (83.5%), with Apixaban (53.08%) being the most used. 72.35% received an adequate dose of DOACs. Adverse events were reported in 4.67% of cases, mostly hemorrhagic (68.42%)

Conclusion: The NVAf population, mostly elderly and with high ischemic risk but low hemorrhagic risk, was effectively managed with direct oral anticoagulants, mainly DOACs, in appropriate doses

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 44

Topic 1: Prevention and Health Promotion

Publishing Title: CIRCADIAN RHYTHM AND METABOLIC DISEASES IN HYPERTENSIVE PATIENTS.

Author Block: David Madrigal-Campos, Beatriz Madrigal, Pensiones Civiles del Estado, Chihuahua, Mexico, Children's National Hospital, Washington, DC, USA

Background: It is known that the disruption of the circadian rhythm has direct effect on cardio-metabolic diseases. Related to the sympathetic dysfunction activity. A relationship with neurologic alterations of sleep have been published. Insomnia is a mild neurologic disorder of sleep that can cause this disruption.

Methods: 250 medical records of in goal hypertensive patients were reviewed. The medical records included laboratory and abdominal ultrasounds. Furthermore, contained 5 years past data. The patients were divided in two groups: the insomnia group and the no insomnia group (control group). Each group had 95 patients. Statistical method chi square.

Results: The end point was the onset metabolic disease like prediabetes, hypertriglyceridemia, diabetes mellitus, obesity and non-alcoholic fatty liver disease (NAFLD). These disorders was presented with these statistical significance: prediabetes p 0.003, diabetes mellitus p 0.007, hypertrygliceridemia p 0.16, obesity p 0.15, NAFLD p 0.07.

Conclusion: Even though only carbohydrate intolerance and diabetes were statistically significant, there is a tendency in which the circadian rhythm disruption increases the frequency of metabolic diseases. Further studies are necessary to be determined whether the pharmacologic treatment, and/or

Abstract Body:

non-pharmacologic measures to treat insomnia affect the prevalence of metabolic diseases.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 45

Topic 1: Prevention and Health Promotion

Publishing Title: UNVEILING METABOLIC CHANGES NATIONWIDE: A COMPREHENSIVE LONGITUDINAL ANALYSIS OF METABOLIC TESTS CHANGES ACROSS THE DOMINICAN REPUBLIC

Author Block: Maxima Mendez Castillo, Manuel Soto, Ramón Romano, Alba Beltre, Angelica Grullon, Jenny L. Cepeda-Marte, Carlos Maiorana, Oscar Vasquez, Lia joubert, Francisco Mañán, Scarlet Margarin, Rafaelina Mercedes Lantigua Concepcion, Cli-Lipid, santo domingo, Dominican Republic, Centro Médico de Diabetes, Obesidad y Especialidades (CEMDOE), santo domingo, Dominican Republic

Background: Metabolic markers, including thyroid status and blood glucose levels, are pivotal indicators of metabolism. By identifying and studying these parameters, we gain crucial insights into the metabolic trends prevalent among Dominicans.

Methods: In a cross-sectional study, 24,830,358 test results from 2013 to 2022 provided by Laboratorios Referencias were analyzed. We focused on assessing the prevalence of alterations in thyroid hormones and basal glycemia, employing a range of statistical methods, including mean, standard deviation, Student's t-test, Welch's T-test, and ANOVA.

Abstract Body: **Results:** In the studied period, the prevalence of abnormal metabolic tests were: low TSH 2.79%, high TSH 7.8%, low T4 1.1%, high T4 1.1%, low free T4 7.6%, high free T4 2.9% and high glucose 26.6%. There were significant differences ($p < 0.05$) in the mean of these tests, except for low TSH and high free T4 means. Furthermore, there were substantial differences in the means of all metabolic tests across all geographic regions. The effect size for all statistical differences was small.

Conclusion: Our findings provide information on the prevalence of metabolic test abnormalities with essential differences between sexes in the Dominican Republic over ten years. These insights can serve as a crucial foundation for the development of targeted public health policies.

Prevalence of abnormal metabolic tests per year (2013 to 2022)													
Metabolic profile test	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2013-2022		
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)		
Low TSH (<0.27 IU/mL)	4.39 (4.20-4.52)	3.80 (3.60-3.91)	3.78 (3.60-3.88)	3.51 (3.42-3.6)	2.98 (2.93-3.06)	2.63 (2.56-2.69)	2.42 (2.36-2.48)	2.72 (2.65-2.79)	2.35 (2.29-2.4)	2.02 (1.96-2.07)	2.79 (2.78-2.8)		
High TSH (>4.20 IU/mL)	8.77 (8.65-8.91)	8.51 (8.35-8.67)	7.75 (7.61-7.89)	8.37 (8.23-8.5)	9.37 (9.24-9.5)	7.25 (7.14-7.36)	7.17 (7.01-7.22)	8.45 (8.38-8.56)	7.11 (7.02-7.2)	7.63 (7.54-7.72)	7.77 (7.77-7.8)		
Low Free T4 (<0.93 ng/dL)	1.22 (1.13-1.32)	1.20 (1.1-1.38)	1.14 (1.06-1.22)	1.14 (1.03-1.24)	1.29 (1.23-1.37)	1.16 (1.11-1.23)	1.17 (1.11-1.23)	0.86 (0.89-1.0)	0.78 (0.74-0.83)	0.86 (0.82-0.9)	1.07 (1.05-1.0)		
High T4 (>14.1 µg/dL)	2.26 (2.19-2.39)	3.15 (3.01-3.29)	2.98 (2.85-3.1)	0.74 (0.68-0.8)	0.78 (0.72-0.83)	0.6 (0.55-0.65)	0.43 (0.39-0.47)	0.61 (0.56-0.65)	0.8 (0.75-0.84)	0.92 (0.87-0.96)	1.08 (1.07-1.1)		
Low Free T4 (<0.93 ng/dL)	5.74 (5.56-6.36)	5.29 (5.07-5.38)	6.1 (5.941-6.26)	7.98 (7.42-7.8)	7.61 (7.46-7.76)	6.25 (6.12-6.37)	8.08 (7.94-8.27)	9.26 (9.147-9.43)	7.62 (7.71-7.92)	8.52 (8.41-8.62)	7.64 (7.60-7.68)		
High Free T4 (>1.71 ng/dL)	3.17 (3.08-3.33)	3.90 (3.56-3.83)	3.5 (3.38-3.62)	4.09 (3.94-4.21)	3.98 (3.58-3.9)	3.39 (3.33-3.49)	2.63 (2.55-2.7)	2.37 (2.32-2.45)	2.36 (2.29-2.42)	1.2 (2.056-2.17)	2.86 (2.85-2.9)		
Glucose (>100 mg/dL)	21.91 (21.38-21.67)	23.04 (22.88-23.19)	23.99 (23.84-24.13)	25.26 (25.12-25.4)	26.7 (26.56-26.84)	27.68 (27.15-27.93)	27.81 (27.69-27.93)	30.17 (30.04-30.3)	27.55 (27.39-27.81)	26.93 (26.83-27.03)	26.57 (26.53-26.61)		

Mean metabolic profile test results by geographic region, 2013 to 2022. ^a													
Metabolic profile test	Total	Ozama	Yuma	Cibao Sur	Cibao Norte	Valdesia	Cibao Este	Higüema	El Valle	Enriquillo	Cibao Noroeste	P-Value	Partial Eta Squared
Low TSH (<0.27 IU/mL)	0.11 (0.08)	0.11 (0.08)	0.12 (0.09)	0.11 (0.08)	0.10 (0.08)	0.10 (0.08)	0.11 (0.08)	0.11 (0.08)	0.12 (0.08)	0.11 (0.08)	0.11 (0.08)	<0.001	0.002
High TSH (>4.20 IU/mL)	12.0 (2.05)	11.7 (2.03)	12.9 (2.02)	12.7 (2.01)	13.0 (1.81)	13.1 (2.09)	13.9 (2.03)	13.3 (2.21)	12.1 (2.01)	16.5 (2.30)	12.2 (2.19)	<0.001	0.001
Low T4 (<5.1 µg/dL)	3.98 (1.19)	4.07 (1.1)	4.01 (1.2)	3.88 (1.2)	3.40 (1.4)	3.83 (1.3)	3.98 (1.2)	3.8 (1.3)	3.88 (1.3)	3.89 (1.2)	3.3 (1.5)	<0.001	0.025
High T4 (>14.1 µg/dL)	15.8 (2.6)	15.6 (2.6)	15.8 (2.7)	16.5 (2.6)	16.5 (2.5)	16.2 (2.6)	15.6 (2.6)	16.8 (2.9)	15.8 (1.8)	17.1 (2.9)	16.4 (2.5)	<0.001	0.02
Low Free T4 (<0.93 ng/dL)	0.80 (0.17)	0.80 (0.16)	0.79 (0.17)	0.79 (0.17)	0.80 (0.17)	0.77 (0.20)	0.79 (0.18)	0.80 (0.16)	0.80 (0.17)	0.79 (0.17)	0.77 (0.20)	<0.001	0.002
High Free T4 (>1.71 ng/dL)	2.24 (0.9)	2.21 (0.9)	2.42 (1.1)	2.2 (0.9)	2.2 (0.9)	2.3 (1.0)	2.2 (0.8)	2.4 (1.0)	2.2 (0.8)	2.4 (1.1)	2.3 (1.0)	<0.001	0.004
Glucose (>100 mg/dL)	135.1 (52.2)	134.9 (52.1)	133.4 (51.0)	135.2 (51.5)	135.5 (51.6)	138.6 (51.7)	134.9 (49.8)	138.3 (55.3)	133.0 (47.4)	128.8 (41.4)	134.3 (48.5)	<0.001	<0.001

^a Values expressed as mean (standard deviation). P-Value calculated Student's T-Test if equal variances and Welch's T-Test if unequal variances.

Mean metabolic profile test results by reported sex, 2013 to 2022. ^a					
Metabolic profile test	Total	Male	Female	P-Value	Cohen's D
Low TSH (<0.27 IU/mL)	0.11 (0.08)	0.11 (0.08)	0.11 (0.08)	0.37	0.01
High TSH (>4.20 IU/mL)	12.0 (2.05)	10.26 (7.5)	12.4 (21.2)	<0.001	0.11
Low T4 (<5.1 µg/dL)	3.98 (1.19)	4.16 (1.0)	3.92 (1.23)	<0.001	0.29
High T4 (>14.1 µg/dL)	15.8 (2.6)	16.0 (2.9)	15.8 (2.6)	<0.001	0.1
Low Free T4 (<0.93 ng/dL)	0.80 (0.17)	0.79 (0.16)	0.80 (0.16)	<0.001	0.03
High Free T4 (>1.71 ng/dL)	2.24 (0.9)	2.22 (0.9)	2.23 (0.9)	0.43	0.01
Glucose (>100 mg/dL)	135.1 (52.2)	136.3 (53.2)	134.0 (51.2)	<0.001	

^a Values expressed as mean (standard deviation). P-Value calculated Student's T-Test if equal variances and Welch's T-Test if unequal variances.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 46

Topic 1: Prevention and Health Promotion

Publishing Title: EXERCISE-INDUCED CARDIAC FATIGUE IN WOMEN

Author Block: Jose Picco, sebastian Wolff, Emanuel Gonzalez Davila, Instituto de cardiología y medicina del deporte Wolff, Mendoza, Argentina

Background: Intense physical exercise can cause transient alterations in myocardial function post-exertion, with these changes being primarily described in men. Women exhibit pathophysiological differences that may reduce the occurrence of these alterations. Objectives: To determine the presence of physiological adaptations in female athletes and to analyze whether women experience exercise-induced cardiac fatigue in ultramarathon or ultratrail races (mountain races exceeding 42 km).

Abstract Body: **Methods:** Twelve athletes who participated in two ultratrail races were recruited and evaluated before and after the race through a complete physical examination and Doppler echocardiography with advanced echocardiographic techniques analysis. Different parameters associated with exercise-induced cardiac fatigue were studied using sports watches during training and the race. All participants signed an informed consent agreeing to the anonymous publication of the data.

Results: The median age of the athletes was 38 years. No physiological adaptations were observed in the baseline studies, nor were there any changes in diameters during exertion. A significant post-exercise decrease was observed in ejection fraction, global longitudinal strain of the left ventricle, myocardial work, and free wall strain of the right ventricle.

Conclusion: Women exhibit less physiological remodeling in response to

exercise load. Exercise-induced cardiac fatigue was observed in both the left and right ventricles.

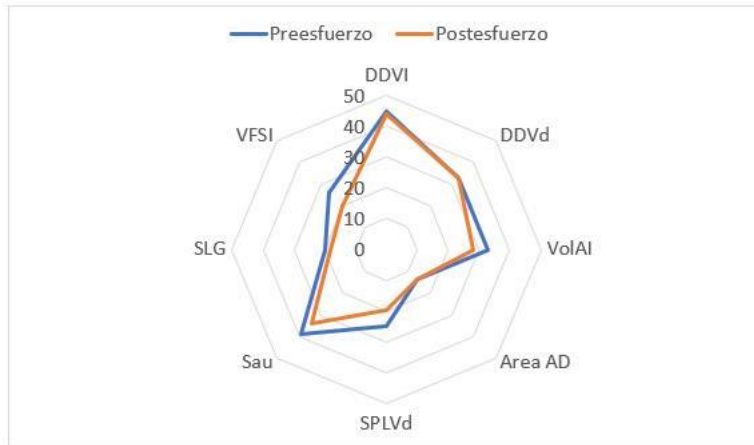


Grafico 1: análisis comparativo de las variables ecocardiográficas basales y post esfuerzo.
Referencias: DDVI: diámetro diastólico ventricular izquierdo, VolAI: volumen auricular izquierdo, DDVD: diámetro diastólico ventricular derecho, ÁreaAD: área auricular derecha, SPLVD: Strain de pared libre de ventrículo derecho, SLG: Strain longitudinal global, SAu: Strain auricular izquierdo.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 47

Topic 1: Prevention and Health Promotion

Publishing Title: THROMBOTIC COMPLICATIONS DURING POSTOPERATIVE PERIOD FOLLOWING PERIOPERATIVE SARS-COV 2 INFECTION: A META-ANALYSIS

Author Block: Pavel Nieto, JESUS BALTAZAR RIVERA QUIROZ, Mayra Mayoral-Morales, Fanny Guadalupe Ramírez-Lara, Facultad de Medicina, Universidad Nacional Autónoma de México, Mexico City, Mexico, Facultad de Estudios Superiores Zaragoza, Universidad Nacional Autónoma de México, Mexico City, Mexico

Abstract Body:

Background: From the very beginning of the Covid-19 pandemic, clinicians noticed that the infection was a risk factor for developing deep venous thrombosis (DVT), pulmonary embolism (PE) and myocardial infarction (MI). We aimed to analyze the occurrence of thrombotic complications during the postoperative period when perioperative SARS-CoV 2 infection occurred.

Methods: Our study was conducted according to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines using the databases: PubMed, Scopus, Cochrane library and Google Scholar. We manually searched for articles published between 2020 and 2024. The systematic search consisted of identifying related keywords in title and abstract. Screening and full-text review were conducted by four of the reviewers and the uncertainties were resolved by an advisor. We included only observational cohort studies assessing the thrombotic complications among perioperative (7 days before and 30 days after) Covid-19 positive patients during the first 30 days of postoperative period. We created the forest plots using the Cochrane RevMan software and we analyzed comorbidity status, thrombotic complications and mortality.

Results: We collected data of 593,115 participants from 11 observational studies. Overall comorbidity showed a risk ratio (RR) 95% Confidence Interval

[95% CI] 1.13 [1.08, 1.18] . The overall thrombosis reported 1.50 [1.37, 1.64]; $p=0.00001$. Covid-19 positive patients showed increased RR for MI (17.36 95% CI [5.94, 50.48]) however it showed $p=0.51$. DVT and PE showed $p=0.001$ and $p<0.00001$, respectively, but lacked a conclusive RR [95% CI] (1.41 [1.26, 1.58]; 1.58 [1.36, 1.84], respectively). Mortality analysis showed 7.12 [5.43, 9.34]; $p<0.00001$.

Conclusion: DVT and PE show a statistically significant difference between groups but do not suggest a causal relationship since the non-infected group shows similar rates of these events. Both groups show similar comorbidity profiles and the higher mortality risk ratio cannot be associated directly to thromboembolic complications. Our results contrast those studies that point out Covid-19 as a risk factor for thromboembolic complications.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 48

Topic 1: Interventional and Structural

Publishing Title: EARLY RECURRENCE OF NON FAMILIAR CARDIAC MYXOMA IN THE LEFT VENTRICLE

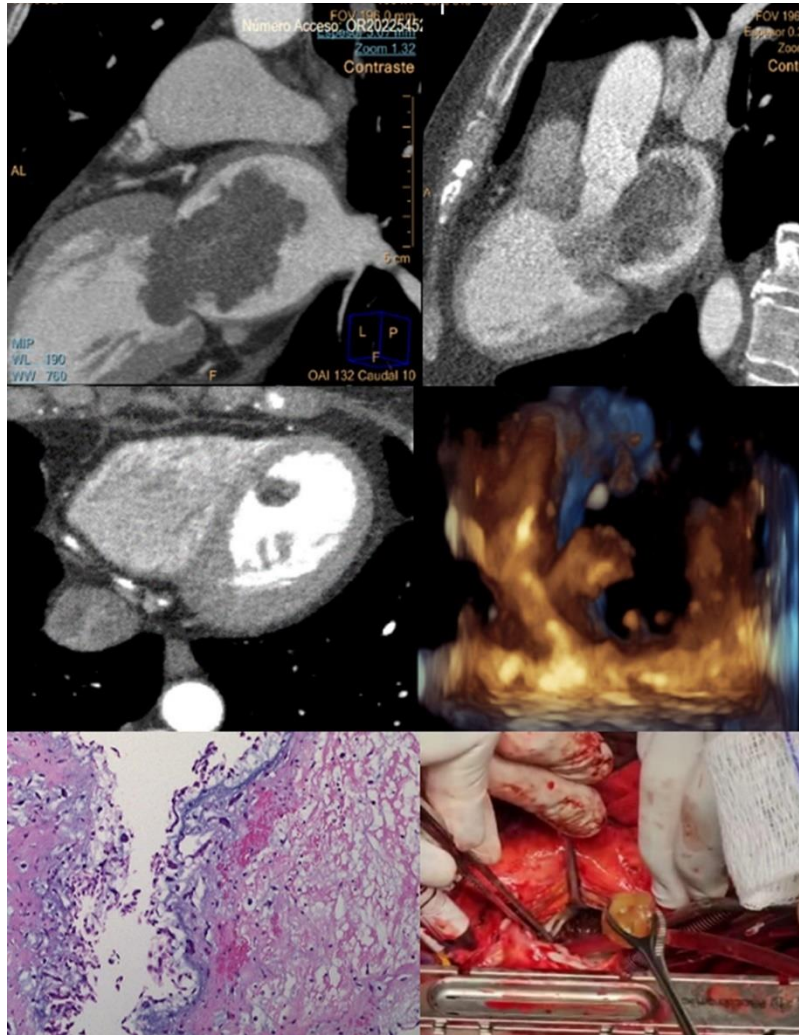
Author Block: Flor Teresita Rosas Aragón, Jorge Hilario Jimenez Orozco, Marisol Martínez Galindo, Marissa De Jesús Quintal Ramírez, Janet Mijangos Chávez, Karla Yovanny Acevedo Castillo, IMSS, Hospital de Especialidades “Dr. Antonio Fraga Mouret”, Centro Médico Nacional La Raza, Ciudad De México, Mexico

Abstract Body: **Background:** Cardiac myxomas are the most common benign tumors of the heart. Most are found in the left atrium (75%), followed by the right atrium (20%) and rarely (2.5%) in the left ventricle. Recurrence is rare after surgical resection (2 to 3% in familial cases and less in sporadic cases). **Case:** 67-year-old female, with functional class deterioration due to dyspnea. Echocardiogram showed a large mass in the left atrium, attached to interatrial septum, which protruded into the left ventricle and obstructed the outflow tract. Angiotomography reported an irregular hypodense image measuring 68x32x41 mm. The tumor was resected without complications, confirming histopathological diagnosis of myxoma. After 6 months, the patient presented an episode of amaurosis fugax and went to emergency service.

Decision-making: The new echocardiogram showed a mass in the left ventricle, angiotomography reported a 10x15 mm pedunculated tumor, with contrast enhancement, adhered to intraventricular septum. The case was evaluated with the cardiothoracic surgery service. The patient underwent a second surgery, presenting an adequate evolution and the same diagnosis was subsequently confirmed histopathologically.

Conclusion: Our case reported a patient with no family history of myxoma,

who presented early recurrent myxoma in a different site than the initial tumor. It could be due to implantation of tumor, seeding in another site at the time of resection. There are very few reported cases with these characteristics.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 49

Topic 1: Interventional and Structural

Publishing Title: CLINICAL FOLLOW-UP OF A LATIN AMERICAN POPULATION WITH DIASTOLIC PRESSURE RATIO (DPR) GUIDED CORONARY REVASCULARIZATION.

Author Block: Jesus Reyes, Salvador E. Trujillo, Fernando E. Atanacio, Sandra P. Ramirez, Victor Bautista, Karla Gonzalez, Genesis E. Aguilar, Everardo Aguayo, HGR 2 Queretaro Instituto Mexicano del Seguro Social, Queretaro, Mexico

Abstract Body: **Background:** Coronary revascularization guided by fractional flow reserve (FFR) is associated with better patient outcomes after the procedure than revascularization guided by angiography alone. Recently, non-hyperemic pressure ratios (NHPRs) have been validated as a reliable alternative to FFR. Diastolic pressure ratio (dPR) is a novel non hyperemic ratio of Pd to Pa at the peak-to-peak midpoint, averaged over 5 consecutive heartbeats. Studies of clinical outcomes associated with the use of dPR are lacking. The aim of this study is to present the first clinical follow-up of a Latin American population in whom the dPR was used to guide coronary revascularization

Methods: This is an observational, prospective, single-center cohort study, including patients who underwent dPR. Patients in whom at least one stenosis was functionally significant (dPR, ≤ 0.89) were assigned to dPR-guided PCI plus the best available medical therapy. Patients in whom all stenoses had a dPR of more than 0.89 were entered into the registry and received the best available medical therapy. The primary end point was the rate of a composite of major cardiovascular events (MACE), death from any cause, nonfatal myocardial infarction, or unplanned revascularization.

Results: We collected 40 patients and 50 vessels during the period from June to December 2023. All patients have complete clinical follow-up from 5 to 10

months until the writing of this abstract. The clinical and procedural characteristics of the patients will be presented in tables. 17 patients (42.5%) had a positive dPR test, of which 15 received PCI and 2 due to diffuse coronary artery disease received only medical treatment. None of the dPR-negative patients underwent PCI. No patient has had a MACE to date, 3 patients who received PCI had angina that led them to the emergency department, none of the 3 had to be revascularized.

Conclusion: dPR-guided coronary revascularization appears to be safe in the Latin American population. Randomized controlled clinical outcome data will be necessary to confirm these findings.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 50

Topic 1: Interventional and Structural

Publishing Title: PERCUTANEOUS CLOSURE FOR RUPTURED SINUS OF VALSALVA ANEURYSM IN A HIGH SURGICAL RISK PATIENT

Author Block: Liseth Hernandez Gonzalez, Daniel Manzur Sandoval, Zuniga S. Miriam, Araceli Gonzalez Ortiz, Isaac Espinosa Caleti, Stephanie Angulo, Edgar Garcia, National Institute of Cardiology Ignacio Chavez, Mexico City, Mexico

Background: A previously healthy young man presented to the emergency room with clinical signs of heart failure. Multimodal image was performed showing a ruptured sinus of Valsalva aneurysm (SVA).

Case: A previously healthy 41-year-old man arrived at the emergency room with dyspnea, jaundice, and tense ascites, leading to his admission to the hospital. A chest X-ray revealed a 50% pleural effusion requiring placement of an endopleural tube and non-invasive mechanical ventilation. Multimodal image was performed revealing a ruptured SVA into the right atrium, resulting in systemic volume overload.

Abstract Body: **Decision-making:** Given the patient's clinical signs of portal hypertension, in addition to presenting respiratory, kidney, and cardiac failure, we decided to close the defect percutaneously. An aortography confirmed a rupture of the SVA. A Cera 1618 device was successfully implanted under fluoroscopic guidance. He was discharged without signs of systemic or pulmonary venous congestion.

Conclusion: The ruptured SVA is a rare but potentially life-threatening condition that necessitates prompt recognition and intervention. Urgent surgical repair is the standard approach; however, transcatheter closure (TCC) has emerged as an attractive alternative especially in patients with high

surgical risk. Although our center has limited experience with TCC we opted for this approach in our patient due to multiple organ dysfunction and high surgical risk resulting in excellent clinical outcomes.

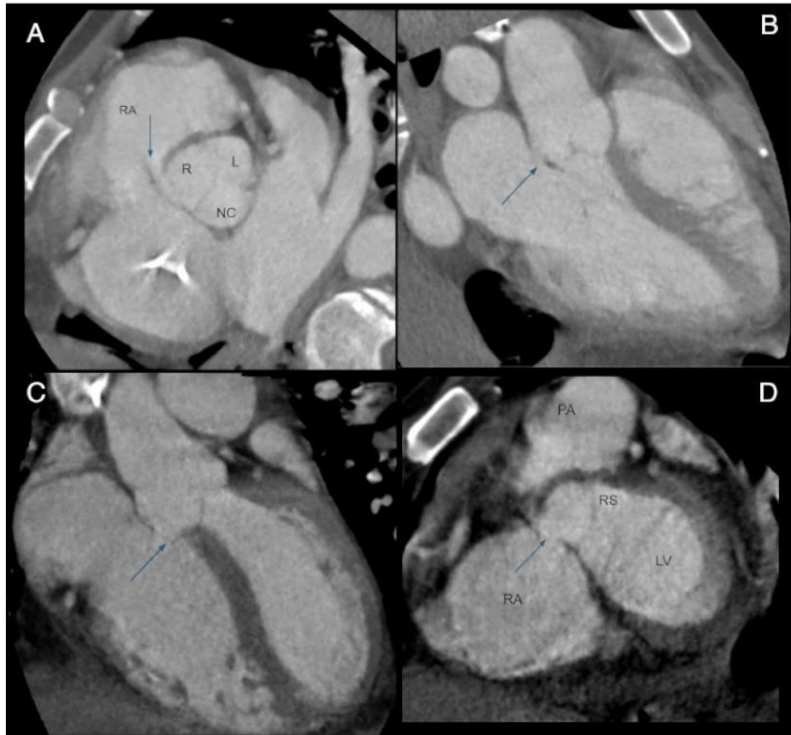
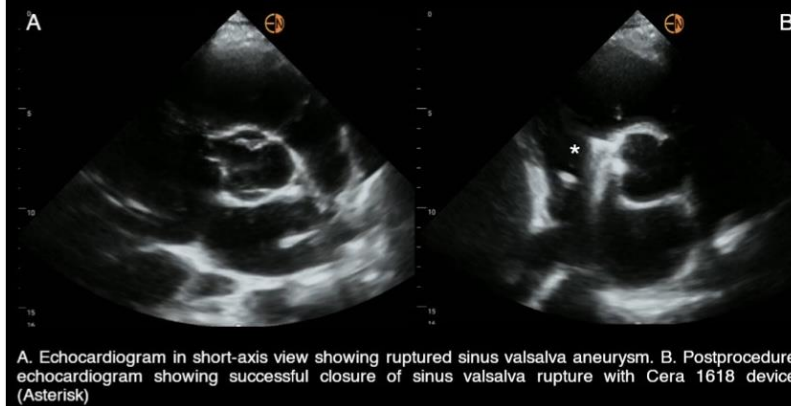


Figure 1. Reconstructed computed tomography in sagittal view showing the communication between the aortic root and the right atrium (Arrow). L: left coronary valve. R: right coronary valve. NC: Non-coronary valve. RA: Right atrium. RS: Right sinus. PA: Pulmonary artery. LV: Left ventricle.



A. Echocardiogram in short-axis view showing ruptured sinus of valsalva aneurysm. **B.** Postprocedure echocardiogram showing successful closure of sinus of valsalva rupture with Cera 1618 device (Asterisk)

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 51

Topic 1: Interventional and Structural

Publishing Title: ENDOVASCULAR MANAGEMENT OF PULMONARY VALVE ENDOCARDITIS

Author Block: Gabriel Roberto López, Fernando Guerrero, Miller Giraldo, Carlos Enrique Vesga, Camilo Calderón, Fundación Valle Del Lili, Cali, Colombia

Background: The use of vegetation aspiration for bacterial endocarditis of the pulmonary valve is uncommon and lacks documentation in the literature

Case: A 34-year-old man with a heart murmur since childhood was admitted to the ICU due to septic shock from the lungs. He had bacteremia from *Staphylococcus aureus* and *Klebsiella pneumoniae*. Echocardiography revealed a pars membranacea ventricular septal defect and two vegetations on the pulmonary valve, measuring 20x11 mm and 20x6 mm

Abstract Body: **Decision-making:** Although valve replacement surgery was needed, the patient's severe shock and multiorgan failure made surgery highly risky. The interventional cardiology team suggested vegetation aspiration to reduce size and septic emboli. Using the 16 Fr Lightning Flash™ (Penumbra, Inc.) aspiration system, guided by transesophageal echocardiography, yellowish material was aspirated, leading to the disappearance of the anterior vegetation and a reduction in the posterior one. Despite post-procedure ICU care, the patient deteriorated into refractory vasodilated shock and multiorgan failure, dying five days later

Conclusion: When surgical valve replacement is not recommended due to high intraoperative mortality risk, vegetation aspiration using echocardiography-guided catheterization is a possible alternative treatment.

However, the outlook for these patients still needs to be better defined

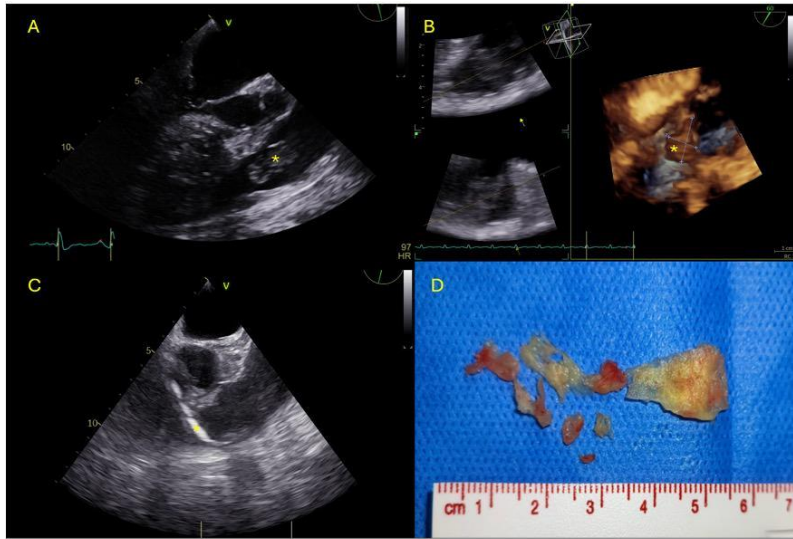


Figure A and B: 2D echocardiography and 3D reconstruction of vegetation on the pulmonary valve (*). **Figure C and D:** The 16 Fr Lightning Flash™ aspiration system (Penumbra, Inc.) in the right ventricular outflow tract and yellowish material aspirated from the pulmonary valve.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 52

Topic 1: Interventional and Structural

Publishing Title: PULMONARY THROMBOEMBOLISM, AN UNUSUAL CASE THAT CHALLENGES CARDIOLOGISTS

Author Block: CARLOS ALFONSO MADARIAGA CAROCCI, Diana Vargas Vergara, Johan C. Sinning Rey, ANDRES MAURICIO BERMUDEZ DAZA, Jessica Liliana Ospino, SR, Jorge L. Fajardo Ruge, Fundacion Universitaria Ciencias de la Salud, Bogota, Colombia, Hospital san jose de Bogota, Bogota, Colombia

Abstract Body:

Background: Patient with a thrombus in the right ventricular and pulmonary embolism associated with pulmonary hypertension, managed with thromboaspiration.

Case: A 50-year-old male patient presented with a clinical picture evolving over 2 days, characterized by dyspnea and chest discomfort. Physical examination revealed clinical signs of heart failure. laboratories showed elevated troponin I and NT-proBNP. The echocardiogram evidenced an image suggesting the presence of a thrombus with irregular borders extending from the right ventricle to the pulmonary artery, accompanied by signs of pulmonary hypertension. CT angiography identified acute pulmonary embolism. The PESI score was 110 points. Considering the performance of mechanical percutaneous pulmonary thromboaspiration, with favorable evolution, the patient was discharged.



Figure 1. A) Parasternal short-axis view of the great vessels towards the left ventricular outflow tract shows a filamentous image anchoring on the pulmonary valve. B) Four-chamber view shows a mobile filamentous image in the right ventricle. C) Long-axis parasternal view shows an image towards the right ventricular outflow tract. D) Opacification defects are observed in the main branch of the right pulmonary artery extending to the upper, middle, and lower lobar branches, without extension to the subsegmental branches. E) In the RAO 25 projection, a filling defect towards the right upper lobar branch is observed. Subsequently, a 12F thromboaspiration catheter is introduced, followed by complete recanalization of the flow.

Decision-making: Pulmonary embolism with evidence of a thrombus in the right ventricle poses a clinical challenge in treatment. Pulmonary arterial hypertension is associated with short-term all-cause mortality and PE-related death. Thrombolysis in hemodynamically stable patients may increase the risk of bleeding; other strategies such as thromboaspiration, thrombectomy, or selective thrombolysis should be considered.

Conclusion: Thromboaspiration can prevent hemodynamic instability, reduce mortality, reduce hospital stay and impact the incidence of pulmonary hypertension of thromboembolic origin. Complications related to this procedure are low.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 53

Topic 1: Interventional and Structural

Publishing Title: PERCUTANEOUS MANAGEMENT OF TRAUMATIC INTERVENTRICULAR SEPTAL DEFECT

Author Block: Gabriel Roberto López, Fernando Guerrero, Pastor Olaya, Jairo Sanchez, Camilo A. Calderón, Fundación Valle del Lili, Cali, Colombia

Abstract Body:

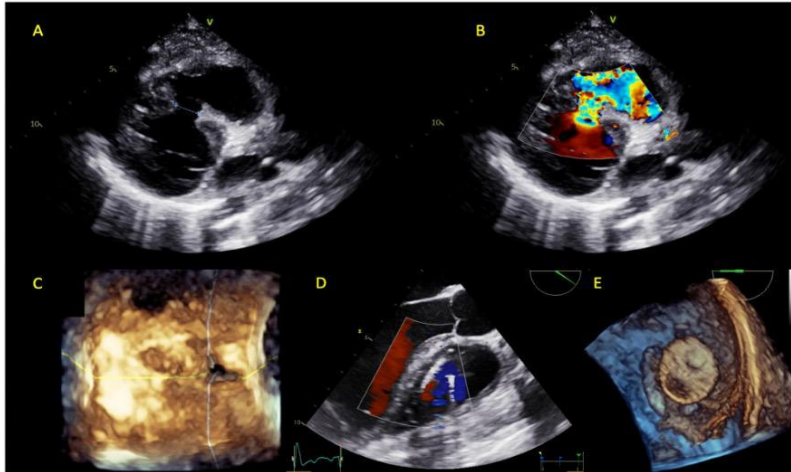
Background: Management of interventricular septal defects (IVSD) from penetrating cardiac trauma is uncertain and lacks documentation.

Case: A 19-year-old patient was brought to the ER with a stab wound in the precordial area, revealing a perforation on the left ventricle's anterolateral wall and the right lung's upper lobe, requiring emergency surgery. The patient completed postoperative care and was discharged without complications. A month later, the patient returned with pneumonia and dyspnea. A harsh pansystolic murmur was noted, and echocardiography revealed a 13 mm IVSD with a left-to-right shunt and Qp/Qs ratio of 1.93, causing significant hemodynamic effects. The left chambers were mildly dilated with normal systolic function (left ventricular ejection fraction of 63%). The right ventricle was normal in size and function.

Decision-making: Previous trauma was considered the causal agent of the IVSD. The heart team decided to perform a percutaneous closure of the IVSD with an Amplatzer™ P.I. Muscular VSD Occluder device with satisfactory results. Postoperative transthoracic echocardiogram showed the device was adequately positioned with minimal residual unidirectional flow from left to right. The patient was discharged without complications.

Conclusion: Percutaneous management of traumatic IVSD was successful and is a viable alternative to open surgery. Early intervention and

multidisciplinary collaboration are crucial for treatment success and patient recovery.



Figures A and B: Transthoracic echocardiogram showing a proximal muscular interventricular septal defect. **Figure C:** Three-dimensional reconstruction of the septal defect. **Figures D and E:** Correction of the defect with an Amplatzer™ P.I. Muscular VSD Occluder device.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 54

Topic 1: Interventional and Structural

Publishing Title: PERCUTANEOUS CLOSURE OF POST INFARCT SEPTUM RUPTURE

Author Block: Evelin Gómez, Edgardo Bobadilla, Abel Salvador Becerra Flores, Centro Médico Nacional de Occidente, GUADALAJARA, Mexico

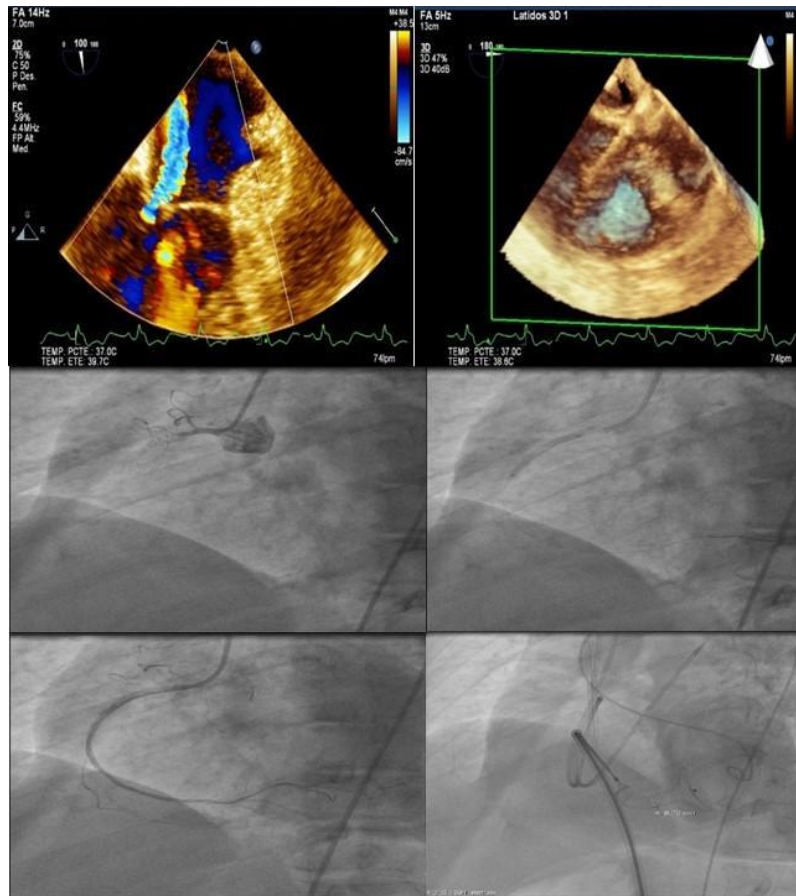
Background: A 67-year-old woman with a history of systemic arterial hypertension, diabetes mellitus and a smoking.

Case: His condition began one month earlier with oppressive chest pain and dyspnea on exertion that self-limited with rest. The first contact electrocardiogram showed extensive anterior necrosis with residual J-point elevation, so thrombolysis was performed without electrocardiographic or clinical criteria for reperfusion and referral was made to a tertiary hospital. Physical examination revealed the presence of a left parasternal holosystolic murmur. Transesophageal echocardiogram showed an interventricular septo-apical rupture of 2.5 x 2.1 cm with left to right flow.

Abstract Body: **Decision-making:** Due to favorable anatomy, percutaneous closure of ventricular septal defect was performed with Amplatzer Occluder 24mm, with visible residual short circuit. A post-procedure transthoracic echocardiogram showed a well-attached interventricular closure device, both discs expanded adequately, with the presence of a qualitatively mild residual shunt with a gradient of 53 mmHg.

Conclusion: Rupture of the interventricular septum is a rare but lethal complication that can occur after acute myocardial infarction, with a frequency of approximately 0.2%-2%. Despite improvements in surgical techniques and transcatheter closure, the outcome after immediate repair of

septal rupture remains a therapeutic challenge because the edematous myocardium is too fragile to be repaired.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 55

Topic 1: Interventional and Structural

Publishing Title: THE CHALLENGE OF SEVERELY RESTRICTIVE ATRIAL COMMUNICATION IN TRICUSPID ATRESIA WITH SEVERE PULMONARY STENOSIS: A CASE REPORT OF A NEWBORN IN THE DOMINICAN REPUBLIC

Author Block: Cristina M. Román, Arline M. Medrano, José Eduardo Fuentes, Lia M. Joubert, Ana L. López, Pedro E. Urena, Yanet A. Toribio, Servicios Cardiovasculares Pediátricos, Santo Domingo, Dominican Republic, Medicina Cardiovascular Asociada, Santo Domingo, Dominican Republic

Abstract Body: **Background:** Tricuspid atresia (TA) is a rare cyanotic CHD. Survival is typically enabled by an interatrial communication. We present the case of a 14-day-old neonate with TA type IB and a severely restrictive foramen ovale (FO).

Case: A 14-day-old male was referred to the cardiology clinic due to a history of cyanosis and a cardiac murmur. Physical exam notorious for an SpO₂ of 40% and marked cyanosis, with no other relevant findings. ECG showed signs of LV enlargement. TTE confirmed the diagnosis of TA type IB with severe pulmonary stenosis (Figure 1A-B), restrictive VSD, restrictive ductus arteriosus (DA), hypoplastic RV (Figure C), and minimal flow across the atria through a restrictive FO.

Decision-making: Since surgery is reserved for infants aged 3 months, immediate intervention became necessary for survival. Angioplasty and placement of a stent in the DA were performed (Figure 1D). Additionally, atrial septostomy with a balloon was conducted, creating a 1 cm non-restrictive interatrial defect facilitating a right-to-left shunt thereby enhancing oxygenation and circulatory function (Figure 1E-F).

Conclusion: Restrictive atrial communication in TA is rare and can result in

significant morbidity and mortality, due to severely limited routes for effective circulation that drastically affect hemodynamic stability. Timely diagnosis and immediate intervention is crucial for survival, with a focus on relieving interatrial septal obstruction and ensuring effective ductus-dependent circulation.

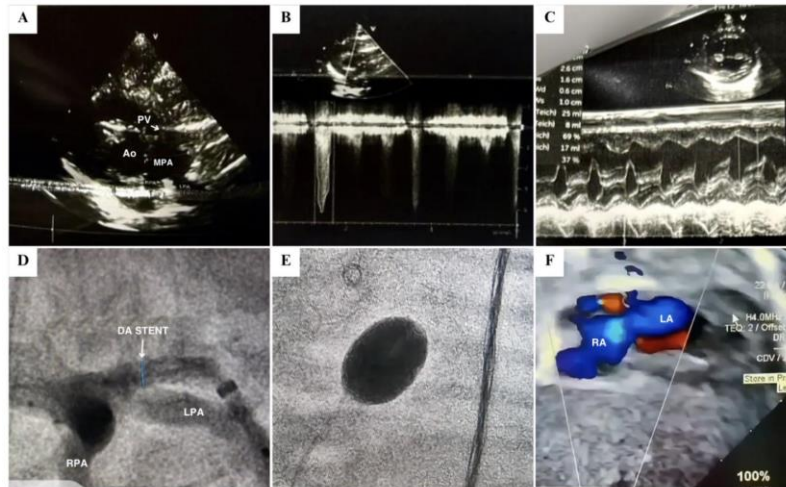


Figure 1. (A) Parasternal short-axis view showing severe valvular pulmonary stenosis. (B) Continuous wave doppler of the right ventricular outflow tract showing a maximum gradient of 86 mmHg. (C) Ventricular M-Mode illustrating LV chamber diameter at 2.6 cm; LV enlargement relative to the RV is evident. (D) Stent placement in DA measuring 2-3 mm in diameter. (E) Echocardiography monitored balloon atrial septostomy at interatrial septum. (F) Postprocedural TTE showing the resultant ASD of 1.0 cm with bidirectional shunt predominantly from right to left. PV: Pulmonary Valve, Ao: Aorta, MPA: Main Pulmonary Artery, DA: Ductus Arteriosus, LPA: Left Pulmonary Artery, RPA: Right Pulmonary Artery, RV: Right Ventricle, LV: Left Ventricle.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 56

Topic 1: Interventional and Structural

Publishing Title: ISCHEMIC CHEST PAIN WHEN A FISTULA STEALS THE CORONARY FLOW

Author Block: Monica Flores, Vicente Jimenez Franco, Jose A. Salinas Casanova, Guillermo Quezada Valenzuela, Christian Juarez Gavino, Daniel Lira Lozano, Marisol Molina, Carlos Jerjes Sánchez, Tecnológico de Monterrey. Instituto de cardiología y medicina vascular, Monterrey, Mexico

Background: Coronary artery fistulas can be associated with angina, arrhythmias or heart failure. A functional image approach is recommended to document ischemia, and the symptoms deriving from significant shunts are indications for closure.

Abstract Body: **Case:** A 40-year-old male presented with severe chest pain increased by exertion. His ECG showed Q waves in precordial leads suggesting necrosis with a positive stress test for ischemia. Angiotomography showed obstruction in the three coronary arteries. A vascular image emerged from the aortic root around the left main coronary artery (LMCA) generating a circle in the origin of the pulmonary artery suggesting a fistula.

Decision-making: Angiography showed LMCA ectasia and a fistula from the left coronary sinus and distal LMCA into the pulmonary artery. Obstructive disease was identified in the circumflex and right artery. We ruled out the possibility of a percutaneous closure through the LMCA, observing the fistula filling by a direct origin from the left coronary sinus independent of the LMCA. Right catheterization ruled out pulmonary hypertension, and the patient underwent coronary artery bypass graft and surgical fistula closure with ligation at the anterior descending artery level. He was discharged

asymptomatic with optimal therapy. His following stress echocardiogram was negative for ischemia.

Conclusion: We present an uncommon case of coronary fistula with ischemic complications managed with an initial non-invasive image approach and surgical closure.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 57

Topic 1: Interventional and Structural

Publishing Title: CARDIAC ARREST BY LIDOCAINE: AN UNCOMMON CULPRIT

Author Block: Shaber Seraj, Omar Haider, Syifa R. Djunaedi, Julia Ladna, rishard abdul, Ahmed Bakhit, UMass Baystate Medical Center, Springfield, MA, USA

Background: Cardiac arrest can be caused by various etiologies such as structural heart disease, ischemia, cardiomyopathy, and arrhythmias. We aim to highlight a rare case of cardiac arrest in a patient without any underlying heart disease due to lidocaine/epinephrine injection in preparation for a dental root canal.

Abstract Body: **Case:** A 59-year-old male presented for an evaluation of cardiac arrest following three rounds of lidocaine/epinephrine injections in the gingival mucosa. He became unresponsive after the injections were administered, which led to CPR. He was found to be in complete heart block followed by ventricular fibrillation arrest and later pulseless electrical activity. Return of spontaneous circulation (ROSC) was achieved after four rounds of epinephrine. He subsequently went into ventricular fibrillation arrest again with ROSC achieved after one defibrillation and another three rounds of epinephrine. The patient's total downtime was thirty minutes. In the ER, EKG post-ROSC revealed ST-segment elevations in the inferior leads (II, III, aVF) with initial hsTroponin of 285. He was taken for cardiac catheterization, which did not reveal any obstructive disease. Repeat EKG following catheterization revealed a S1Q3T3 pattern, raising concern for PE which was ruled out with CTA. TTE revealed a reduced EF of 30-40% with global hypokinesis. MRI was obtained five days following cardiac arrest which showed recovered systolic

function with EF of 63%. The patient recovered with an uncomplicated hospital course.

Decision-making: Primary workup was unrevealing with no clear etiology or disease state. Although epinephrine could have been a culprit it is unlikely given the low doses used in anesthetics. Given the patient's presentation with hypotension, it is probable he had intravascular infiltration of lidocaine leading to heart block and ventricular fibrillation arrest. EKG changes consistent with ST-segment changes in a right coronary pattern led us to believe coronary artery vasospasm was the specific etiology, mimicking STEMI on arrival.

Conclusion: We aim to highlight a mechanism of cardiac arrest that is yet to be reported in the literature and can be kept as a potential differential diagnosis.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 58

Topic 1: Interventional and Structural

Publishing Title: AMPHETAMINE-INDUCED MULTIFOCAL VASOSPASM OF CORONARY AND CEREBRAL ARTERIES LEADING TO CONCURRENT CARDIAC ARREST AND SEIZURES

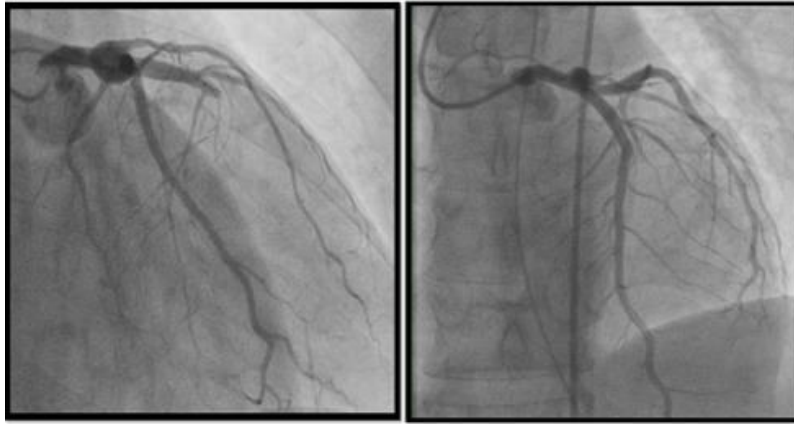
Author Block: Gabriel Esses, Nicolas Schaeffer, Benjamin Mann, Aleksandre Toreli, South Brooklyn Health, Brooklyn, NY, USA

Abstract Body: **Background:** Amphetamine-type stimulants are among the most widely used illicit drugs in the world. Amphetamines cause a massive release of catecholamines, leading to intense vasoconstriction of the coronary and cerebral arteries. We present a case of a man who developed multiple episodes of vasospasm-induced cardiac arrest with concurrent seizures. **Case:** A 44-year-old male with a history of amphetamine use presented after an out-of-hospital cardiac arrest complicated by seizure-like activity. He was taken emergently for cardiac catheterization where he again went into cardiac arrest along with generalized seizures. On initial injection of contrast into the coronary system, there was 100% coronary obstruction of the mid-LAD. After injection of nitroglycerin, the obstruction completely resolved. Urine toxicology was significant for amphetamines.

Decision-making: The intervention was aborted as the cause of the obstruction was arterial vasospasm. Echo, EEG and CT head were unremarkable. The patient improved with supportive care and he was discharged with outpatient drug counseling program.

Conclusion: This case demonstrates a novel phenomena of amphetamine-induced cardio-neurological dysfunction leading to a diverse, seemingly unrelated toxidrome of life-threatening symptoms and the importance for

clinicians to maintain a high degree of suspicion to suspect underlying amphetamine toxicity when presented with a patient exhibiting concurrent episodes of cardiac arrest and seizures.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 59

Topic 1: Interventional and Structural

Publishing Title: SINGLE CORONARY SYSTEM ORIGINATING FROM RIGHT CORONARY ARTERY PATIENT WITH SEVERE AORTIC STENOSIS

Author Block: Nelson Acosta, Aimee Flores, Oscar Ortega, ASOCIACION INSTITUTO DOMINICANO DE CARDIOLOGIA, santo domingo, Dominican Republic

Background: The incidence of a single coronary artery is around 0.024% and usually doesn't have clinical repercussions. There are no data on the long-term postoperative prognosis of aortic valve replacement in patients with a single coronary artery.

Case: A 74-year-old woman with a history of severe aortic stenosis diagnosed 1 year ago and arterial hypertension. She reported dyspnea and dizziness and was referred from the cardiac surgery department to the cardiac catheterization department for coronary angiography prior to valve replacement surgery. Physical examination revealed a mesosystolic aortic ejection murmur, intensity 3/6, radiating to the base of the neck and apex.

Abstract Body: **Decision-making:** Her echocardiogram shows a left ventricular ejection fraction of 71%. The aortic valve is trileaflet and calcified, with a mean gradient of 35 mmHg and a valve area of 0.8 cm². The coronary angiography shows a dominant right coronary artery and the left main coronary artery was not found. The coronary angiotomography only observe the right coronary artery with vascular vestiges towards the left ventricle (Fig1). A biological valve was implanted in the aortic position. The aortic valve was highly calcified and was replaced with a Cardioprotese Ltda #21 coiled pericardium valve.

Conclusion: The combination of severe aortic stenosis with the right coronary artery as the only vessel is a rare entity that complicates the clinical

presentation and makes the postoperative prognosis uncertain.

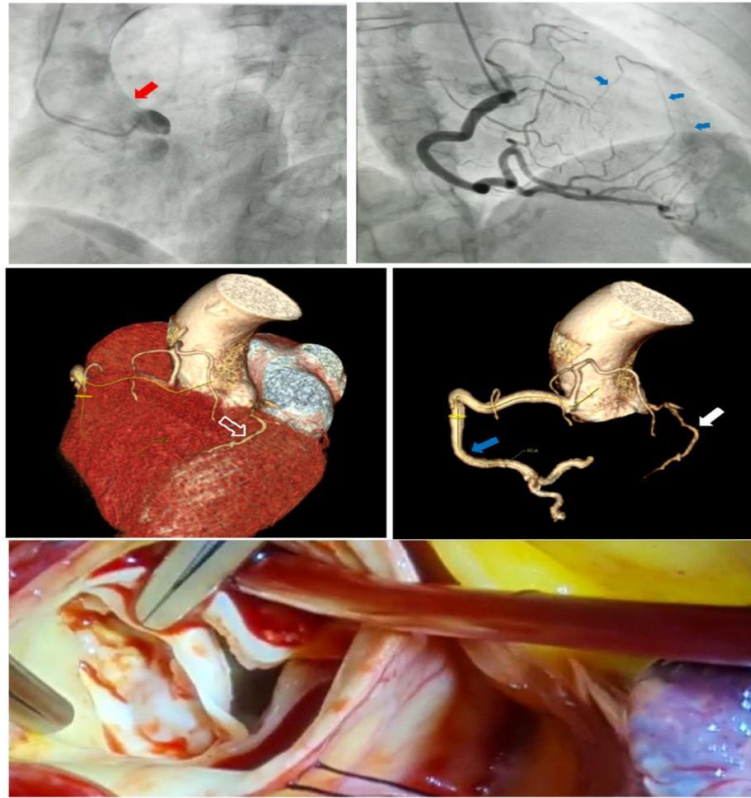


Figure 1- Coronary angiography and angiotomography showing the absence of the left main coronary artery and its branches. Image A shows the place where the ostium of the LMCA would be expected to be found (red arrow). Image B shows the RCA and its collateral branches that supply the LAD territory (blue arrows). Image C shows the short path covered by the traces of what would be an outline of the LAD (white arrow) in the volumetric reconstruction of the coronary angiotomography. Image D shows a well-developed CD, with 30% eccentric lesion (blue arrow). Image E is a trans-surgical photograph where the ostium of the LMCA is not observed, and a highly calcified aortic valve.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 60

Topic 1: Interventional and Structural

Publishing Title: CHALLENGING RECURRENCE: PERCUTANEOUS STENT IMPLANTATION FOR AORTIC RECOARCTATION

Author Block: Edgardo Bobadilla, Daniel Lizarraga, Guillermo Rodriguez Zavala, Hector Flores Salinas, Jorge G. Delgado, Abel Salvador Becerra Flores, Francisco Lara, Natalia Jaime, Donaciano Leyva, Evelin G. Gómez, Centro Médico Nacional de Occidente, Guadalajara, Jalisco, Mexico

Abstract Body: **Background:** A 52 year old male with type 2 Diabetes Mellitus and arterial hypertension, was diagnosed and surgically treated for aortic coarctation at the age of 6; underwent a second surgery at the age of 45 with the placement of a Dacron tube.

Case: The patient presented with exertion dyspnea and chest pain, prompting an electrocardiogram which showed no alterations. A cardiac angiotomography and echocardiogram revealed aortic recoarctation with a maximum gradient of 58 mmHg. Physical examination showed a late systolic aortic murmur radiating to the back, blood pressure of the right arm of 126/69 mmHg, left arm at 92/47 mmHg and asymmetric peripheral pulses. Coronary arteriography was performed without observing significant lesions.

Aortography showed a pre ductal diameter of 15 mm, ductal 11 mm, and post ductal of 36, with post ductal aortic pressure of 70/38 mmHg and pre ductal 115/36 mmHg, peak-to-peak gradient of 45 mmHg.

Decision-making: The patient was then considered a candidate for balloon angioplasty and placement of a 40 mm covered stent. During the procedure, the stent was deployed with residual stenosis and a gradient of 30 mmHg. An uncompliant balloon was advanced, achieving improvement with a gradient of

10 mmHg. The control angiography showed adequate stent apposition.

Conclusion: The use of a covered stent in aortic recoarctation can prevent or minimize complications such as aneurysms or stent fractures; however, there are few reports on its safe use in recoarctation with the presence of a Dacron tube

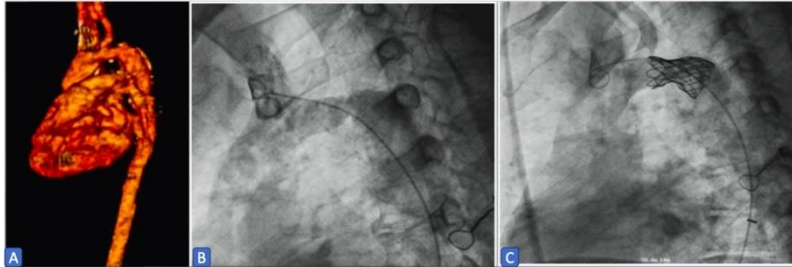


Figure 1. Computed tomography angiography with 3D reconstruction of the aortic arch and descending aorta where the recoarctation site is visualized (A). Diagnostic aortogram (B). Aortogram after endovascular stent implantation (C).

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 61

Topic 1: Interventional and Structural

Publishing Title: ISCHEMIC STROKE CAUSED BY MYXOMA

Author Block: Andres Mauricio Bermudez Daza, CARLOS ALFONSO MADARIAGA CAROCCI, Jessica Liliana Ospino Guzman, Diana Vargas Vergara, Jorge Leonardo Fajardo Ruge, Hopital de San Jose, Bogota, Colombia

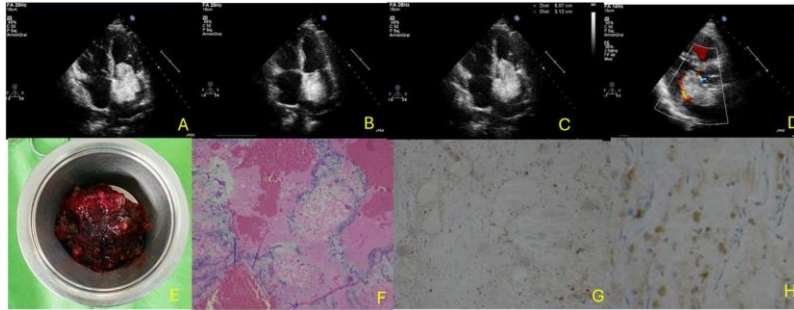
Background: Patient with ischemic stroke wake up of cardioembolic etiology secondary to a large left atrial mass.

Case: A 71-year-old female was found lying on the floor with right hemiparesis and aphasia. Medical history of Hypothyroidism. On physical examination, there is a decrease in bibasal respiratory sounds, diastolic murmur in the mitral focus, edema in the lower limbs and strength 1/5 in the right limbs. CT shows multi-topographic ischemic cerebrovascular disease. Echocardiogram shows biatrial dilation with a mobile mass 6x3.1 cm in the left atrium occupying 60-70% that generates a severe mitral stenosis, right ventricular dilation, and left ventricular dysfunction.

Abstract Body: **Decision-making:** She is taken to surgery for resection of the mass adhered to the interatrial septum, and histological analysis of this identifies myxoma, with the removal of the myxoma the myocardial function improved and she was discharged. There are multiple causes of cardioembolic ischemic stroke, among these causes we have atrial myxoma, an entity with a low prevalence between 0.01-0.03%. In 78% of cases, its location is in the left atrium. Generally, its behavior is benign and its manifestations are asymptomatic. Despite the above, this mass can generate obstructive and embolic effects. The management is the resection of the masses with the aim of preventing

and/or relieving these events.

Conclusion: Despite the low incidence of myxomas, these can be causal agents of valvular obstruction and/or embolic events.



A,B,C Apical 4-chamber image: a myxoma measuring 6x3.1 cm entering the mitral valve is appreciated. D Parasternal long axis image of mitral stenosis due to myxoma. E: Pathological specimen. F: Mesenchymal lesion of vascular component, fusocellular myxoid. G: Immunohistochemistry with keratin. H: Immunohistochemistry with S100. Histological images courtesy of the pathology laboratory of San Jose Hospital (FUCS).

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 62

Topic 1: Ischemic Heart Disease

Publishing Title: RISK STRATIFICATION IN CHRONIC CORONARY DISEASE ACCORDING TO THE TIMI RISK SCORE FOR SECONDARY PREVENTION IN BRAZIL

Author Block: Henrique Pinesi, Eduardo Moreira, Marcelo Henrique Moreira Barbosa, Fabio Grunspun Pitta, Fabiana Hanna Rached, Eduardo Gomes Lima, Eduardo Martins, Carlos V. Serrano, JR, Instituto do Coracao, Hospital das Clinicas, Faculdade de Medicina, Universidade de Sao Paulo, Sao Paulo, Brazil

Abstract Body: **Background:** Risk stratification in Chronic Coronary Disease (CCD) patients is challenging. The TIMI Risk Score for Secondary Prevention (TRS2P) is a simple 9-point tool developed to predict cardiovascular death, myocardial infarction (MI), and ischemic stroke among post-MI patients. There are no studies of it in the Brazilian population. This study aimed to validate the TRS2P score among patients with CCD at a tertiary center in Brazil.

Methods: Patients with CCD, defined as having undergone a previous revascularization procedure, previous MI, or >50% stenosis in at least one epicardial coronary artery, were followed on an outpatient basis. The primary outcome consisted of a composite of MACE (death, MI and stroke). Predicted risk was as reported in the original derivation study. Calibration was assessed through calibration plot and the Hosmer-Lemeshow test. Discrimination was evaluated by the C-statistic.

Results: The study sample consisted of 1023 patients. Of those, 510 (49%) had completed a 3-year follow-up, and thus were included in the Hosmer-Lemeshow estimation and the discrimination analyses. During follow-up, 162 MACE were documented. The estimated overall 3-year incidence was 17% (95%CI 14%-19%), whereas the predicted incidence was 15%. The risk was

underestimated in every TRS2P strata, as shown in the figure. The C-statistic was 0.64 (95%CI: 0.58-0.69).

Conclusion: The TRS2P score underestimated MACE and presented moderate discrimination in a Brazilian tertiary center CCD cohort.

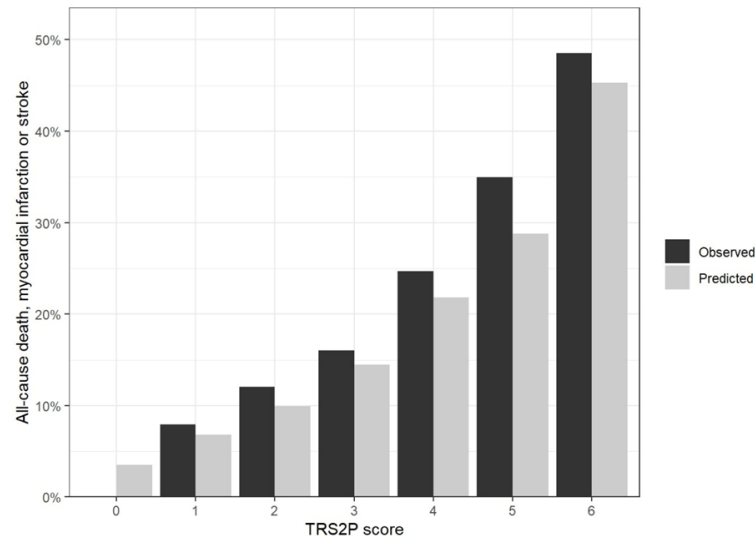


Figure: Calibration plot showing the observed and the predicted incidence of MACE in each TRSP2 strata. Hosmer-Lemeshow Goodness-Of-Fit p-value < 0.01.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 63

Topic 1: Ischemic Heart Disease

Publishing Title: NEUTROPHIL-LYMPHOCYTE RATIO AS A MARKER OF CARDIOVASCULAR OUTCOMES IN PATIENTS WITH CHRONIC CORONARY SYNDROME

Author Block: Henrique Pinesi, Eduardo Moreira, Marcelo Henrique Moreira Barbosa, Eduardo Martins, Fabio Grunspun Pitta, Eduardo Gomes Lima, Fabiana Hanna Rached, Carlos V. Serrano, JR, Instituto do Coracao, Hospital das Clinicas, Faculdade de Medicina, Universidade de Sao Paulo, São Paulo, Brazil

Abstract Body: **Background:** Inflammation is one of the pathophysiological processes involved in the genesis and progression of atherosclerosis and has been increasingly used as a therapeutic target in recent years. The neutrophil-lymphocyte ratio (NLR) is a simple inflammatory biomarker associated with coronary atherosclerosis in the acute setting. There needs to be more data in patients with chronic coronary syndrome (CCS). This study aimed to analyze the relationship between NLR and cardiovascular outcomes in patients with CCS.

Methods: Patients with CCS, defined as a previous revascularization procedure (surgical or percutaneous), previous myocardial infarction (MI) or stenosis > 50% in at least one epicardial coronary artery, were included and followed up on an outpatient basis. The NLR was calculated based on the admission blood count. The main outcome was the composite of death, non-fatal myocardial infarction and non-fatal stroke.

Results: 975 patients were included, with a median age of 65 years and 289 (30%) were women. Previous MI was present in 598 (61%), 289 (30%) had undergone previous revascularization surgery and 451 (46%) had

percutaneous coronary intervention. Diabetes was prevalent in 575 (59%) and hypertension in 922 (95%). The median NLR was 2.15 (IQR 1.25 - 2.87). Individuals with values above the median had impaired left ventricular ejection fraction (55% x 58%, $p = 0.003$) and lower serum levels of LDL-c (81 x 88 mg/dL, $p = 0.004$), total cholesterol (150 x 164 mg /dL, $p < 0.01$) and triglycerides (113 x 134mg/dL, $p < 0.001$). There was no association between NLR and coronary anatomical severity. NLR correlated with age, LDL-c and ventricular function ($p < 0.05$ for all). During follow-up, 152 events of the composite primary outcome were registered, with an estimated 3-year incidence of 15.6% in the general population - higher in patients with $NLR \geq 2.15$ when compared to $NLR < 2.15$ (20% x 14%, $p = 0.002$). In the multivariate analysis, the 3rd quartile of NLR had a 31% higher risk than the 1st quartile ($p < 0.05$).

Conclusion: NLR correlated with a higher risk of cardiovascular events in a population with CCS.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 64

Topic 1: Ischemic Heart Disease

Publishing Title: DISPARITIES IN THE MANAGEMENT OF DYSLIPIDEMIA IN INDIVIDUALS AT HIGH CARDIOVASCULAR RISK IN THE DOMINICAN REPUBLIC

Author Block: Jenny cepeda, Ricardo E. Hernández-Landa, Carlos Ruiz-Matuk, Marc B. Bello-Figueroa, Kristy Polanco, Daniela Salado, Valery Carrion, Jazmin Pantaleon Vasquez, Pedro Vargas Bocio, Roberto Garcia, Elizabeth M. Sánchez Almánzar, Universidad Iberoamericana, santo domingo, Dominican Republic

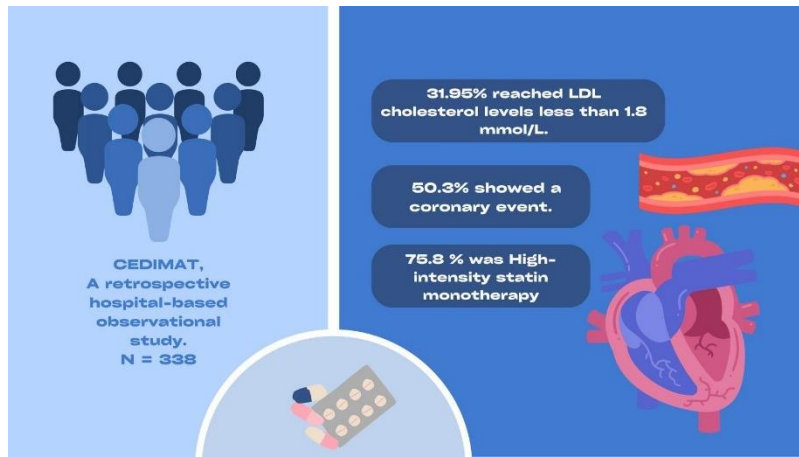
Abstract Body:

Background: Science continues to provide evidence for managing cardiovascular disease in high-risk patients. This study aimed to collect information from data on these patients.

Methods: This is an observational and retrospective study. We included 338 medical records of patients over 18 years of age with new cases of acute MI in patients undergoing left coronary catheterization at a tertiary health center.

Results: The population was $X(SD) = 68.3 (10.9)$ years. Of the medical records evaluated, 48.4% have a history of dyslipidemia and 50.3% of Acute Coronary Syndrome. There was a 57.3% probability of suffering a coronary event in patients with HTN ($OR=57.3, p<0.001$) and with a history of stroke and chronic kidney disease ($OR=9.10, p=0.038$). Patients on low-intensity statin monotherapy were 4.2% ($n = 11$), and none of the patients were on high-intensity therapy combined with ezetimibe. A reduction in the treatment dose was evident in 20.4% ($n=69$) of patients, and the addition of a new medication in 2.1% ($n=7$) of cases. Only 31.95% ($n=108$), $p<0.01$, reached LDL-C levels below 70 mg/dL in the study period. Each point increase in LDL cholesterol level was associated with approximately a 6% increase in unstable angina/myocardial infarctions compared to the lowest frequency categories.

Conclusion: There continues to be a great need to protocolize and establish adherence plans to reduce LDL-C levels in people at high cardiovascular risk.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 65

Topic 1: Ischemic Heart Disease

Publishing Title: DIAGNOSTIC ACCURACY OF THE SINGLE-PHOTON EMISSION COMPUTED TOMOGRAPHY TEST COMPARED TO INVASIVE CORONARY ANGIOGRAPHY IN A LATIN AMERICAN POPULATION

Author Block: Jesus Reyes, Everardo Aguayo, Genesis E. Aguilar, Karla Gonzalez, Victor Bautista, Sandra Ramirez, Fernando Atanacio, Salvador E. Trujillo, HGR 2 Queretaro Instituto Mexicano del Seguro Social, Queretaro, Mexico

Background: Single-photon emission computed tomography (SPECT) is a nuclear imaging modality used frequently to diagnose coronary artery disease. There is a paucity of data regarding its diagnostic accuracy in the Latin American population

Methods: Patients who underwent invasive coronary angiography (ICA) from June to December 2023 who had a SPECT test performed before the intervention were collected. The diagnostic accuracy was determined compared to the gold standard (ICA) for stenosis $\geq 50\%$, ectasia and coronary tortuosity

Abstract Body: **Results:** 78 patients were collected, 234 vessels were analyzed, 72% were men (n=56), the average age was 63 +/- 19 years, 63% were diabetic, 87% had hypertension. All patients have a report of a fixed or stress-induced defect in at least one territory. When only coronary stenosis $\geq 50\%$ was considered, the test had a sensitivity and specificity of 67 and 61% respectively, positive likelihood ratio (PLR) 1.72, considering ectasia added to coronary stenosis, the test had a sensitivity and specificity of 69 and 65% (PLR) 1.97, finally when coronary tortuosity was considered in addition to stenosis and ectasia the test had a sensitivity and specificity of 64 and 67% (PLR) 2.01.

Conclusion: Single-photon emission computed tomography test had low sensitivity and specificity in this Latin American population; diagnostic accuracy did not improve after considering coronary ectasia and tortuosity as probable causes for a positive test

	TP	FP	FN	TN	Sensitivity	Specificity	PLR
Stenosis	55	59	27	93	0.67	0.61	1,72
Stenosis + Ectasia	65	49	29	91	0.69	0.65	1,97
Stenosis + Ectasia + Tortuosity	77	37	42	78	0.64	0.67	2,01

• Table 1. Diagnostic Accuracy of SPECT compared to invasive coronary angiography. PLR = Positive likelihood ratio

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 66

Topic 1: Ischemic Heart Disease

Publishing Title: META-ANALYSIS OF EFFICACY AND SAFETY IN DUAL ANTIPLATELET DE-ESCALATION TRANSITIONING FROM TICAGRELOR TO CLOPIDOGREL IN ACUTE MYOCARDIAL INFARCTION FOLLOWING PERCUTANEOUS CORONARY INTERVENTION AT TWELVE MONTH FOLLOW UP

Author Block: Ahmed Qasim Mohammed Alhatemi, Hashim Talib Hashim, Warith Al Anbiyaa university, Karbala, Iraq, Al Nasiriyah Teaching Hospital, Dhi Qar, Iraq

Abstract Body: **Background:** Background: In the management of acute myocardial infarction (AMI) following percutaneous coronary intervention (PCI), dual antiplatelet therapy (DAPT) plays a crucial role in preventing recurrent ischemic events. Recent studies have explored the feasibility and safety of de-escalating DAPT from ticagrelor to clopidogrel.

Methods: Methods: We conducted a systematic review and meta-analysis by searching several databases, including Cochrane Central Register of Controlled Trials (CENTRAL), PubMed, MEDLINE (including MEDLINE InProcess) (OvidSP), Web of Science, Embase (OvidSP), and Scopus. We assessed the risk of bias using the ROB2 Cochrane tools for randomized controlled trials (RCTs). The analysis was performed using RevMan Cochrane software.

Results: Results: A total of ten studies including observational and clinical studies involving N=18,001 patients (11,458 de-escalated from ticagrelor to clopidogrel after 12 months and 6,543 remained on ticagrelor after 12 months post-PCI) were included. There was no difference in the risk of all-cause death (RR 0.98; 95% CI 0.69 to 1.38; p=0.90), cardiovascular death (RR 1.09; 95% CI 0.68 to 1.74; p=0.73), myocardial infarction (RR 0.90; 95% CI 0.71 to

1.14; $p=0.37$) and stroke (RR 0.81; 95% CI 0.50 to 1.32; $p=0.41$) between the two groups.

Conclusion: Conclusion: In conclusion, transitioning from ticagrelor to clopidogrel in acute myocardial infarction following percutaneous coronary intervention appears to be a feasible strategy for de-escalating dual antiplatelet therapy (DAPT). While maintaining efficacy in preventing adverse cardiovascular events, such as stent thrombosis, this approach may mitigate bleeding risks associated with prolonged ticagrelor use.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 67

Topic 1: Ischemic Heart Disease

Publishing Title: STABLE ANGINA WITH A TWIST: UNCOVERING A RARE CORONARY ANOMALY

Author Block: Fabio Parada Cabrera, Heydy Bautista, ISMAEL GUZMAN RODRIGUEZ, RODOLFO Gutiérrez, Gustavo Adolfo Sotomora, SR, Hospital Roosevelt, Guatemala, Guatemala

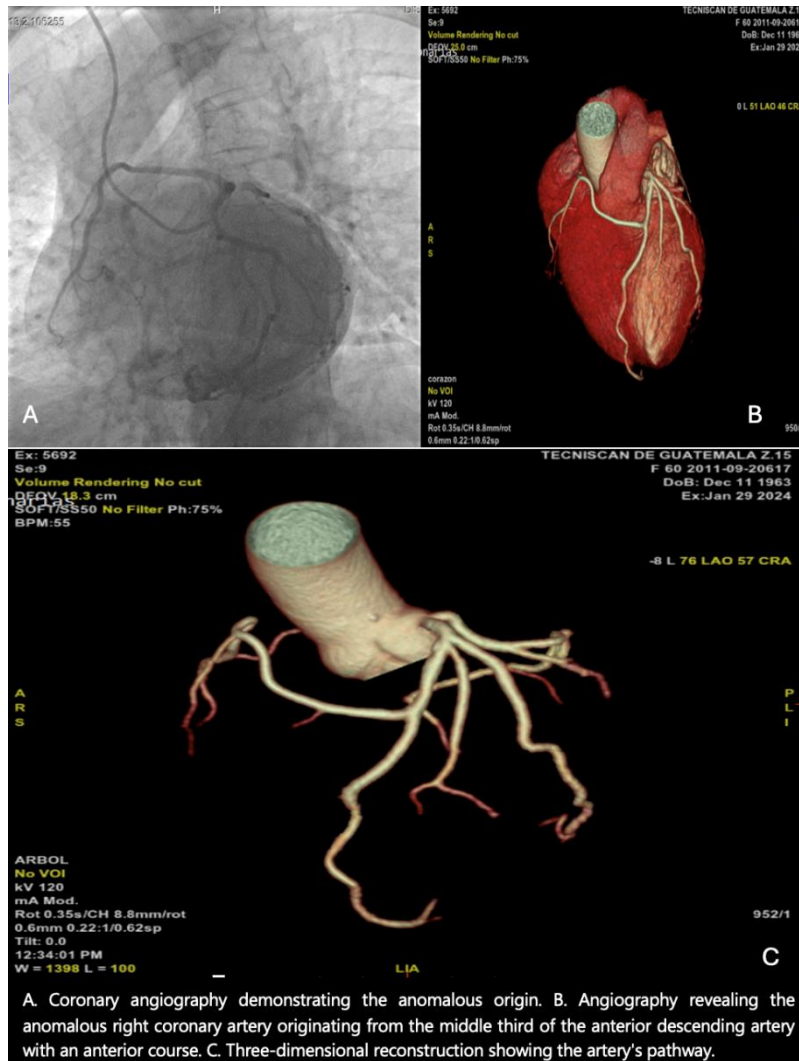
Background: Anomalous right coronary arteries are extremely rare in the general population. Myocardial ischemia symptoms and sudden cardiac death might result from dynamic narrowing of the anomalous right coronary artery from the left coronary sinus. A decision has to be made on whether surgical correction is necessary.

Abstract Body: **Case:** A 60-year-old female was consulted for typical progressive angina, with hypertension, diabetes, and dyslipidemia history. A stress test was performed which showed changes in the ST segment, Duke score of 12, concluding a high cardiovascular risk for an ischemic event. The patient was taken for a coronary angiography, that showed no epicardial arteries atherosclerotic lesions, with anomalous origin of the right coronary artery.

Decision-making: To further evaluate the artery's course, coronary angiotomography was performed. This revealed that the right coronary artery originated anomalously from the middle third of the anterior descending artery, running anterior to the pulmonary artery. To determine the necessity of surgical intervention, a stress echocardiogram was conducted, which showed ischemia in 2 out of 16 inferolateral segments, indicating a low risk.

Conclusion: Ischemia due to an anomalous coronary origin presents a challenging treatment pathology, requiring comprehensive imaging and

functional testing to determine the necessity of surgical intervention.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 68

Topic 1: Ischemic Heart Disease

Publishing Title: THE IMPACT OF HIGH-DOSE FOLIC ACID SUPPLEMENTATION ON CLINICAL OUTCOMES IN ACUTE MYOCARDIAL INFARCTION AND CORONARY ARTERY DISEASE: A SYSTEMATIC REVIEW AND META-ANALYSIS

Author Block: Ahmed Qasim Mohammed Alhatemi, Hashim Talib Hashim, Warith Al Anbiyaa university, Karbala, Iraq

Abstract Body:

Background: Background: Folic acid, a B vitamin, is essential for DNA synthesis and repair, and its role in reducing homocysteine levels has been linked to cardiovascular health. Elevated homocysteine is a risk factor for cardiovascular diseases, including acute myocardial infarction (MI) and coronary artery disease (CAD). Despite evidence suggesting that folic acid supplementation may lower homocysteine levels, its clinical benefits in reducing cardiovascular events remain unclear.

Methods: Methods: A comprehensive literature search was conducted in PubMed/Medline, Google Scholar, and Cochrane Library databases for studies published from 2000 to 2024 using MeSH terms related to “folic acid,” “B vitamin,” “acute myocardial infarction,” “cardiac arrest,” “heart attack,” and “coronary heart disease.” Only randomized controlled trials (RCTs) and observational studies in English involving adult patients with acute MI or CAD were included. Data on study characteristics and patient demographics were extracted, and study quality was assessed using the RoB2 tool. Outcomes were pooled using RevMan 5.3.4 software.

Results: Results: Fourteen studies on all-cause mortality showed a risk ratio (RR) of 0.99 [95% CI: 0.94-1.04], indicating no significant difference between folic acid and control groups. Eight studies on cardiovascular mortality

yielded a RR of 0.90 [95% CI: 0.82-0.99], suggesting a significant reduction in cardiovascular deaths with folic acid supplementation. Analyses of sudden death, coronary artery bypass graft (CABG) events, revascularization procedures, stroke, and recurrent MI found no significant associations with folic acid supplementation.

Conclusion: Conclusions: High-dose folic acid supplementation appears to reduce cardiovascular mortality in post-MI patients but shows no significant impact on other clinical outcomes. Future large-scale RCTs are needed to fully ascertain the therapeutic potential of folic acid supplementation in secondary prevention of cardiovascular events.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 69

Topic 1: Ischemic Heart Disease

Publishing Title: AORTIC ANEURYSM MIMICKING INFERIOR ST-ELEVATION MYOCARDIAL INFARCTION A CASE REPORT

Author Block: Ahmed Qasim Mohammed Alhatemi, Hashim Talib Hashim, Warith Al Anbiyaa university, Karbala, Iraq

Abstract Body:

Background: Aortic aneurysms are rare but critical conditions that can present with symptoms mimicking myocardial infarction. Prompt and accurate diagnosis is vital to manage these complex cases effectively, necessitating a multidisciplinary approach

Case: A 22-year-old female presented with recurrent, intermittent retrosternal chest pain radiating to her back and shoulders, accompanied by nausea and palpitations. Despite multiple ER visits and treatment for presumed musculoskeletal pain, her symptoms persisted. Initial ECG showed inferior ST-segment elevation, yet troponin levels were normal. A follow-up ECG normalized, prompting further investigation. A chest X-ray revealed a large mediastinal mass, and a subsequent chest CT angiogram identified a well-defined anterior mediastinal lesion compressing the main pulmonary artery and proximal ascending aorta. Surgical exploration confirmed an aortic aneurysm near the sinus of Valsalva.

Decision-making: Faced with the dual challenge of an aortic aneurysm and myocardial infarction-like symptoms, the decision was made to proceed with open heart surgery. The surgical team, including cardiothoracic surgeons, cardiologists, and anesthesiologists, performed an aneurysm resection and interposition graft placement. Histopathological analysis post-surgery confirmed the diagnosis, revealing fibrosis, hyalinization, necrosis, and calcification within the aneurysm.

Conclusion: This case underscores the importance of considering atypical etiologies in myocardial infarction presentations, especially in younger patients with unusual symptoms. It highlights the necessity of a comprehensive diagnostic approach and interdisciplinary collaboration for optimal patient outcomes. The patient's recovery post-surgery was favorable, emphasizing the effectiveness of timely and coordinated medical and surgical intervention.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 70

Topic 1: Ischemic Heart Disease

Publishing Title: STEMI CARE IN LOW-AND-MIDDLE-INCOME COUNTRIES: ASSESSMENT OF METRICS AND PERFORMANCE INDICATORS IN A SINGLE-CENTER PROGRAM.

Author Block: Samuel Gabino Guzman, Carlos Garcia Lithgow, SR, Roberly Marcelino Camilo, Marlon Miguel Espaillat, Francisco José Mañan De La Cruz, Ricardo Blanchery, Diogenes Cuevas, Cesar J. Herrera, CEDIMAT Cardiovascular Center, Santo Domingo, Dominican Republic, UNPHU, Santo Domingo, Dominican Republic

Abstract Body: **Background:** In developing nations, STEMI is a major cause of morbidity/mortality, disability, and excessive expenditures related to delays/lack of reperfusion. Implementation of quality improvement initiatives has enhanced outcomes by promoting best practices, but such experiences remain limited in LATAM. We aim at assessing the sustainability of a mature STEMI program in the Dominican Republic.

Methods: From January 2015 to May 2024, data corresponding to consecutive subjects presenting with STEMI to a tertiary care hospital were divided into 3 periods (P) for analysis: P1 (2015-2019), P2 (2020-2022), and P3 (2023-onwards). Confidential clinical information and ACC/AHA metrics were analyzed after IRB approval.

Results: During the study interval, 318 ptes. were included: 70% male, mean age 63yrs.; 48% anterior wall; 4% presenting in shock; 89% treated with PCI, and 11% with lytics with no change between P. Performance indicators behavior shown: while 3/8 metrics worsened P1 vs. P2, 5/8 returned to baseline and 3/8 improved P1 vs. P3. A nonsignificant trend towards reduction of the proportion of ptes. discharged alive from P1 on was noted.

Conclusion: Taking into consideration the impact of the pandemic, the evolution of this STEMI program enrolled in ACC's GHATI registry demonstrated sustained improvement in quality metrics. If confirmed in a regional larger scale, this experience may be useful when addressing barriers to timely reperfusion and adherence to guideline-based therapies in LMICs.

Table. Evolution of STEMI performance indicators and metrics.

	P1 2015-2019	P2 2020-2022	P3 2023-onwards	P1 vs P2	P1 vs P3
N	163	124	31		
Arrival to ECG (min)	4 ± 3.3	6 ± 4.5	4 ± 1.99	<0.001	0.816
Arrival to device time (min)	74 ± 38.11	100 ± 53.7	83 ± 36	<0.001	0.24
Evaluation of LVEF (%)	95%	97%	100%	0.44	0.03
Proportion of patients receiving aspirin and P2Y12 inhibitor between FMC and reperfusion therapy	91%	94%	100%	0.58	0.45
Aspirin and P2Y12 inhibitor prescribed at discharge	88%	72%	96%	0.001	0.38
Beta-blocker at discharge	92%	89%	100%	0.41	0.005
Statin at discharge	86%	85%	96%	0.97	0.01
ACE-I or ARB for LVSD (<40% LVEF) at discharge	93%	98%	100%	0.051	0.007
Proportion of patients discharged alive	91%	88%	84%	0.53	0.14

ACE-I: Angiotensin-converting enzyme inhibitor; ARB: Angiotensin receptor blocker; ECG: electrocardiogram; FMC: First medical contact; LVEF: Left ventricular ejection fraction; LVSD: Left ventricular systolic dysfunction.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 71

Topic 1: Ischemic Heart Disease

Publishing Title: VASCULO-BEHCETS SYNDROME: A RARE CASE OF ACUTE CORONARY SYNDROME

Author Block: Lina Patricia Colón Ramírez, Sandy Jimenez, Wendy La Paz, Carlos Garcia Lithgow, SR, Diogenes Cuevas, Cesar J. Herrera, CEDIMAT Cardiovascular Center, Santo Domingo, Dominican Republic

Background: Cardiac involvement is seen in 5% of patients with Bechet Syndrome (BS), sex has an impact on its prognosis and tends to occur in the absence of traditional CV risk factors.

Case: A 32-year-old woman with no past medical history presented with a one-month history of severe oppressive chest pain worsening with exertion, elevated troponin levels (142 ng/dl) and non-specific ECG changes. She reported relapsing and remitting episodes of oral and genital ulcerations, nails and hair fragility, unprovoked weight loss, and moderate lumbar pain during the last 12 months.

Abstract Body: **Decision-making:** Given her symptoms and troponin elevation, coronary angiography was performed (Figure) revealing moderate to severe stenoses in a multivessel distribution, unchanged after intracoronary nitroglycerin administration. The in-tandem appearance of the lesions and her other non-cardiac symptoms, rised the suspicion of vasculitis. A serologic workup revealed a positive HLA-B51 suggesting VBS. Treatment was begun with colchicine 0.5 mg BID and a short course of steroids. During follow-up, symptoms resolved and a control Cardiac CT demonstrated marked improvement on the previously identified obstructive lesions one year after treatment.

Conclusion: Clinicians should have a high index of suspicion for vasculitis in patients without CV risk factors and in-tandem/continuous lesions to avoid unnecessary revascularization since reversible plaques/stenosis may reverse with anti-inflammation therapy.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 72

Topic 1: Ischemic Heart Disease

Publishing Title: MANAGEMENT OF LEFT VENTRICULAR THROMBUS IN HIV-POSITIVE PATIENTS

Author Block: Syifa R. Djunaedi, Omar Haider, Shaber Seraj, Uneza Khawaja, Shyla Sachdev, University of Massachusetts Chan Medical School Baystate Medical Center, Springfield, MA, USA

Background: Cardiovascular disease (CVD) has emerged as the leading non-AIDS-related cause of mortality among patients with HIV. The incidence of myocardial infarction (MI) in HIV-positive patients is higher than in the general population. Antiretroviral treatment (ART) combined with comorbid conditions such as hyperlipidemia can precipitate atherosclerosis in HIV-positive patients.

Abstract Body: **Case:** A 57-year-old female with a history of uncontrolled diabetes mellitus, hyperlipidemia and HIV on ART presented with chest pain. Electrocardiogram revealed ST-segment elevations in the anterolateral leads and concomitant ST depressions in the inferior leads. Emergent cardiac catheterization demonstrated 80% stenosis of the proximal LAD and prompted placement of a drug eluting stent to the proximal LAD. Restoration of blood flow to the distal apex was unsuccessful. Suspicion arose for a late-presenting myocardial infarction with organized distal left ventricular (LV) thrombus. The patient started on apixaban for the thrombus. Due to an interaction with cobicistat (ART), she transitioned to warfarin.

Decision-making: According to the 2013 ACC/AHA STEMI Guidelines, initiating direct oral anticoagulants therapy alongside dual antiplatelet therapy for patient with ST-elevation myocardial infarction (STEMI) and LV

thrombus is reasonable for at least three months. For patients with HIV on ART, it is imperative to note potential medication interactions. The patient was taking darunavir-cobicistat. Darunavir is a protease inhibitor and is combined with cobicistat to enhance anti-viral activity. The coadministration of apixaban theoretically increases the concentration of apixaban and leads to an elevated bleeding risk due to potent CYP3A4 and P-glycoprotein inhibition by darunavir/cobicistat.

Conclusion: Our case emphasizes the importance of managing cardiovascular disease with other chronic medical conditions such as HIV. Patients taking protease inhibitors should exercise caution when starting DOAC therapy in the setting of post-MI complication of LV thrombus due to drug-drug interactions and increased bleeding risk.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 73

Topic 1: Ischemic Heart Disease

Publishing Title: RECURRENT STENT THROMBOSIS IN A YOUNG FEMALE PATIENT, BLAME THE PLATELETS

Author Block: Blanca Arrieta, Daniel Quesada Chaves, Hospital San Vicente de Paúl, Heredia, Costa Rica

Abstract Body:

Background: intrastent restenosis is the result of two processes: neointimal hyperplasia and vascular remodeling. The main predictor is diabetes mellitus, with a minor diameter of the vessel, major length, localization in the aDA and minor diameter of the lumen after the procedure.

Case: 34-year-old female patient with a history of type 2 diabetes mellitus, arterial hypertension, dyslipidemia, and hypothyroidism, initially admitted to the emergency department with a diagnosis of non-ST elevation coronary syndrome (NSTEMI-ACS). Coronary angiography revealed a lesion in the anterior descending artery (aDA) treated with the placement of a #1 stent in the culprit vessel. The patient returned with stable angina with an exercise stress test positive for ischemia . A new angiography documented proliferative restenosis of the previously placed stent. The patient returned with angina symptoms less than one year after her second intervention, and another echocardiogram was performed, which showed preserved ejection fraction but with an HbA1c of 11.2%. A dobutamine stress echo test was positive for induced ischemia, and a third catheterization was scheduled , revealing a 99% restenosis of the aDA.

Decision-making: After multiple percutaneous interventions (seven) for severe aDA disease, the patient underwent internal mammary artery-anterior descending artery bypass with good results. Two months after bypass she

was evaluated again due to symptoms, an ejection fraction of 37% and 99% restenosis of the proximal-middle-distal aDA, 100% mammary bridge occlusion, and 90% lesion in the circumflex artery (CA). A stent was placed from the trunk to the circumflex, and balloon treatment was administered for aDA restenosis. The patient was studied for sticky platelet syndrome-hyperfibrinogenemia, with elevated CKMA, strong clotting, which can be associated with platelet hyperactivity and hypercoagulability. Therefore, clopidogrel was discontinued, and ASA, ticagrelor, and warfarin were continued.

Conclusion: Stent thrombosis is one of the most feared complications after angioplasty, abnormal platelet function and activity must be ruled out in patients with recurrent events.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 74

Topic 1: Ischemic Heart Disease

Publishing Title: SILENT BUT DEADLY: A HEADACHE UNVEILS A HIDDEN HEART ATTACK

Author Block: David Francisco Hernández-Flores, Javier Reyes, Elizabeth Armijo Yescas, Carlos Augusto Contreras, Ana Rosas Hernández Martínez, Alondra Nateras Quiroz, Fernando Martínez, Amin Ramirez Juarez, Tania Hernandez, SR, Ernesto Trevino Gomez, ISSSTE HRAE Bicentenario de la Independencia, Estado de Mexico, Mexico

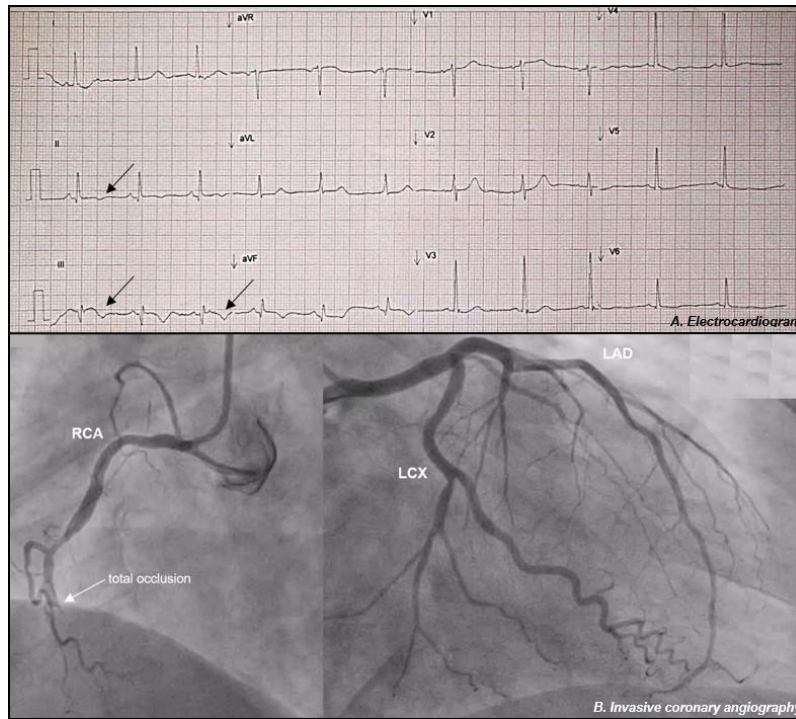
Background: Acute coronary syndromes (ACS) has clear protocols for its approach, but sometimes some atypical presentations represent a diagnostic challenge.

Abstract Body: **Case:** A 56-year-old female with no medical record comes to our hospital referring 24 hours of severe headache as its only symptom and a blood pressure of 160/90 mmHg. An electrocardiogram (ECG) showed T wave inversion in inferior leads. Biomarkers revealed high-sensitivity cardiac troponins at 22,049 ng/L with further increase to 29,035 ng/L.

Decision-making: It is important to consider that although headache can occur as an accompanying symptom during an ACS, its presentation as the only symptom is very rare. However, with a high suspicion supported by the tests carried out, ACS was integrated and invasive angiography performed showing right coronary artery dominance with total occlusion in the middle third, distal TIMI Flow 0. Percutaneous coronary intervention (PCI) was carried out with two drug eluting stents with instant relief of the headache with favourable clinical evolution afterwards.

Conclusion: Acute coronary syndrome has a fatal prognosis if appropriate

treatment is not administered. We must keep an open mind to the atypical presentations of SCA, since only with high diagnostic suspicion we can get the correct diagnosis of these patients. Headaches, although uncommon as a primary manifestation of ACS, can be a indication of myocardial ischemia, especially in patients without a known cardiovascular history.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 75

Topic 1: Ischemic Heart Disease

Publishing Title: CORONARY ARTERY STEAL SYNDROME BY A SIDE BRANCH OF LEFT INTERNAL MAMMARY ARTERY AS A CAUSE OF ANGINA AFTER CABG

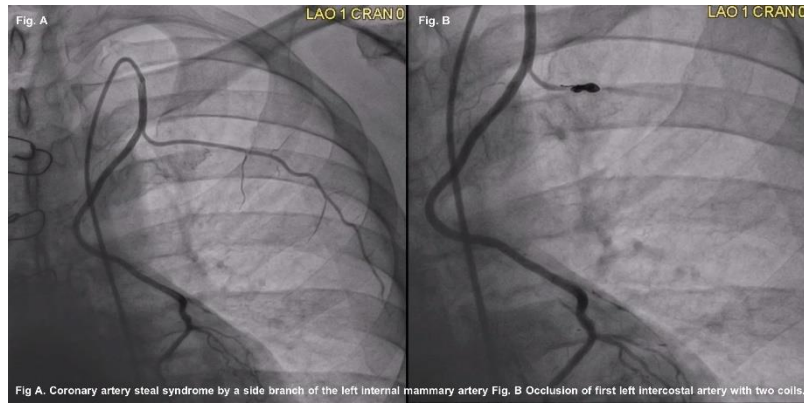
Author Block: Aldo Emir Martínez Sarabia, Oscar de Jesús Gamboa Hernández, Rodrigo Del Angel Gálvez, Raúl Emmanuel Fonseca Robles, Alexandra Arias Mendoza, Michel Alberto Aros Pérez, Estanislao Antonio calixto, National Institute of Cardiology Ignacio Chávez, Mexico City, Mexico

Abstract Body:

Background: A 54-year-old male patient with a history of type 2 diabetes, mixed dyslipidemia and active smoking

Case: He started 4 years ago with oppressive chest pain, intensity 6/10, with irradiation to the neck, which was exacerbated by physical effort and improved with rest, with an approximate duration of pain episodes of 30 minutes. Subsequently, his symptoms worsened, of greater intensity and duration, accompanied by nausea and diaphoresis. He was diagnosed with unstable angina, based on data derived from echocardiography, cardiac gammagraphy, and coronary angiography, it was established multivessel coronary artery disease with a high Syntax Score of 46 points. For the above and comorbidities, coronary artery bypass graft surgery was made. In routine follow-up a year later, there was a recurrence of chest pain despite optimal antianginal medical therapy.

Decision-making: It was performed a new coronary angiography, identifying the permeability of vascular graft bridges, but also the first left intercostal artery, which could be causing coronary artery steal syndrome. After excluding other causes of chest pain, that side branch was closed successfully with two coils, posterior to embolization the patient had improvement in angina



Conclusion: Coronary artery steal syndrome by side branches of the left internal mammary artery is a rare cause of angina after CABG, although its existence is disputed, it is widely documented these cases have a substantial symptomatic improvement with their occlusion

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 76

Topic 1: Ischemic Heart Disease

Publishing Title: THE UNSEEN ECHO: DELAYED DETECTION OF AN ASYMPTOMATIC INTRAMYOCARDIAL HEMATOMA IN ISCHEMIC HEART DISEASE

Author Block: Javier Reyes, David Francisco Hernández-Flores, Tania Hernandez, SR, Ernesto Trevino Gomez, ISSSTE HRAE Bicentenario de la Independencia, Mexico City, Mexico

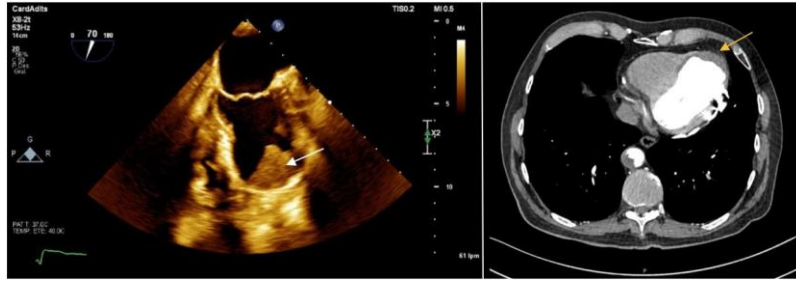
Abstract Body: **Background:** Intramyocardial hematoma is a deadly complication after myocardial infarction. Due to rapid hemodynamic deterioration prompt diagnosis is crucial and surgical treatment needed, where as chronic and asymptomatic course is exceptional.

Case: An 83-year-old male with a 10 year history of ischemic heart disease received cardiac resynchronization therapy with defibrillator (CRT-D) as primary prevention. Six months after generator replacement, he enters our hospital for device externalization. During our medical approach with transesophageal echo a suspicious image is found. Cardiac magnetic resonance for diagnosis confirmation was not an option as the device is not compatible, for which cardiac CT scan is ordered. CT scan reports chronic intramyocardial hematoma in the anterior wall. Conservative management was decided as the patient remains asymptomatic.

Decision-making: Intramyocardial hematoma has a very low incidence and high mortality. Low left ventricular ejection fraction, late diagnosis and advanced age are related to worse prognosis. In this scenario outcomes were opposite as literature mentions.

Conclusion: Intramyocardial hematoma is a rare finding and generally fatal. It is unusual to find this complication at a very late presentation. In this scenario

surgical treatment involved great mortality risk, Given the patient's stability we opted for a conservative strategy with a favorable outcome. Treatment must be individualized for each patient.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 78

Topic 1: Ischemic Heart Disease

Publishing Title: EFFECT OF METHOTREXATE CARRIED IN LIPID NANOPARTICLES ON LEFT VENTRICULAR REMODELING AND INFARCT SIZE IN PATIENTS WITH ST-ELEVATION MYOCARDIAL INFARCTION: A RANDOMIZED CLINICAL TRIAL

Author Block: Aline Gehlen Ferrari, Rocío SALSOSO, Vanessa Baldo, Remo Holanda de Mendonca Furtado, Talia Falcão Dalçóquio, Luciano Baracioli, Aleksandra Morikawa, Fatima Freitas, Cesar Nomura, Thauany Tavoni, Jose C. Nicolau, [Raul Maranhao](#), Heart Institute (InCor) - University of São Paulo Medical School, São Paulo, Brazil, Sao Paulo, Brazil

Abstract Body: **Background:** Inflammation is very important in the pathophysiology of ST-elevation acute myocardial infarction (STEMI), with special role in left ventricular (LV) remodeling. Methotrexate (MTX) is a potent anti-inflammatory drug with a potential benefit in the treatment of STEMI. A formulation of MTX incorporated into lipid nanoparticles (LDE), LDE-MTX, tested in rats with induced myocardial infarction, reduced by 50% the infarct size and improved LV function, without observable toxicity. The aim of this study was to evaluate effects and safety of LDE-MTX treatment on LV remodeling and infarct size in patients with STEMI.

Methods: Randomized, double-blinded, placebo-controlled, proof of concept study. Patients were randomized within 4±2 days after STEMI to receive LDE-MTX (40 mg/m², intravenous) or LDE-placebo weekly for 6 weeks. The efficacy endpoints were change between 90±7 days and baseline, in LV end-diastolic (LVEDVi) and end-systolic (LVESVi) volumes, LV ejection fraction (LVEF), LV mass and infarct size, measured by cardiac magnetic resonance. The main safety endpoints were serious adverse events and incidence of

hematological, renal, and liver dysfunction.

Results: Thirty-five patients were randomized (18 to LDE-MTX, 17 to LDE-placebo). Two patients in the LDE-placebo group and one in the LDE-MTX group refused to continue the protocol and were excluded from the final analysis. Infarct size and LV mass were lower in patients treated with LDE-MTX, while The LVEDVi, LVESVi and LVEF were similar between the groups. There were no significant differences between the groups regarding safety parameters.

Conclusion: In patients with STEMI, LDE-MTX resulted in higher reduction in infarct size and lower LV mass loss, despite no differences in LV volumes. No safety issues were observed. These results encourage further clinical studies on this novel Nanomedicine approach for the treatment of patients with STEMI.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 79

Topic 1: Special Topics

Publishing Title: CORRELATION OF MORBIDITIES IN PREGNANT PATIENTS WHO PRESENT A HYPERTENSIVE DISORDER WITH OR WITHOUT DIABETES AT THE PLAZA DE LA SALUD GENERAL HOSPITAL (HGPS) DURING THE PERIOD JANUARY - DECEMBER 2021.

Author Block: Florangel Guzman Lora, Jose Miguel Ruiz Montero, Universidad Iberoamericana, Santo Domingo, Dominican Republic, Hospital General de la Plaza de la Salud, Santo Domingo, Dominican Republic

Background: This research aimed to analyze the existing correlation of morbidities in pregnant patients who present a hypertensive disorder with or without Diabetes.

Methods: This research is of an analytical-descriptive observational type, retrospective with a cross-section, based on analysis of the data recorded in the clinical records of the patients of the department of gynecology and obstetrics of the Plaza De La Salud, all pregnant patients who had a hypertensive disorder during january - december 2021 were analyzed, using a non-probabilistic convenience sampling with 204 patients in total, with a sample size of 99 patients, resulting in 34 patients with Diabetes.

Abstract Body: **Results:** In relation to the age of the patients studied, a mean of $30.8 \pm SD 5.63$ (43 - 19) was obtained, the presence of diabetes in pregnant women who had a hypertensive disorder was 34.3% and 65.7% did not present diabetes. Within our sample we were able to obtain that only 29% had no pathological history, however 71% did have a pathological history. The most common gestational age at delivery was 37 weeks. 73% of the patients were nulliparous. Only 24.2% had premature birth, however, 4% of neonates of diabetic mothers presented macrosomia. We found that patients with a

history of hypertensive disorder in a previous pregnancy have an 80% higher risk of having a future premature birth. Having a history of a hypertensive disorder in the previous pregnancy increases an 82% greater risk of developing preterm birth in the future pregnancy, according to our Odds Ratio test (OR= 4.76), IC (18.3- 1.24).

Conclusion: The most common gestational age of pregnancy was 37 weeks. Most of the patients in the study weren't diabetic or had a history of Chronic Hypertension; however, they had a pathological history where preeclampsia in a previous pregnancy was the most common history. The majority of patients were nulliparous. The most common method of delivery was cesarean section. The most common hypertensive disorder was gestational hypertension. Prematurity is a risk to develop in patients with a history of hypertension from the previous pregnancy.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 80

Topic 1: Special Topics

Publishing Title: CARDIO-OBSTETRICS EDUCATION IN LATIN AMERICA: A REGIONAL SURVEY OF CARDIOVASCULAR FELLOWSHIP PROGRAM DIRECTORS

Author Block: Jenniffer Mateo, Larissa M. Romero, Pura M. Henriquez, Licurgo J. Cruz, SR, Carolina Pimentel, Alberto J. Lorenzatti, Claudio Cesar Higa, Clara Ines Saldarriaga Giraldo, Ana Girleza Munera Echeverri, Eduardo Rivas Estany, Antonio C. P. Chagas, Xavier Escudero, Rachel Goldberg, Colleen Harrington, Cesar J. Herrera, CEDIMAT, Cardiovascular Center, Santo Domingo, Dominican Republic, Massachusetts General Hospital, Boston, MA, USA

Abstract Body: **Background:** Cardiovascular (CV) disease is the leading cause of pregnancy-related deaths worldwide, particularly in low- and middle-income countries where adverse outcomes and other forms of maternal morbidity and mortality affect women disproportionately. While there has been improvement in cardio-obstetrics (CO) education in nations with advanced economies, there is scant data on CO training in developing regions, especially in Latin America (LATAM), where 88 women die per 100,000 live births due to pregnancy-related causes. This study aims to understand the status of CO medical education in the region.

Methods: An anonymous closed-ended questions Google-based survey was distributed by email to a random sample of program directors through local ACC chapters and CV societies. It included demographic information, questions about CO curricula, and fellows in training (FITs) participation in the care of pregnant patients.

Results: A total of 42 programs responded, corresponding to Central America and the Caribbean (74 %), South America (21%), and Mexico (5%); 52% of

responders self-identified as male, and 42% worked in public health institutions. Although most centers (73%) provide care to pregnant patients, the majority (76%) do not have a dedicated CO team or expert faculty. In this survey, only 37% of training programs reported holding structured educational sessions on CO, 71% less than twice a year, and a small minority (8%) offered formal mandatory rotations. Most (81%) respondents strongly endorsed a need for the inclusion of CO education in their programs.

Conclusion: In LATAM, few CV training sites offer formal academic education or clinical rotations in CO; expert clinical teams are lacking, and FITs have little opportunity to care for pregnant patients with CV disease. In this survey, most educators recognized CO as an essential area in their educational programs, showing strong interest in expanding their curriculum to include this subspecialty.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 81

Topic 1: Special Topics

Publishing Title: HOW THE INTERNATIONAL ATOMIC ENERGY AGENCY CAN SUPPORT THE DIAGNOSIS AND MANAGEMENT OF CARDIOTOXICITY IN A CARDIOONCOLOGY MULTIMODALITY APPROACH IN PATIENTS WITH CANCER IN LATIN AMERICA

Author Block: Amalia T. Peix Gonzalez, Claudio T. Mesquita, Roberto Agüero, Fernando Dettori, Teresa Massardo, Enrique Hiplan, Gutierrez-Villamil Claudia, Silvia B. Flores, Isabel Berrocal, Marlon R. Vargas, Mayra Mercedes Sanchez, Jose A. Coss, Veronica V. Gomez, Maria Fonseca, Karla Abadi, Adriana Puente, Victor Rosales, Victor Rosales, Luis F. Chen, Yariela Herrera, Marina J. Arnal, Aurelio Mendoza, Omar Alonso, Enrique Estrada-Lobato, Diana Paez, Institute of Cardiology, La Habana, Cuba

Abstract Body: **Background:** Cardiovascular diseases and cancer constitute the main causes of death in Latin America (LA), sharing common risk factors. New drugs have been developed to improve survival and remission rates in cancer. However, there is an important caveat due to the cardiotoxicity of these therapies, which on many occasions limits their efficacy. Multimodality imaging plays a crucial role in the diagnosis and risk stratification of these patients. The International Atomic Energy Agency (IAEA) supports regional projects to spread the adequate use of medical imaging modalities and contribute to capacity building. Purpose: To contribute to achieving an early diagnosis and an adequate risk stratification of cardiotoxicity in LA oncologic patients.

Methods: IAEA supports a regional project (2024-2025, 18 countries) in LA. Regional courses will be implemented, including diagnostic units using

imaging multimodality.

Results: Human resources capacities will be strengthened on the use of imaging multimodality and their benefits in the diagnosis and management of cardiotoxicity, with special emphasis on women with breast cancer. Three regional courses with 150 professionals trained, as well as 17 experts' missions to the different participant countries to help develop cardiac medical imaging, will be implemented. Lectures will be presented in the IAEA Human Health Campus for free access. At the end of the project, two centers using multimodality imaging to manage cardiotoxicity will be running in each country. In addition, the regional network for dissemination of results, exchange of experiences, discussion of clinical cases, and virtual short courses on multimodality was already implemented and running. Three publications on the epidemiological situation, technical and human resources available for cardio-oncology in LA, as well as a consensus document adapted to the region on the utilization of multimodality in the management of cardiotoxicity will be completed by the end of the project.

Conclusion: The support of international organizations as the IAEA contributes to the capacity building and a better management of cardiotoxicity in oncologic patients in LAC.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 82

Topic 1: Special Topics

Publishing Title: CARDIAC SURGERY AND VISCOELASTIC POINT-OF-CARE TESTING: DIAGNOSIS, MANAGEMENT AND MONITORING OF HAEMOSTASIS

Author Block: Isabel Rodriguez, Hospital Infanta Elena, Huelva, Spain

Background: Viscoelastic tests (rotational thromboelastometry, ROTEM®), together with the implementation of a specific algorithm for coagulation management in cardiac surgery, enable perioperative coagulopathy to be better controlled.

Methods: Retrospective cohort study including 675 patients who underwent cardiac surgery with cardiopulmonary bypass. The incidence of allogeneic blood transfusions and clinical postoperative complications were analyzed before and after ROTEM® implementation.

Abstract Body: **Results:** Following viscoelastic testing and the implementation of a specific algorithm for coagulation management, the incidence of any allogeneic blood transfusion decreased (41.4% vs 31.9%, $p=0.026$) during the perioperative period. In the group monitored with ROTEM®, decreased incidence of transfusion was observed for packed red blood cells (31.3% vs 19.8%, $p=0.002$), fresh frozen plasma (9.8% vs 3.8%, $p=0.008$), prothrombin complex concentrate administration (0.9% vs 0.3%, $p=0.599$) and activated recombinant factor VII (0.3% vs 0.0%, $p=0.603$). Increased incidence was observed for platelet transfusion (4.8% vs 6.8%, $p=0.530$) and fibrinogen concentrate (0.9% vs 3.5%, $p=0.066$), tranexamic acid (0.0% vs 0.6%, $p=0.370$) and protamine administration (0.6% vs 0.9%, $p=0.908$). Similar results were observed in the postoperative period, but with a decreased

incidence of platelet transfusion (4.8% vs 3.8%, $p = .813$). In addition, statistically significant reductions were detected in the incidence of postoperative bleeding (9.5% vs 5.3%, $p=0.037$), surgical reexploration (6.0% vs 2.9%, $p=0.035$), and length of Intensive Care Unit (ICU) stay (6.0 days vs 5.3 days, $p=0.026$).

Conclusion: The monitoring of hemostasis by ROTEM® in cardiac surgery, was associated with decreased incidence of allogeneic blood transfusion, clinical hematologic postoperative complications and lengths of ICU stay.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 83

Topic 1: Special Topics

Publishing Title: DISSECTION OF THE INTRAVENTRICULAR ARTERY IN THE PUERPERIUM REGARDING A CLINICAL CASE

Author Block: Juan Sebastian Theran León, Luis Andrés Dulcey, Jaime Gómez, Laura Yibeth Esteban, Jorge Andrés Hernández, Universidad de Santander, Bucaramanga, Colombia

Abstract Body: **Background:** Cardiovascular complications during pregnancy and postpartum are rare but often fatal. The causes and mechanisms of the development of such complications are not fully understood. Spontaneous dissection of the coronary artery against the background of the influence of sex hormones is one of the mechanisms for the development of acute coronary syndrome in the postpartum period. The false lumen of the intramural hematoma overlaps the true lumen, causing arterial obstruction and leading to acute myocardial hypoxia. Therefore, it is important to note that the pathophysiology of spontaneous coronary dissection differs from that of acute coronary syndrome associated with atherosclerotic plaque rupture, and that these patients require different treatment approaches. Currently, an unequivocal and precise strategy for this pathology has not been established, so difficulties persist in the management of these patients and in the choice of treatment strategies.

Methods: The article describes a complex clinical case of the development of acute myocardial infarction in the postpartum in a young woman without risk factors in the context of a spontaneous coronary dissection, complicated by cardiogenic shock, which required percutaneous coronary emergency.

Results: Intervention and stenting in the artery dependent on the infarction.

The postoperative period was complicated, requiring extracorporeal membrane oxygenation. However, an integrated approach and correctly chosen treatment strategies help to stabilize the patient's condition.

Conclusion: Currently, an unequivocal and precise treatment strategy has not been established, so difficulties persist in patient management and decision making. In our opinion, an individualized approach should be followed for each patient, taking into account the general condition of the body, the type and volume of the dissection, the consequences and complications, as well as the experience and technical capacity of the clinic.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 84

Topic 1: Special Topics

Publishing Title: MUTATION IN GENIS ENCODING DESMOSOMAL PROTEINS ASSOCIATE WITH ABNORMALITIES OF THE SKIN, HAIR AND HEART

Author Block: Jorge Andrés Hernández Navas, Juan Sebastian Theran León, Luis Dulcey, Universidad de Santander, Bucaramanga, Colombia

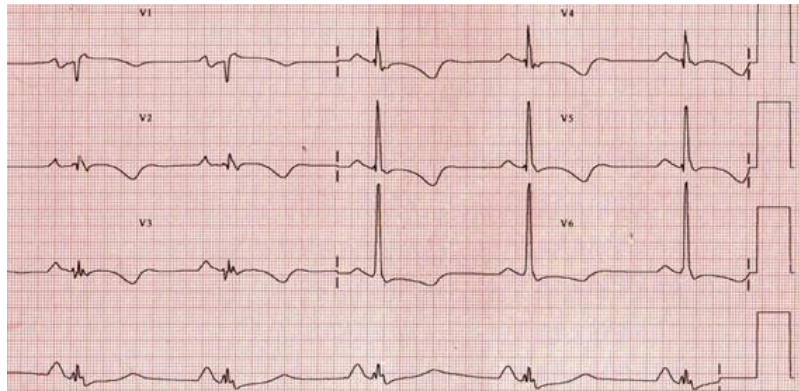
Background: Carvajal syndrome is a clinical entity that has not been adequately characterized in South America .

Methods: this is a male patient in the third decade with a clinical picture of functional class deterioration who underwent a transthoracic echocardiogram that reported an EFV of 40%, a hypokinesia -type disorder .

Results: The article presents a rare clinical case of Carvajal syndrome (OMIM 605676), identified for the first time in Eastern Europe (Belarus), associated with compound heterozygous mutations, with a classic triad of signs (dilated cardiomyopathy, keratoderma and woolly hair phenotype). curly). The article presents a brief review of the literature on the problem and issues of differential diagnosis in the form of a comparative analysis of Carvajal syndrome with a phenotypically similar pathology: Naxos syndrome , caused by mutations in the gene that encodes another desmosomal protein : plakoglobin (Naxos syndrome, OMIM 601214), and which leads to the development of arrhythmogenic right ventricular heart failure

Abstract Body: **Conclusion:** Mutations in genes encoding desmosomal proteins cause a wide range of diseases with abnormalities of the skin, hair, and heart; In 45-50% of cases, these mutations determine the development of arrhythmogenic cardiomyopathy of the right ventricle. Today, more than 120 autosomal dominant and autosomal recessive mutations of the desmoplakin (DSP) gene

are known, which cause cutaneous cardiac pathology.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 85

Topic 1: Special Topics

Publishing Title: INSIGHT INTO OVERLAPS: IDENTIFYING PATIENTS WITH AUTOIMMUNE RHEUMATIC DISEASES AND THEIR RELATIONSHIP WITH INFLAMMATORY CARDIOVASCULAR AFFLICTIONS

Author Block: Karla Marie Garcia Almonte, Isabella Mella Bonilla, Violeta Rosario, Eliany Mejía López, Medicina Cardiovascular Asociada, Santo Domingo, Dominican Republic, Fisiosalud, Santo Domingo, Dominican Republic

Background: Inflammatory cardiovascular diseases are a common manifestation in patients with autoimmune rheumatic diseases. Understanding the complexity and diverse manifestations of cardiovascular diseases in these patients guarantees better diagnoses and clinical management.

Methods: An observational, descriptive, and cross-sectional method was used in private centers from January 2018 to August 2023. A total of 162 patients with autoimmune rheumatic diseases were collected retrospectively through electronic databases, and details of inflammatory cardiovascular diseases were assessed through different variables.

Results: 18 patients with inflammatory cardiovascular diseases were found, corresponding to 11.1% of a population of 162 (88.9%); 17 (94.4%) belonged to pericarditis and 1 (5.6%) to myocarditis. The patient distribution by sex demonstrated a female predominance, comprising 94.4%. The age range of 30-39 years represented 38.89%. The most prevalent autoimmune rheumatic disease linked to inflammatory cardiovascular diseases was antiphospholipid syndrome at 25.0%. The most common comorbidities were previous COVID-19 infection and hypertension in 18.8%, respectively. Chest pain was the

Abstract Body:

main clinical manifestation by 40.0%. In most cases, serum inflammatory markers were found to be normal. The most frequent echocardiogram finding was pericardial effusion in 50.0%. Concerning the therapeutic modality used, colchicine stood out at 92.3%.

Conclusion: The identified cases of inflammatory cardiovascular diseases in patients with autoimmune rheumatic diseases were found to be of idiopathic origin and not directly linked to the underlying condition, as inflammatory markers were within normal parameters in most patients, likely reflecting low disease activity. Nevertheless, highlighting the complexity and importance of establishing early cardiovascular diagnoses is essential, as it avoids possible fatal manifestations and irreversible complications. Thus, a multidisciplinary team approach is fundamental in the primary care of these patients.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 86

Topic 1: Special Topics

Publishing Title: CARDIAC BIOMARKERS AND RELATIONSHIP WITH MORTALITY, INHOSPITAL STAY DAYS AND INVASIVE VENTILATION REQUIREMENT DUE TO COVID-19 INFECTION. EXPERIENCE IN CARDIOVASCULAR CENTER IN MEXICO

Author Block: Ulises Torres, Pamela Ramirez Rangel, JR, Instituto Nacional de Cardiología Ignacio Chávez, México City, Mexico

Abstract Body: **Background:** As many studies have found out since the COVID-19 pandemic started, there are multiple target systems antissues which suffer injury and bring on the severe clinical presentation. It has been demonstrated in several postmortem and in vitro essays the direct damage of myocardial cells. Different pathways of direct and indirect damage of myocardial cells related with cytokines and viral infiltration consider the cardiac damage as a possible etiology of death and severe disease. Cardiac biomarkers such as NT-ProBNP and Troponin have demonstrated a direct correlation with mortality in little case series. We evaluated the prognostic value of cardiac biomarkers in patients hospitalized due to COVID-19 in a tertiary cardiovascular center in Latin America.

Methods: This is a single-center retrospective study of 423 patients hospitalized due to COVID-19 infection in whom NT-ProBNP, Troponins and D-Dimer were assessed at hospital admission. Direct correlation between cardiac biomarkers and mortality, hospitalization days and requirement of invasive ventilation was established using Tau Kendall and Pearson's Chi-square.

Results: A total of 423 were enrolled in the study, 80 patients were excluded due to negative PCR-SARSCOV2 or lack of income biomarkers values. 304

patients were discharged successfully and 119 patients died during hospitalization. There was a statistically significant difference between survivor and no survivor group in levels of NT-ProBNP(224 vs 1713, $p<0.001$), Troponin (9.6 vs 47, $p<0.001$) and D-Dimer (285 vs 586, $p<0.001$), also in patients with invasive ventilation requirement vs standard non invasive oxygenotherapy the difference in biomarkers levels was statistically significant. As well as, a direct relation of biomarkers with days of hospital stay and days of ventilation requirement was demonstrated.

Conclusion: Cardiac injury biomarkers troponin, NT-ProBNP and D-dimer predicted adverse outcomes such as mechanical ventilation, death and long hospital stay. These results elucidate the high involvement of myocardial tissue in COVID-19 and the possibility of long term cardiovascular sequelae and adverse cardiovascular outcomes.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 87

Topic 1: Special Topics

Publishing Title: THROMBOSIS OF THE ATRIAL SEPTAL OCCLUDER DEVICE SECONDARY TO UNCONVENTIONAL ANTIPHOSPHOLIPID ANTIBODIES

Author Block: Adriana Miguel, Dalia Carbajal, Angélica Vargas Guerrero, Nahin Enesto Inoa Portes, Stephanie Angulo, Eduardo Hernandez-Rangel, Edgar Garcia, Instituto Nacional de Cardiología "Ignacio Chávez", México City, Mexico

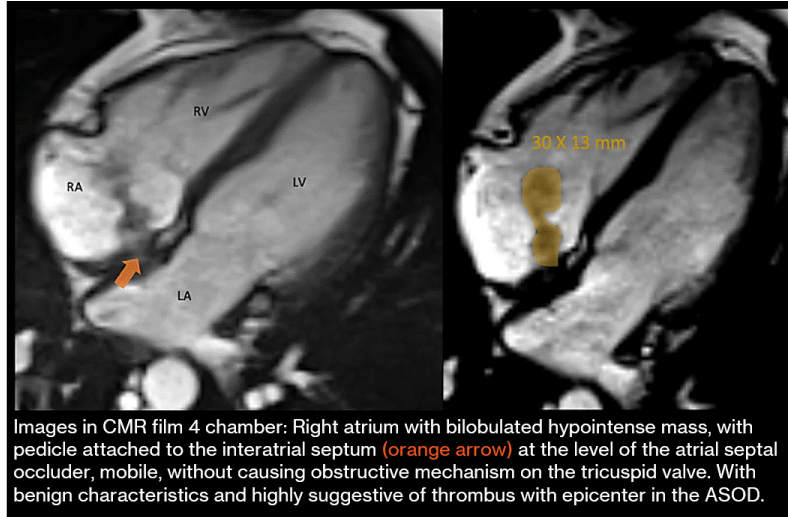
Background: Thrombosis of atrial septal occluder device (ASOD) is rare. In our knowledge no cases are reported in association with antiphospholipid antibodies (aPL).

Case: 6-year-old woman, presented pericardial effusion, malar erythema, livedo racemosus, fine speckled pattern antinuclear antibodies 1:320, anticardiolipin (aCL) IgG 32U/L, 2 qualitative positive aCL IgM and 1 lupus anticoagulant. Foramen ovale NYHA I was detected. Antiphospholipid syndrome (APS) was suspected. At 20 years, presented functional impairment due to foramen ovale, interventional closure was performed with GORE Cardioform ASOD 30mm. Three months later, 2 thrombi (1 attached to the distal portion of the ASOD without residual shunt and another very mobile) were identified. It was decided to differ thrombectomy and maintain anticoagulation with unfractionated heparin 2 weeks, due to suspected APS, endocarditis was discarded. Three weeks later, thrombus size was decreased. Negative criterial aPL were reported, persistent prolonged aPTT and other thrombophilias were discarded; 2 positive antiprothrombin IgM with 12 weeks apart [10.6 and 11.1 U/mL (ULN 8.1 U/mL)].

Abstract Body: **Decision-making:** ASOD thrombosis was demonstrated 3 months after implantation, despite acetylsalicylic acid. APS was not confirmed in

childhood, however, with intracavitary thrombosis and positive antiprothrombin IgM, seronegative APS was concluded.

Conclusion: APS should be suspected in a young patients with ASOD thrombosis.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 88

Topic 1: Special Topics

Publishing Title: IMPLEMENTATION OF THE VEXUS PROTOCOL IN PATIENTS WITH CARDIOVASCULAR DISEASE AT A LEADING CENTER IN BOGOTÁ, COLOMBIA.

Author Block: Alberto Jose Sanjuanelo Fontalvo, Claudia Jaramillo, Rene Diaz, Claudia Poveda, Laura Guerrero Bautista, Samantha Valderrama Barrera, Ana Fernandez, Fundacion Clinica Shaio, Bogota, Colombia

Background: Generalized congestive symptoms are common in patients with cardiovascular disease (CVD). Traditionally, invasive techniques like Swan-Ganz catheters or biomarkers assessed congestion. However, these methods have limitations. The VEXUS protocol (Venous Excess Ultrasound Score) offers a non-invasive ultrasound approach

Methods: This prospective study evaluated the implementation of the VEXUS protocol in CVD patients at Fundación Clínica Shaio, Bogotá, Colombia (December 2023-May 2024). We assessed its feasibility and impact on patient management.

Abstract Body: Single-center observational study in seventy patients with CVD and congestive symptoms. A single operator with two years of experience performed VEXUS assessments. Continuous variables are expressed as mean+standard deviation. Categorical variables are presented as proportions.

Results: Results were given with a total of seventy patients, the majority were male with an average age of 69 years. The principal diagnosis was heart failure with congestive symptoms (64.3%), leading by coronary disease (12.9%), and pulmonary hypertension type IV (8.6%).

Most patients had a previous history of heart failure (52%), arterial

hypertension (50%), and valvular cardiomyopathy (35.7%).

VEXUS score Type 2 (moderate congestion) was the most frequent finding (35.7%), following by VEXUS score type 0 (31,4%), VEXUS score type 1 (18,6%) and VEXUS score type 3 (14,3%). The most frequent variable associated with VEXUS type 3 was the pulsatility of the portal vein.

After the application of the VEXUS protocol, 48.6% of patients had treatment modifications, including increased diuretic dose (10%), diuretic initiation (8.6%), and thoracentesis (fluid removal; 7.1%).

Conclusion: This prospective study demonstrates the feasibility of implementing the VEXUS protocol in patients with cardiovascular disease at a leading center in Bogotá. In our cohort, VEXUS led to treatment modifications in nearly half of the patients. These findings suggest that VEXUS may be a valuable tool for guiding clinical decision-making and potentially improving patient outcomes.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 89

Topic 1: Special Topics

Publishing Title: PERCHERON SYNDROME POST PCI, A RARE COMPLICATION, A RARE VARIANT

Author Block: Blanca Esthela Méndez Bizarrón, MAYRA A. SANCHEZ RUBIO, ANA K. PONCE PEREZ, SALVADOR FIGUEROA PRECIADO, INSTITUTO MEXICANO DEL SEGURO SOCIAL, TEPIC, Mexico

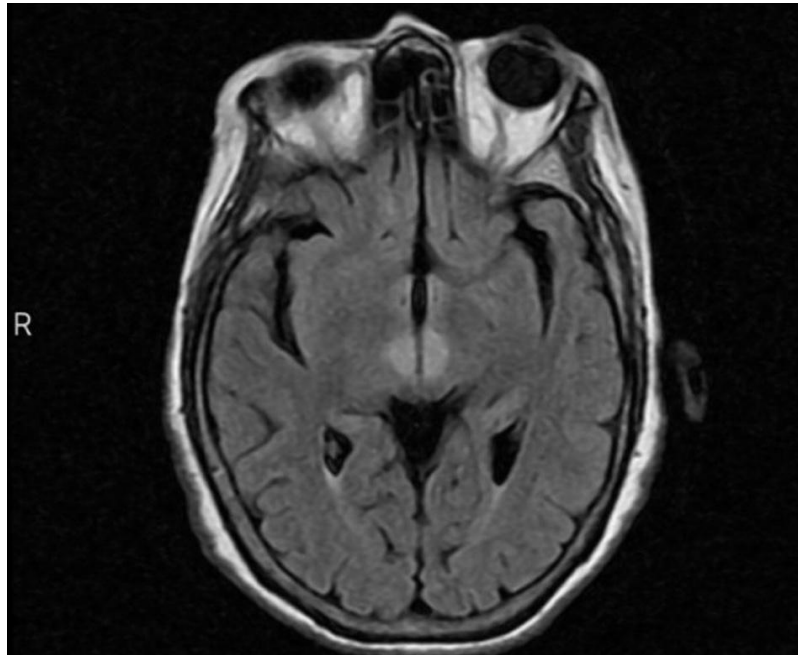
Background: Percheron artery is an uncommon variant of the paramedian artery, that supplies both thalamic nuclei, its occlusion causes bilateral thalamic infarction with diverse presentation that involves alterations in the state of consciousness.

Case: 75 yo female with history of diabetes mellitus and hypertension, presented with NSTEMI with inferior ischemia, 3 vessel disease and PCI to RCA was performed, elective LAD PCI was scheduled a month later, immediately after the procedure the patient was found with neurological impairment, Glasgow scale 7, with spontaneous breathing and stable vital signs. CT scan showed no remarkable findings; with less than 4.5 hours from the beginning of the impairment, alteplase was administrated, a second CT scan showed no remarkable findings but MRI showed a bilateral paramedian thalamic infarction, associated with Percheron syndrome. The patient continue treatment with DAPT but no improvement in the clinical state, was discharged with gastrostomy and tracheostomy.

Abstract Body: **Decision-making:** Stroke is one of the least frequent complications from PCI, the suspicion was greater because benzodiazepines and opioids were not used during the intervention, the cause could be embolization of a calcium plaque or a clot. We had no access to neurointervention approach so we

decided thrombolysis.

Conclusion: Percheron syndrome has a poor prognosis, the awareness of this complication can help identify it quickly and provide early treatment that may change the outcome.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 90

Topic 1: Special Topics

Publishing Title: SYNCOPE -- THE SYNDROMIC NATURE OF POSTURAL ORTHOSTATIC TACHYCARDIA SYNDROME (POTS)

Author Block: Kabhilan Balasubramaniam, Nikhil Kumar, Akshay Bagai, Whitby Cardiovascular Institute, Whitby, Canada, University Of Queensland (Rehabilitation Medicine), Brisbane, Australia

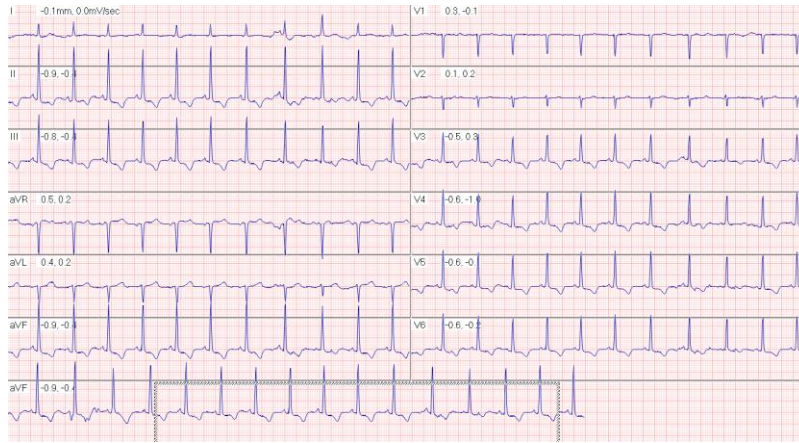
Background: Postural Orthostatic Tachycardia Syndrome (POTS) diagnosis requires a heart rate increase of ≥ 30 bpm within 10 minutes of standing, without orthostatic hypotension. In resource-limited settings, the Active Standing Test (AST) is more practical than a tilt-table test, monitoring heart rate, blood pressure, and ECG while lying and standing.

Case: A 32-year-old female, post-viral, presented with fatigue, dizziness, chest pain, and dyspnea. Severe symptoms limited her to a wheelchair, necessitating antidepressants for ADLs impairment.

Abstract Body: **Decision-making:** Resting ECG showed normal sinus rhythm. AST revealed heart rate spike to 140 bpm and BP drop to 60/40 mmHg after 3 minutes standing, causing near-syncope and deep T wave inversions. Diagnosed with IST, OH, and POTS. Treated OH with salt-water regimen and supervised exercise. At 6 months, repeat AST showed no heart rate increase or BP drop. She walked into the office. Dynamic T wave inversions persisted. CT angiogram found no coronary artery disease.

Conclusion: POTS-like symptoms evolved into IST and OH. Managed with education, exercise, and salt-water intake, improving without meds. POTS is complex with comorbidities like fibromyalgia, myalgic encephalomyelitis, and migraines. Long-COVID may worsen symptoms. Specialist referrals are crucial

due to diagnostic complexity. Future research may better characterize ECG changes in orthostatic intolerance. Overlapping symptoms suggest a syndromic nature, needing personalized management.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 92

Topic 1: Special Topics

Publishing Title: CARDIAC TAMPONADE SECONDARY TO HYPOTHYROIDISM IN A YOUNG FEMALE FROM A CARIBBEAN ISLAND

Author Block: Carla Comarazamy, aracelis gomez, III, Esperanza Dotel, Pura M. Henriquez, PLAZA DE LA SALUD GENERAL HOSPITAL, SANTO DOMINGO, DN, Dominican Republic

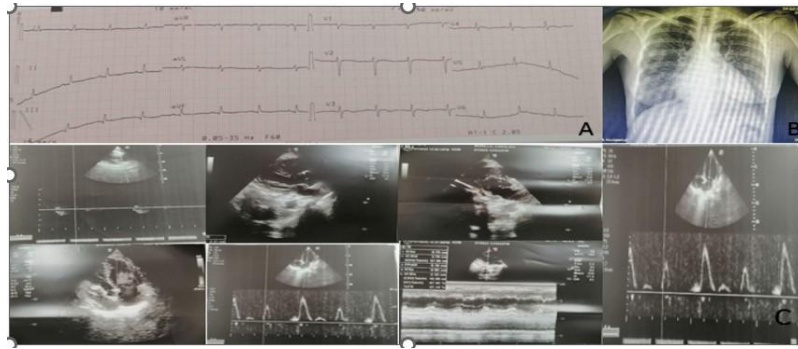
Background: Hypothyroidism can cause pericardial effusion (PEF) in 5-30% of patients, although cardiac tamponade (CT) rarely occurs.

Case: A 39-year-old female, with a history of alopecia, onycholysis and asthenia, presented with a 7 days retro-sternal chest pain, accompanied by episodes of fever. Physical exam revealed distended jugular veins and muffled heart sounds, HR of 105 bpm and BP of 80/40 mmHg. Ekg: low voltage (**Fig A**), Chest x-ray cardiomegaly (**Fig B**).

Abstract Body: **Decision-making:** Echocardiogram with severe PEF with collapse of the free wall of the atrium and right ventricle consistent with CT. (**Fig C**). Surgical drainage of PEF yielded 400 ml of amber fluid, negative cytology for malignancy. She remained hypotensive despite IV norepinephrine infusion. On the third day, infectious screening was negative, and a hormonal profile showed elevated TSH (100 U/ml) and low free T4 (0.14 ng/dl). Primary hypothyroidism was diagnosed, and Levothyroxine 100 mcg was instituted. Vasoactive amines were discontinued. She remained stable and was discharged on her tenth post-surgical day.

Conclusion: PEF with CT is a clinical-surgical emergency that has multiple causes; including systemic conditions like hypothyroidism. This case

underscores the importance of considering this possibility.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 93

Topic 1: Special Topics

Publishing Title: MALIGNANT CARDIAC TAMPONADE, COLORECTAL CARCINOMA AS RARE ENTITY.

Author Block: Oscar De Jesús Gamboa Hernández, Aldo Emir Martínez Sarabia, María Alexandra Arias Mendoza, Rodrigo Gopar Nieto, Michel Alberto Aros Pérez, Miguel Tapia Sansores, INSTITUTO NACIONAL DE CARDIOLOGIA "IGNACIO CHAVEZ", Mexico, City., Mexico

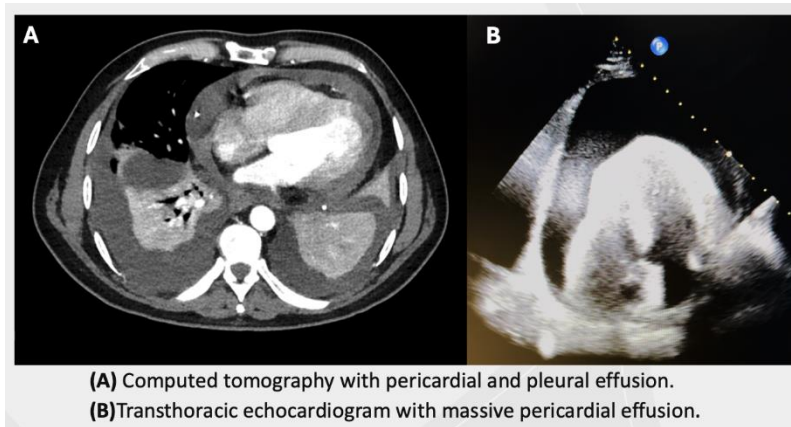
Background: Malignant pericardial effusion can be a consequence of neoplastic diseases. Rapid treatment of cardiac tamponade is crucial, but identifying the etiology impacts prognosis and recurrence.

Case: Male, 59 years old, with a clinical onset of 5 months, presented with weight loss, dyspnea, diaphoresis, and eventually syncope. He was externally treated with loop diuretics without improvement, which led him to consult our emergency service.

Abstract Body: **Decision-making:** Point-of-care ultrasound revealed a massive pericardial effusion with signs of hemodynamic compromise. Pericardiocentesis was performed and 250 milliliters of hemorrhagic fluid were obtained. The pericardial fluid was positive for malignant cells of epithelial origin. Computed tomography (CT) revealed sigmoid colon lesions and widespread adenopathy. The positron emission tomography reported increased metabolic activity in the sigmoid colon. Colonoscopy revealed a focal lesion of 10x30 mm in the lumen of the colon. Histopathology confirmed adenocarcinoma. The patient underwent pericardio-pleural window surgery and is currently receiving chemotherapy with Oxaliplatin, 5-fluorouracil and Leucovorin.

Conclusion: This case illustrates the need for rapid intervention and thorough

etiological investigation in malignant pericardial effusion. Multidisciplinary management is essential for optimal patient outcomes. Colorectal carcinoma metastasis to the heart is rare but should be considered in similar presentations.



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 94

Topic 1: Special Topics

Publishing Title: CORRELATION OF PREOPERATIVE CARDIOVASCULAR RISK SCORE AND MORTALITY IN PATIENTS UNDERGOING CARDIAC SURGERY IN A TERTIARY CARE CENTER AND MIDDLE-INCOME COUNTRY

Author Block: Mateo Gutierrez, Gustavo Rojas Velasco, Rodrigo Gopar Nieto, Jesus salvador Serrano Garcia, Daniel Manzur Sandoval, National Institute of Cardiology Ignacio Chavez, Mexico, Mexico

Abstract Body: **Background:** In hospital and 30-day post-operative mortality of patients undergoing cardiac surgery ranges between 5%. Currently, there are at least 19 tools estimating morbidity and mortality in patients scheduled for cardiac surgery, with some being more accurate than others across different hospitals.

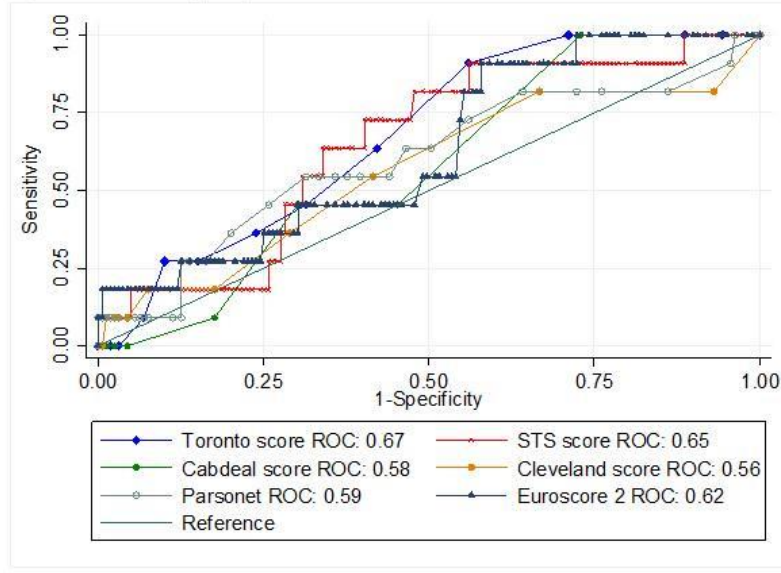
Methods: An observational, retrospective study was conducted, including patients from a single hospital center who underwent cardiac surgery between February and November 2023. Six pre-operative scores were analyzed for their correlation with 30-day mortality. Receiver Operating Characteristic (ROC) curves were used to describe the performance and predictive accuracy of the different algorithms.

Results: A total of 283 patients were included, 54.6% were men, with a median age of 57 years. 30-day mortality was 6.8%. Six pre-operative scores (EuroScore II, Toronto, Cabdeal, Parsonet, Society of Thoracic Surgeons, and Cleveland) were calculated. All 6 scores obtained a value greater than 0.5, ranging from 0.56 to 0.67. The Cleveland Score being the lowest and the Toronto Score the highest. ROC curves of the different algorithms are shown in Figure 1.

Conclusion: The discriminatory power of the 6 scales analyzed is lower than

reported in European or North American literature, underestimating mortality. Toronto score showing the highest power. It is important to individualize and validate each score among hospital centers due to demographic differences, hospital infrastructure, and disease stage.

Figure 1. ROC curves of pre-operative scores



Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 95

Topic 1: Special Topics

Publishing Title: SUCCESSFUL RESCUE OF GUIDE IN COMPLEX BIFURCATION LESION

Author Block: Ossiel Rico Ramírez, Alejandro Godinez, Agustín Yañez, Nilda Espinola Zavaleta, ISSSTE BICENTENARIO, TULTITLAN, Mexico

Background: Fracture of the coronary guidewire is a rare complication of percutaneous coronary intervention (PCI), with an estimated incidence of this complication of 0.2 to 0.8%. The management of this event can be interventional or conservative, depending on the patient's clinical situation and the position of the guide within the vessel. In general all interventional cardiologists should be familiar with the different salvage techniques, starting with the procedure to evaluate the rupture zone using imaging techniques such as IVUS or OCT and the subsequent guide rescue decision.

Abstract Body: **Case:** A 64-year-old male patient who has a history of type 2 diabetes and dyslipidemia, who presents with angina, so he comes for evaluation where acute coronary syndrome with elevation of the ST segment on the lower face is detected, which multivessel disease, is detected with significant lesion in the LAD, CD with OTC, PCI plus stent placement in the middle segment of the CD and stent in the distal segment of CD is performed, successful, at the time of removing the guide in the BMW bifurcation of the Diagonal Branch, it presents imprisonment of the same, detaching the radiopaque part.

Decision-making: In the case of a foreign body, a maneuver is performed to extract it with a Whisper and Guidezilla guide that is not effective; 2nd maneuver with advancement of 2 Runtrough guides and 3 Whisper guides, a foreign body is trapped and pulled until it is extracted; Removal of radiopaque

part as well as proximal segment stent is observed. Bifurcation lesions are complex and remain among the most challenging areas of treatment with percutaneous coronary intervention (PCI), these lesions are associated with higher rates of complications including fracture of the coronary guide. In our case, the management of a coronary guidewire fracture is described, secondary to PCI of a calcified lesion in a bifurcation, by means of support, entrapment guidewire with guide rotator, with multiwire technique, the fractured guidewire is rescued.

Conclusion: It is important to know each of the interventional options and offer safety in complex lesion. Dealing with complications is also knowing how to treat.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 96

Topic 1: Special Topics

Publishing Title: AN UNUSUAL CASE OF PSEUDO-STEMI DUE TO INFECTIOUS AND INFLAMMATORY ETIOLOGIES

Author Block: David Alberto Brenes-Castro, III, Serrano-García S. Jesús, Michelle Escribano Cruz, Edgar A. Sáñez-Ordóñez, Braiana A. Díaz-Herrera, Alexis Morales Guzman, Alexandra Arias-Mendoza, Diego Araiza-Garaygordobil, Instituto Nacional de Cardiología, Mexico City, Mexico

Background: This is the case of a 53-year-old female without any past medical history.

Case: She was seen in the ER due to a history of 1 week of pain on the left leg and skin macules. She presented acute onset chest pain at rest. An ECG revealed diffuse ST-segment elevation and was transferred to our hospital. She arrived 7 hours after the onset of symptoms. She was hypotensive and ECG showed dynamic ST-segment changes. Immediate coronary angiography was performed which revealed normal coronary arteries. Laboratory tests showed NT-proBNP (24,543 pg/mL), hs-TroponinT (413 pg/mL), D-Dimer (>9 ug/mL) and elevated inflammatory markers. She was admitted to the CVICU.

Abstract Body: **Decision-making:** A transthoracic echocardiogram showed regional wall motion abnormalities (RWMA) compatible with Takotsubo cardiomyopathy. A PAC catheter revealed a distributive shock profile, and she was started on antibiotics and norepinephrine. Positive blood cultures were obtained with *S. dysgalactiae*. A CT angiography ruled out pulmonary embolism and showed extensive deep vein thrombosis. Due to persistent fever and suspicion of septic embolisms, two separate transesophageal echocardiograms and a PET scan were performed which ruled out endocarditis. Cardiac enzymes, ST-segment changes and RWMA normalized. Further evaluation confirmed

antiphospholipid syndrome and a toxic shock syndrome. A multidisciplinary meeting involving cardiology, rheumatology, hematology and infectology was performed. She was started on hydrocortisone and plasmapheresis. She had a favorable clinical response.

Conclusion: This is a complex case which, although the final diagnosis was not cardiovascular, reminds us of the relevance of differential diagnosis in cardiac syndromes. First, ST-segment elevation in young patients, STEMI mimickers and non-cardiac causes of troponin and NT-proBNP elevation. Second, the importance of shock profiling with a PAC catheter with suspicion of mixed etiologies (e.g. cardiac and septic) to appropriately select treatment. Third, the use of multimodality imaging to rule out endocarditis in selected cases. Finally, it underscores the value of a multidisciplinary approach to reach a correct diagnosis.

Session Title: Friday Poster Session

Session Time: Friday, September 20, 2024, 8:30 am - 5:30 pm

Poster Board Number: 97

Topic 1: Special Topics

Publishing Title: HEART AT(LL)ACK - A CASE OF MINOCA DUE TO ACUTE T-CELL LYMPHOBLASTIC LYMPHOMA

Author Block: Pranav Ramamurthy, Omar Haider, Khalid J. Sawalha, Kathryn Jobbins, UMass Chan - Baystate Medical Center, Springfield, MA, USA

Abstract Body:

Background: Myocardial infarction with nonobstructive coronary arteries (MINOCA) involves myocardial ischemia despite normal coronary arteries. This case presents a rare instance of myocardial infarction due to large mediastinal lymphoma with malignant pericardial effusion.

Case: A 41-year-old male with polysubstance abuse history presented with retrosternal chest pain. Electrocardiogram (EKG) revealed an inferior ST-segment elevation myocardial infarction (STEMI) with ST-segment elevations in leads II, III, and aVF. Initial lab results showed mild neutrophilic leukocytosis, elevated C-reactive protein (5.6 mg/dL), and NT-proBNP (308 pg/mL). High-sensitivity troponin T rose from 41 ng/L to 56 ng/L over 3 hours. Emergent cardiac catheterization revealed left dominant coronary circulation without significant coronary artery disease. Cocaine-induced vasospasm was initially suspected. Echocardiography identified moderate pericardial effusion and signs of early tamponade. Pericardiocentesis yielded hemorrhagic fluid with elevated LDH (5225 U/L). Computed tomography scan revealed a 9 cm anterior mediastinal mass suggestive of malignancy. T-cell lymphoblastic lymphoma (T-ALL) was confirmed by bone marrow biopsy and pericardial cytology.

Decision-making: Our patient was initially found to have an inferior STEMI. After non-obstructive cardiac catheterization, his presentation was initially

attributed to cocaine-induced vasospasm and was later concluded to be due to cardiac tamponade from malignant pericardial effusion secondary to T-ALL. EKG changes likely manifested in the setting of cardiac tamponade-induced coronary vasospasm. While MINOCA is often associated with nonobstructive coronary causes such as vasospasm or dissection, this case illustrates malignancy-related pericardial effusion as a potential etiology. Notably, this patient did not have any skin findings or systemic symptoms and inferior STEMI was the first clinical manifestation of the disease.

Conclusion: While emergent cardiac catheterization is standard for STEMI, pericardial tamponade must be considered in MINOCA cases, necessitating urgent intervention.

Session Title: Campfire Discussions: Challenging Clinical Cases in Electrophysiology

Session Time: Saturday, September 21, 2024, 9:30 am - 10:20 am

Presentation Number: 33-09

Topic 1: Electrophysiology

Publishing Title: ABLATION OF CRISTA TERMINALIS FOCAL ATRIAL TACHYCARDIA USING END INSPIRATION TO PREVENT PHRENIC NERVE PARALYSIS

Author Block: Pedro Javier Diaz, SR, Evan Saenger, Alejandro Velasco, Hemal M. Nayak, University of Texas Health Science Center, San Antonio, TX, USA

Background: Phrenic nerve injury is a potential complication associated with catheter ablation which must be avoided to prevent diaphragmatic paralysis.

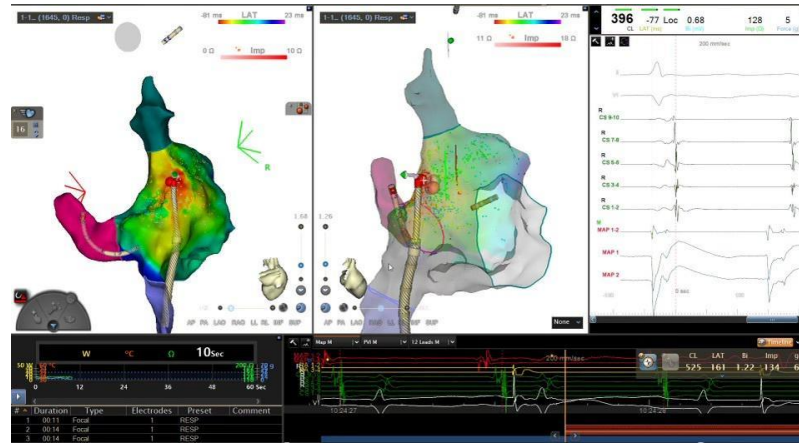
Case: A 42-year-old female was admitted for an electrophysiology (EP) study and radiofrequency ablation (RFA) due to a 1-year history of palpitations consistent with symptomatic SVT. During the EP study, atrial tachycardia was induced with programmed atrial stimulation. Early activation was seen in the posterior right atrium at the crista terminalis. Persistent phrenic nerve capture was identified via pacing at the same location. A directly proportional relationship with respiration was noted, with no capture occurring during inspiratory breath hold. A quadripolar catheter was placed in the right subclavian vein to achieve constant phrenic capture. RFA was performed at end inspiration with careful monitoring for loss of phrenic capture. Atrial tachycardia was no longer inducible and there were no complications post ablation.

Abstract Body:

Decision-making: The presence of the arrhythmogenic focus near the phrenic nerve may restrict performance of catheter ablation. Prior studies have identified more complex techniques such as epicardial access with phrenic nerve displacement. This barrier was overcome by temporary cessation of respiration, displacement of the phrenic nerve, and successful ablation.

Conclusion: The use of ablation during end inspiration with displacement of

the phrenic nerve allowed the procedure to be carried out in a simple and safe way.



Session Title: Campfire Discussions: Challenging Clinical Cases in Electrophysiology

Session Time: Saturday, September 21, 2024, 9:30 am - 10:20 am

Presentation Number: 33-05

Topic 1: Electrophysiology

Publishing Title: COMBINED CATHETER AND ALCOHOL ABLATION IN RECURRENT VENTRICULAR TACHYCARDIA

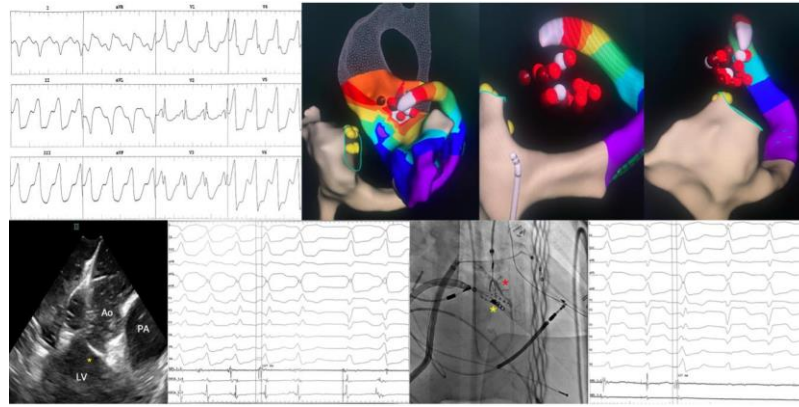
Author Block: Laura Fernanda Gilon Cordoba, Aura Maria Gomez Valencia, David Santacruz Pacheco, Edgar Fernando Hurtado Ordoñez, Fernan del Cristo Mendoza Beltran, Efrain Alonso Gomez Lopez, Juan Felipe Betancourt Rodríguez, Juan Manuel Camargo Ballestas, Fernando Rosas Andrade, Victor Manuel Velasco Caicedo, Orlando Sarmiento Agamez, Javier Eduardo Prieto Bermudez, Fundacion Clinica Shaio, Bogotá, Colombia

Background: Ventricular arrhythmias (VT) in patients with structural heart disease are usually related to scar substrate and less frequently with a focal origin. Approach to ventricular arrhythmias depends on clinical and electrical manifestations. Treatment options include antiarrhythmic drugs, implantable defibrillators, catheter ablation, autonomic modulation and ethanol ablation.

Abstract Body: **Case:** A 74 year old patient with idiopathic cardiomyopathy and a left ventricular ejection fraction of 34%, with optimal medical therapy and cardiac resynchronization therapy with defibrillator, required endoepicardial ablations and bilateral sympathectomy because recurrent VT including episodes of arrhythmic storm.

Decision-making: Due to a new incessant VT a focal left ventricular summit (LVS) arrhythmia was identified, requiring a combined approach of radiofrequency (RF) ablation and transvenous ablation with 99% ethanol to achieve resolution of his VT. Image: Mapping and RF ablation of VT, Intracardiac echocardiography, termination of VT during RF ablation, septal vein (red asterisk) and premature ventricular complex obtained during ethanol ablation of LVS (yellow asterisk).

Conclusion: Focal origin of VT in patients with structural heart disease is less common. We present the case of a patient with idiopathic dilated cardiomyopathy and incessant VT, in whom RF ablation plus retrograde venous ethanol ablation via coronary sinus was effective in controlling his arrhythmia without new recurrences.



Session Title: Campfire Discussions: Challenging Clinical Cases in Electrophysiology

Session Time: Saturday, September 21, 2024, 9:30 am - 10:20 am

Presentation Number: 33-07

Topic 1: Electrophysiology

Publishing Title: TRICAMERAL PACEMAKER IMPLANTATION IN PERSISTENT LEFT SUPERIOR VENA CAVA: AN ANATOMICAL CHALLENGE IN RESYNCHRONIZATION TECHNIQUES

Author Block: Christopher Luna Estrella, Juan Ismael Almonte Gómez, SR, [Fidel Toribio Toribio](#), Jordi Mercé, Bellvitge University Hospital, Barcelona, Spain

Background: Persistent left superior vena cava (PLSVC) is the most frequent variation in abnormal venous return to the heart, accounting for 0.2% to 4.3% of all congenital cardiac anomalies. It can complicate transvenous implantation of devices such as pacemakers, Swan-Ganz catheters, or cardiac resynchronization therapy (CRT).

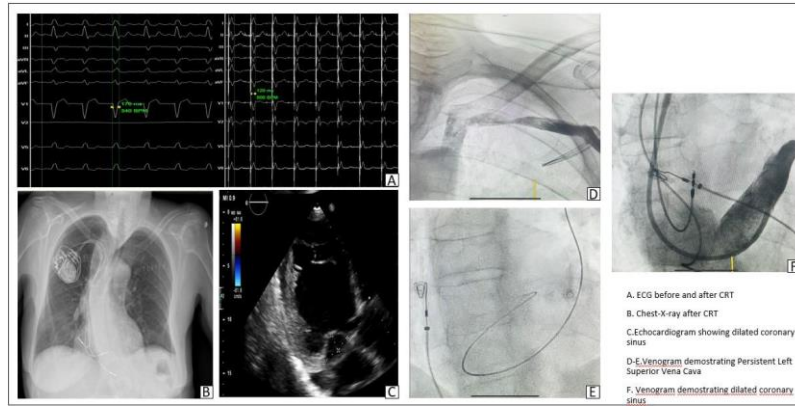
Case: A 74-year-old woman with dyslipidemia and non-ischemic dilated cardiomyopathy in optimal medical therapy, NYHA class III, severe left ventricular dysfunction with LV ejection fraction (EF 23%), end-diastolic volume of 132 ml, sinus rhythm with episodes of paroxysmal atrial fibrillation, left bundle branch block and QRS duration of 176 ms, is referred to the Electrophysiology Unit for the implantation of a device for CRT. PLSVC was discovered during the procedure, complicating the implantation.

Decision-making: A triple right axillary puncture was performed with fixation of the right atrial and right ventricular leads. After cannulating the coronary sinus, significant dilation is observed, complicating the occlusive venography and progress of the tetrapolar lead. We decided to place the third electrode in the area of the left His bundle branch. With biventricular stimulation and preactivation of the left bundle branch lead of 30 ms, a QRS of 120 ms is obtained.

Conclusion: PLSVC may be associated with potential complications and pose a challenge for the implantation of CRT. Knowledge of certain strategies

Abstract Body:

and special techniques may help increase the success rate.



Session Title: Campfire Discussions: Challenging Clinical Cases in Multimodality Imaging

Session Time: Saturday, September 21, 2024, 11:50 am - 12:40 pm

Presentation Number: 38-09

Topic 1: Multimodality Imaging

Publishing Title: LEAFLESS TREE CORONARY ANATOMY: AN ATYPICAL MANIFESTATION OF TAKAYASU ARTERITIS

Author Block: Angel Alexis Priego-Ranero, Erik Alexanderson, Isabel Carvajal-Juárez, Gabriela Fonseca-Camarillo, Michel Alberto Aros Perez, Abraham Romero, Instituto Nacional de Cardiología Ignacio Chávez, Mexico city, Mexico

Background: Takayasu arteritis is a very rare form of large vessel vasculitis. Its role in acute coronary syndromes is unknown.

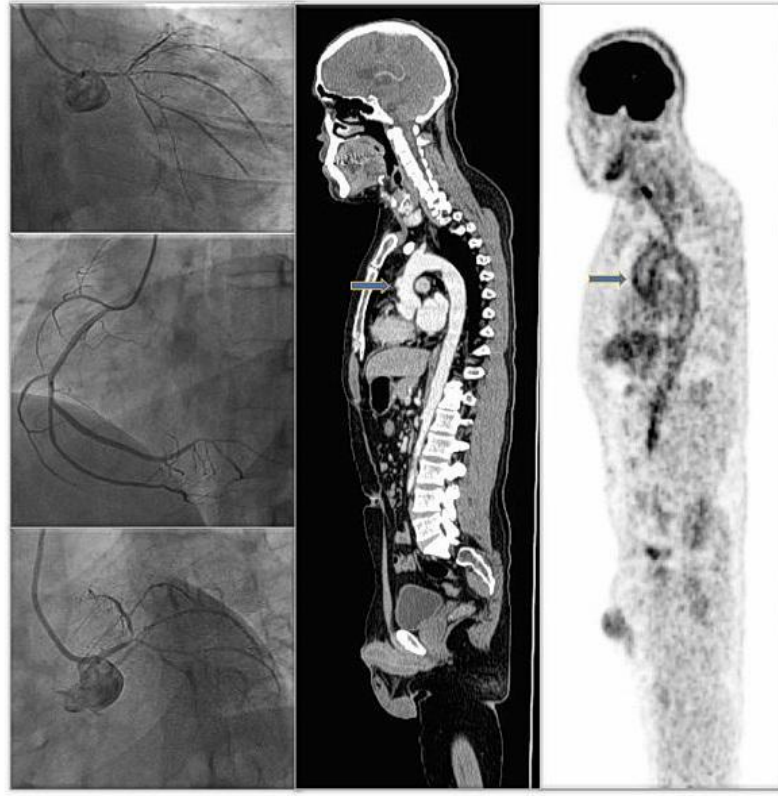
Case: A 36-year-old male with a history of heavy smoking presented to the emergency department with syncope at rest, oppressive chest pain, diaphoresis, nausea and vomiting. His blood pressure was 130/84 mmHg. He had a respiratory rate of 18 breaths per minute, heart rate of 113 bpm, and SpO₂ of 94%. Physical examination revealed a cardiac murmur at the mesocardium and bilateral carotid bruits. Initial ECG indicated anterior necrosis and a 1 mm ST-segment elevation in aVR. Cardiac enzyme assays revealed elevated hS-cTnT levels. Non-ST-segment elevation myocardial infarction was diagnosed. An invasive coronary angiography demonstrated diffuse three-vessel coronary artery disease, rendering the patient unsuitable for revascularization.

Abstract Body:

Decision-making: Chest CT-angiography revealed diffuse and concentric intimal thickening, with a maximum aortic wall thickness of up to 5 mm, most pronounced in the aortic arch, suggestive of Takayasu's arteritis. Advanced cardiovascular imaging with cardiac magnetic resonance imaging and positron emission tomography with fluorodeoxyglucose (PET-FDG) confirmed the diagnosis of Takayasu's arteritis, Numano type V.

Conclusion: It is essential to consider Takayasu's arteritis as a potential

cause of acute coronary syndromes in young patients with diffuse coronary artery disease and very few risk factors.



Session Title: Campfire Discussions: Challenging Clinical Cases in Multimodality Imaging

Session Time: Saturday, September 21, 2024, 11:50 am - 12:40 pm

Presentation Number: 38-07

Topic 1: Multimodality Imaging

Publishing Title: LEFT ANTERIOR DESCENDING TO PULMONARY ARTERY FISTULA IN AN ADULT WITH MITRAL INFECTIVE ENDOCARDITIS: A CASE REPORT

Author Block: Bryan David Hernandez Nieto, Rigüey Cecilia Mercado Marchena, Zenen Rua, Carlos Renowitzky, Jeison Torrens, Carlos Geliz-Vílaro, José Polanco-Manjarrez, Angie Bocanegra-Camacho, Franco Vallejo-García, Carlos Cotes-Aroca, Oscar Heilbron, Alberto Cadena-Bonfanti, Manuel Urina-Triana, Miguel A. Urina-Triana, Faculty of Health Sciences, Simón Bolívar University, Barranquilla, Colombia, Department of Cardiology, Clínica Centro SA, Barranquilla, Colombia

Abstract Body: **Background:** Coronary artery to pulmonary artery fistula (CPAF) is extremely rare, representing <0.01% of congenital malformation in adults and its association with infective endocarditis is exotic.

Case: A 56 year-old man without cardiovascular risk factors, presented with fever, cough, and chest pain, and was diagnosed with mitral infective endocarditis with severe regurgitation. Incidentally, preoperative studies revealed a fistula between the LAD and the main pulmonary artery. Targeted antibiotics and multidisciplinary management, including mitral repair and fistula clipping, successfully addressed both conditions, leading to significant clinical improvement and a favorable evolution and long-term prognosis.

Decision-making: The coexistence of mitral endocarditis and CPAF is extremely rare and scarcely documented in the literature. This case highlights the importance of a comprehensive diagnostic approach and informed decision-making in complex cardiac pathologies. Preoperative imaging was crucial for characterizing the CPAF, facilitating optimal surgical

planning.

Conclusion: This case underscores the importance of considering uncommon congenital anomalies in complex clinical presentations. A comprehensive approach -involving advanced imaging, optimized medical management, and precise surgery- is essential for early recognition and appropriate treatment, preventing complications and improving outcomes and prognosis.

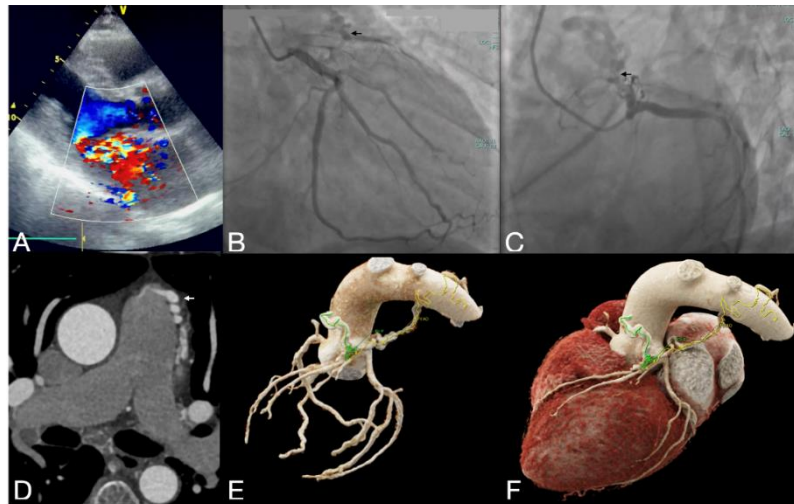


Fig 1. Transthoracic echocardiography in parasternal long-axis view showing an eccentric mitral regurgitation jet classified as severe (Panel A). Coronary angiography in right and left caudal projections, respectively, demonstrating the origin of the fistulous tract from the proximal left anterior descending coronary artery (black arrow, Panel B and C). Transverse computed tomography showing fistulous tract (Panel D, white arrow) and its 3D reconstruction (Panel E and F).

Session Title: Campfire Discussions: Challenging Clinical Cases in Multimodality Imaging

Session Time: Saturday, September 21, 2024, 11:50 am - 12:40 pm

Presentation Number: 38-05

Topic 1: Multimodality Imaging

Publishing Title: TRICUSPID CORK: DIURETIC INDUCED HYPOTENSION IN A PATIENT WITH SEVERE VENOUS CONGESTION

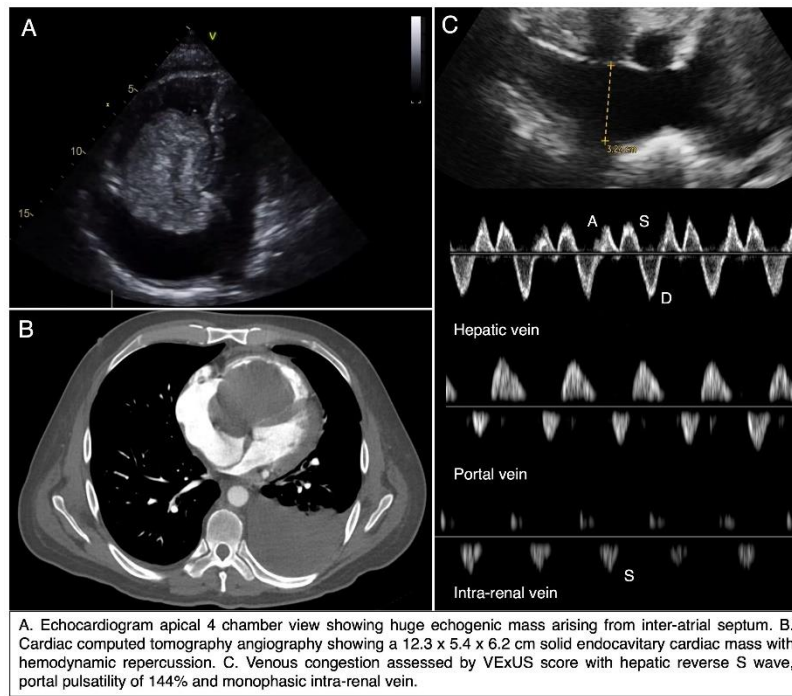
Author Block: Mario Andrés De Jesús Leal Villarreal, Aimée M. Mercado-Domínguez, César Gómez-Rodríguez, Sergio M. Alday-Ramirez, Ramón A. Soto, Diego Araiza, Eduardo R. Argaiz, Instituto Nacional de Cardiología “Ignacio Chávez”, Mexico City, Mexico, Instituto Nacional de Ciencias Médicas y Nutrición “Salvador Zubirán”, Mexico City, Mexico

Background: Cardiac myxoma is the most prevalent primary heart tumor. Right atrium myxoma are rare, occurring in 18% of cases. We present a case of a giant right atrial myxoma with intracardiac obstruction and severe venous congestion.

Abstract Body: **Case:** A 36-year-old male was referred to our center due to dyspnea and 1-year history of progressive bilateral edema. Physical exam revealed jugular venous distension, hepatomegaly, ascites and bilateral pitting edema. Cardiac auscultation with diastolic tumor “plop”. TTE showed a huge echogenic mass arising from inter-atrial septum. Cardiac CTA confirmed a 12.3 x 5.4 x 6.2 cm solid endocavitary cardiac mass. Venous congestion assessed by VExUS score with plethoric inferior vena cava, hepatic reverse S wave, portal pulsatility of 144% and monophasic intra-renal vein.

Decision-making: Due to anuria and severe venous congestion, he was started on intravenous diuretics, with adequate response in the first hour. However, the patient presented hypotension and hemodynamic collapse requiring norepinephrine infusion to recover mean arterial pressure. The patient underwent surgery with resection of intracardiac tumor which was later confirmed to be a myxoma.

Conclusion: This case illustrates the variety of clinical presentation produced by cardiac myxomas. Tricuspid valve obstruction with right heart failure signs represented quite a therapeutic challenge since small reductions in preload generate important hemodynamic effect due to the particular myxoma physiology.



Session Title: Campfire Discussions: Challenging Clinical Cases in Special Topics

Session Time: Saturday, September 21, 2024, 2:10 pm - 3:00 pm

Presentation Number: 43-09

Topic 1: Special Topics

Publishing Title: A RARE AND CHALLENGING CASE OF SURGICAL MANAGEMENT OF CELL TUMOR WITH INTRAVASCULAR EXTENSIVE INVOLVEMENT

Author Block: Gabriel Roberto López, Eduardo Cadavid, Alvaro Diego Peña, Jorge Alexander Zambrano, Diana Cristina Carrillo, Camilo Andrés Calderón, Fundación Valle del Lilión, Cali, Colombia

Background: Germ cell tumors with intravascular involvement are rare and potentially fatal due to embolic complications.

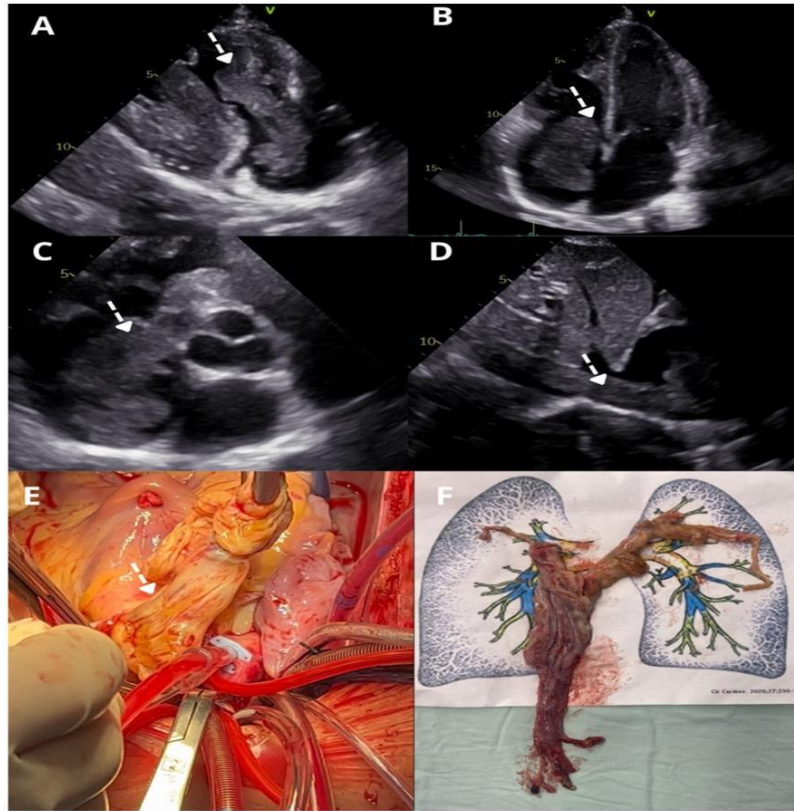
Case: A 17-year-old presented with a 4-month history of weight loss and abdominal pain. Imaging revealed retroperitoneal lymph node conglomerates and a large tumor thrombus extending from the inferior vena cava, through the right atrium and ventricle, to the main pulmonary artery bilaterally. Surgical intervention under cardiopulmonary bypass involved pulmonary thromboendarterectomy with extraction of 3 tumor masses from the pulmonary branches and the entire intracardiac course, extending into the intraabdominal inferior vena cava. Biopsy revealed a mixed germ cell tumor comprising postpubertal teratoma, embryonal carcinoma, yolk sac tumor, and choriocarcinoma. Due to the tumor's size, the surgery was performed in conjunction with cardiovascular and oncologic surgery.

Abstract Body:

Decision-making: Germ cell tumors typically respond well to chemotherapy, even in metastatic stages. Aggressive management included surgical intervention coupled with chemotherapy. Subsequent imaging confirmed complete resolution of the tumor thrombosis. The patient tolerated the treatment well and was discharged for outpatient follow-up.

Conclusion: Surgical extraction of intravascular tumor masses in germ cell tumors is rare, necessitating a multidisciplinary approach for optimal management. Timely intervention and meticulous surgical technique

contributed to a successful outcome.



Figures A, B, C, and D: Echocardiographic view of the tumor (arrows) showing the tumor entering from the inferior vena cava, extending through the right chambers to the main pulmonary artery. **Figure E:** Tumor (arrow) resection surgery. **Figure F:** Extracted tumor surgical specimen.

Session Title: Campfire Discussions: Challenging Clinical Cases in Special Topics

Session Time: Saturday, September 21, 2024, 2:10 pm - 3:00 pm

Presentation Number: 43-07

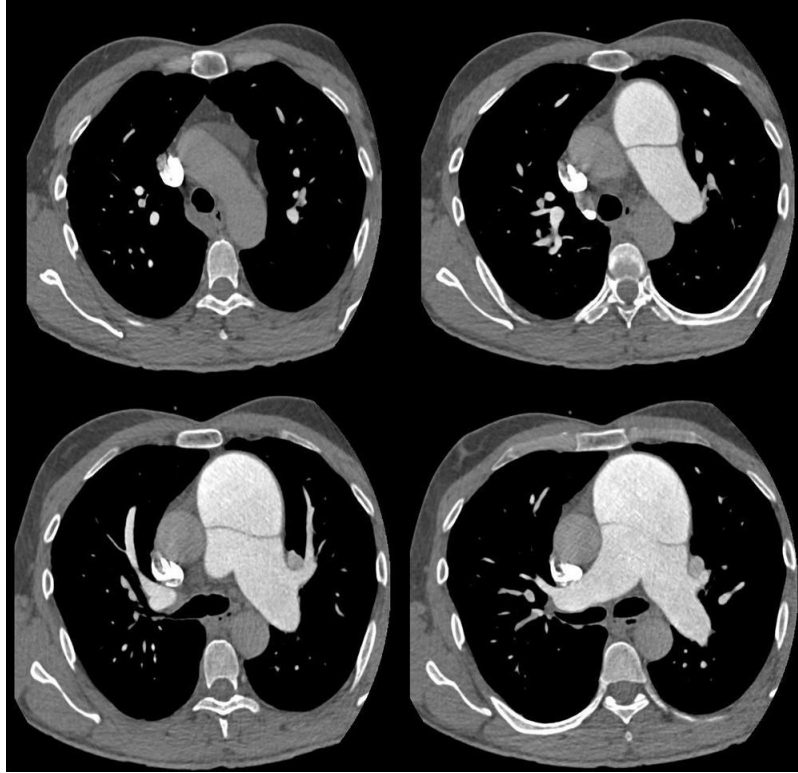
Topic 1: Special Topics

Publishing Title: DISSECTION OF THE PULMONARY ARTERY IN A PATIENT WITH MARFAN SYNDROME- A RARE PATHOLOGY

Author Block: Michel Alberto Aros Pérez, Gabriela Columba Fonseca Camarillo, Angel Alexis Priego-Ranero, Abraham Romero-Beltrán, Aldo Emir Martínez Sarabia, Oscar De Jesús Gamboa Hernández, INSTITUTO NACIONAL DE CARDIOLOGÍA IGNACIO CHÁVEZ, CIUDAD DE MÉXICO, Mexico

Background: Pulmonary artery dissection is an extremely rare pathology with high mortality rates. Due to its low frequency, treatment is challenging. Symptoms are nonspecific, and diagnosis is often incidental. The majority of reported cases have been identified postmortem

Abstract Body: **Case:** A 42-year-old man presented to our emergency department with hemoptysis. One month before admission, he developed exertional dyspnea accompanied by oppressive chest pain. Symptoms worsened with physical activity. Upon physical examination a Marfan syndrome phenotype was identified. CTA Chest was performed and revealed dilation of the main pulmonary artery trunk from its origin, with a maximum diameter of 7.1 cm, with a dissection flap located 47 mm away from the valve plane. Additionally, an aneurysmal dilation of the ascending aorta at the level of the Valsalva sinuses, with a maximum diameter of 47 mm was shown



Decision-making: The case was presented at a medical-surgical session where treatment was deemed feasible. The patient was admitted to the CICU where he recovered favorably, underwent early extubation, and had an uneventful hospital stay, leading to discharge with outpatient follow-up

Conclusion: The pulmonary trunk is the most frequently affected site by dissection. Optimal treatment remains undefined due to the rarity of the disease

Session Title: Campfire Discussions: Challenging Clinical Cases in Special Topics

Session Time: Saturday, September 21, 2024, 2:10 pm - 3:00 pm

Presentation Number: 43-05

Topic 1: Special Topics

Publishing Title: UNVEILING PULMONARY EMBOLISM: A UNIQUE CULPRIT IN AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE

Author Block: Eddiana Colon, Solangel Raquel Urena, Christopher Luna Estrella, Carlos Cruz, Stephany Ventura, Joel Antonio Prado, SR, Marcos Alejandro Rodríguez Almonte, Clinica Universitaria Union Medica del Norte, Santiago de los Caballeros, Dominican Republic

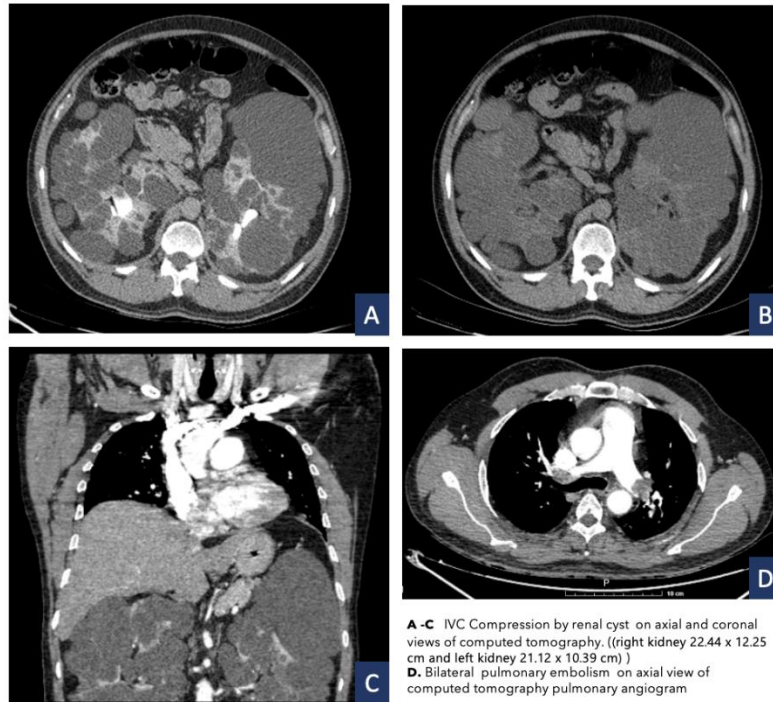
Background: Autosomal dominant polycystic kidney disease (ADPKD) is characterized by progressive chronic kidney disease (CKD), and heightened cardiovascular vulnerabilities. Among its grave complications, pulmonary embolism (PE) stands out, often attributed to the lesser-known mechanism of mechanical compression exerted by cyst upon the inferior vena cava (IVC).

Abstract Body: **Case:** A 50-year-old man with a history of ADPKD, CKD stage 2, and hypertension presented to the emergency room with sudden chest pain and dyspnea. On arrival, he was hemodynamically unstable and hypoxic. Physical examination revealed palpable abdominal masses bilaterally. A bedside echocardiogram showed McConnell's sign: akinesia of the mid free wall of the right ventricle with normal motion at the apex. Computed tomography angiography confirmed a massive extensive bilateral PE and multiple large renal cysts compressing the IVC

Decision-making: Thrombolytic therapy with 100 mg intravenous alteplase was administered due to his instability. His condition improved significantly post-treatment. A comprehensive hypercoagulable workup was negative, indicating the PE was caused by IVC compression.

Conclusion: This case highlights a rare cause of PE in ADPKD—IVC

compression, inducing venous stasis and endothelial injury, aligning with Virchow's triad; endothelial damage triggers increased pro-coagulant secretion and decreased vasodilators, emphasizing the importance of raising awareness of such mechanisms.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 1

Topic 1: Electrophysiology

Publishing Title: INTEGRATING ELECTROPHYSIOLOGY AND CARDIAC MRI FOR COMPREHENSIVE ARRHYTHMIA ASSESSMENT

Author Block: AMAN SINHA, Shubhkamna Hrart Hospital, Gaya Bihar, India

Background: Background: Accurate localization of arrhythmogenic substrates is crucial for arrhythmia treatment. This study evaluates the effectiveness of integrating electrophysiology with cardiac MRI for comprehensive arrhythmia assessment.

Methods: Methods: This study included 100 patients with complex arrhythmias who underwent both electrophysiological mapping and cardiac MRI. Data from both modalities guided ablation therapy. Primary endpoints were procedural success and arrhythmia-free survival at 12 months, with secondary endpoints including procedural time and radiation exposure.

Abstract Body: **Results:** Results: Integration of electrophysiology with cardiac MRI improved procedural success rates (95% vs. 80%, $p<0.01$) and arrhythmia-free survival at 12 months (85% vs. 65%, $p<0.01$) compared to electrophysiology alone. Procedural time was reduced by an average of 30 minutes (mean time 90 minutes vs. 120 minutes, $p<0.05$). Radiation exposure was significantly lower (mean dose 15 mGy vs. 25 mGy, $p<0.01$). Patients in the integrated approach group experienced fewer peri-procedural complications (5% vs. 15%, $p<0.05$). Quality of life, assessed by the EQ-5D questionnaire, improved significantly more in the integrated approach group (mean increase of 0.15 vs. 0.10, $p<0.05$). There was also a greater reduction in the recurrence of symptomatic arrhythmias (10% vs. 25%, $p<0.01$) and a lower rate of repeat ablation

procedures (5% vs. 20%, $p<0.01$).

Conclusion: Conclusion: Integrating electrophysiology and cardiac MRI enhances arrhythmia assessment and treatment, resulting in higher procedural success rates, better long-term outcomes, reduced procedural time, lower radiation exposure, and fewer complications. This approach offers significant clinical benefits.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 2

Topic 1: Electrophysiology

Publishing Title: SEX-SPECIFIC ANALYSIS OF ATRIAL FIBRILLATION IN DEVELOPING NATIONS

Author Block: Luis Manuel Suazo Bautista, Gloria Hermon, Joel David Guzmán Castro, Ivan Arcadio Ovalles, JR, Felix R. Almanzar, JR, Ruth Ely Guzman Vargas, Marlon Miguel Espaillet, Patricia Severino, Deborah Jimenez, Manuel Alejandro Castillo, Ismael Correa, Elaine E. Nunez Ayala, Fernando Vidal, Pamela Pina Santana, Cesar J. Herrera, CEDIMAT, Santo Domingo, Dominican Republic

Background: Compared with men, women (W) with Atrial Fibrillation (AF) have different presentation, anatomical features, and treatment response; live longer with AF; have more symptoms; higher residual stroke risk while on warfarin; lower rates of rhythm-control treatment, cardioversion, and ablation, and more peri-procedural complications. Given the scarce data on sex-specific analysis of AF in LMICs, we aimed to study it in a single-center cohort in the Dominican Republic.

Abstract Body: **Methods:** A retrospective analysis of consecutive pts. with AF hospitalized for any reason at a teaching institution was undertaken. Demographic, clinical, and echocardiographic profiles, and treatment modalities were gathered from EMR and analyzed by self-reported sex identification. .

Results: As shown, 677 pts., 54% M, median age 73 (62-83 yrs.) were evaluated. Compared with men, W were older, had higher rates of hypertension, worse CHA2DS2-VASc and HAS-BLED scores, higher LA volume index, were less often referred for rhythm control strategies including cardioversion or ablation therapies, had longer hospital stays, and more non-CV adverse events.

Conclusion: Despite exhibiting higher risk clinical and anatomical features more often than men, in this series, W with AF received fewer rhythm control interventions and had longer, more complicated hospitalizations. If confirmed in larger cohorts, addressing these disparities in resource-limited regions may improve AF care outcomes.

Table. Demographic, Clinical, Echocardiographic, and Therapeutic Profiles of patients hospitalized with AF by sex.

	Total (N=677)	Male (N=366)	Female (N=311)	p-value
Age (years, median/ IQR)	73 (62-83)	69 (58-79)	77 (68-85)	<0.001
Reason for Admission				0.051
Cardiovascular	528 (78%)	298 (81%)	230 (74%)	
Non-Cardiovascular	124 (18%)	55 (15%)	69 (22%)	
Arrhythmic Profiles				0.75
Paroxysmal	440 (65%)	240 (66%)	200 (64%)	
Persistent	86 (13%)	47 (13%)	39 (13%)	
Long-standing persistent	50 (7%)	29 (8%)	21 (7%)	
Permanent	101 (15%)	50 (14%)	51 (16%)	
History of Hypertension	518 (77%)	264 (72%)	254 (82%)	0.004
CHA2DS2-VASC	3 (2-5)	2 (1-4)	4 (3-5)	<0.001
HAS-BLED	2 (1-2)	1 (1-2)	2 (1-2)	<0.001
Echocardiographic				
Phenotypes (median/IQR)				
LVEF (%)	61 (50-67)	60 (47-66)	61 (52-67)	0.058
LA Volume Index (mL/m2)	38 (27-52)	37 (26-51)	42 (28-55)	0.028
Anticoagulation Therapy at discharge				
NOAC	500 (76%)	272 (77%)	228 (75%)	0.58
Warfarin	63 (10%)	30 (8%)	33 (11%)	0.30
Heparin/LMWH	8 (1%)	5 (1%)	3 (1%)	0.62
None	87 (13%)	47 (13%)	40 (13%)	0.48
Rate Control Strategy	342 (51%)	175 (48%)	167 (54%)	0.13
Rhythm Control Strategy				
DC Cardioversion	112 (17%)	75 (21%)	37 (12%)	0.003
Pharmacological Cardioversion	112 (17%)	57 (16%)	55 (18%)	0.45
Ablation	38 (6%)	27 (8%)	11 (4%)	0.031
Length of Stay (days)	3 (1-7)	2 (1-6)	4 (2-7)	<0.001
Adverse Events during Hospitalization	109 (17%)	56 (16%)	53 (18%)	0.52
Non-Cardiovascular	49 (45%)	19 (34%)	30 (57%)	0.028
Cardiovascular	43 (39%)	26 (46%)	17 (32%)	0.18
Mortality	17 (16%)	11 (20%)	6 (11%)	0.35

DC: direct current; IQR: interquartile range; LA: left atrium; LMWH: low-molecular-weight heparin; LVEF: left ventricular ejection fraction; NOAC: novel oral anticoagulant.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 3

Topic 1: Electrophysiology

Publishing Title: ARRHYTHMIC MITRAL VALVE PROLAPSE WITH MODERATE REGURGITATION

Author Block: Larissa M. Romero, Gloria Hermon, Pamela Pina Santana, Elvis Rivera, Cesar J. Herrera, Fernando Vidal, CEDIMAT Cardiovascular Center, Santo Domingo, Dominican Republic

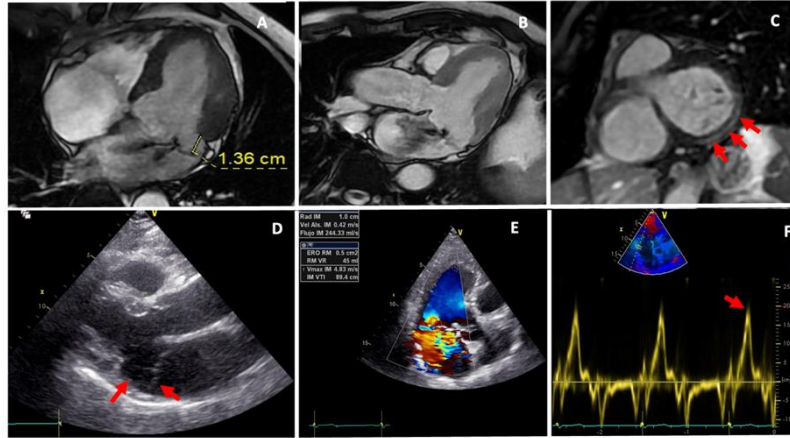
Background: Ventricular tachycardia (VT) and sudden cardiac death can be associated with degenerative mitral valve prolapse (MVP) regardless the grade of mitral regurgitation (MR), and can occur with or without fibrosis, suggesting other unrecognized proarrhythmic factors.

Case: A 67-year-old male with MVP came to our clinic asymptomatic for follow up, he is an avid runner without limitations. Physical exam was positive for II/VI pansystolic murmur and bradycardia. A 24 h Holter monitor was obtained denoting 10,000 monomorphic ventricular premature complexes. Diagnostic imaging findings shown (Fig. 1).

Abstract Body: **Decision-making:** A mechanistic hypothesis for the development of an arrhythmogenic substrate in MVP is valve-induced mechanical stress that induce both myocardial fibrosis and inflammation, most likely concordant with myocardial scar. These can be detected in most patients with degenerative MVP, ventricular ectopy, and even with mild or moderate MR. These changes can occur before the development of valve dysfunction and may partially explain the incidence of MVP-related sudden death in patients with less than severe MR. Treatment with low dose betablockers was used and cessation of intense exercise advised.

Conclusion: MVP with moderate mitral regurgitation is in a grey zone for the

need of treatment, often linked to inadequate risk assessment in the aging population. Better risk stratification is essential to improve management and prevent adverse events in patients with MVP.



Panel A: Four chamber cardiac magnetic resonance (CMR) view showing mitral annular disjunction of 1.3 cm and bileaflet prolapse. **Panel B:** Three chamber CMR view demonstrating moderate mitral regurgitation and left atrial dilation. **Panel C:** Short axis CMR view denotes subendocardial late gadolinium inferolateral LV enhancement suggesting fibrosis. **Panel D:** Parasternal long axis echocardiogram pointing MVP. **Panel E:** Color Doppler apical 3 chamber view showing moderate mitral regurgitation. **Panel F:** Lateral mitral annulus peak systolic velocity of 20 cm/s (Picklehaube sign).

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 4

Topic 1: Electrophysiology

Publishing Title: PACING THE HEART, DETECTING THE ISCHEMIA: COULD LEFT BUNDLE PACING BE THE FUTURE IN DIAGNOSING CAD?

Author Block: Omar Haider, Mohamed Abdelazeem, Shayal Pundlik, Jishu Motta, Marshal Fox, Baystate Medical Center, Springfield, MA, USA

Background: Exercise testing is recommended for diagnosing obstructive coronary artery disease (CAD) in adults with an intermediate pretest probability, but historically has been less reliable in patients with electronically paced rhythms. Left bundle branch pacing (LBBP) has emerged as a safe alternative, but diagnosing ischemic heart disease in LBBP patients is scarce.

Abstract Body: **Case:** An 83-year-old male with a Medtronic dual-chamber pacemaker and Medtronic 3830 left bundle ventricular pacing lead presented with progressive dyspnea over two months. His electrocardiogram (EKG) revealed atrial flutter with a ventricular rate of 35 bpm. An Exercise Treadmill Test (ETT) revealed total exercise time of 3 minutes 25 seconds, achieving a MET level of 4.6, and was seen to have abnormal EKG changes by 2 minutes 50 seconds including increased ectopy, and horizontal ST depression in leads II, III, and aVF, as well as upsloping ST depression in leads V4, V5, and V6 by stage 1 of the test. These morphological changes were observed in conjunction with the underlying atrial/ventricular (A/V) paced rhythm. Myocardial perfusion revealed reversible defects in the anterior wall concerning for myocardial ischemia. Diagnostic cardiac catheterization revealed moderately severe stenosis in the distal left main coronary artery and severe stenosis in the left anterior descending artery (LAD). The patient was referred for coronary artery

bypass grafting.

Decision-making: Since 2021, LBBP has emerged as a safe and reliable method of physiologic pacing, offering physiologic activation of the conduction system compared to traditional right ventricular pacing. In patients with paced ventricular rhythms, diagnosis and risk assessment of obstructive CAD poses challenges. Exercise testing is a Class I recommendation for diagnosing CAD in adult patients with an intermediate pretest probability of CAD. Historically ACC/AHA guidelines have deemed exercise testing to be Class III recommendation for individuals with electronically paced rhythms due to the challenges in interpreting EKG changes.

Conclusion: Further evaluation should be considered to diagnose inherent ischemia through physiological paced rhythms.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 5

Topic 1: Electrophysiology

Publishing Title: PRONATION-FRIENDLY TEMPORARY PACING: EXTERNAL PACEMAKER GENERATOR WITH ACTIVE FIXATION LEAD IN SEVERE PNEUMONIA

Author Block: David Francisco Hernández-Flores, Javier Reyes, Karen Bonfil Solis, Omar Durazo, Everardo Aguayo, Ossiel Rico Ramírez, Sandra Nayeli Robledo Márquez, Tania Hernandez, SR, Gregorio Horacio Ontiveros Hernández, Ernesto Trevino Gomez, ISSSTE HRAE Bicentenario de la Independencia, Mexico City, Mexico

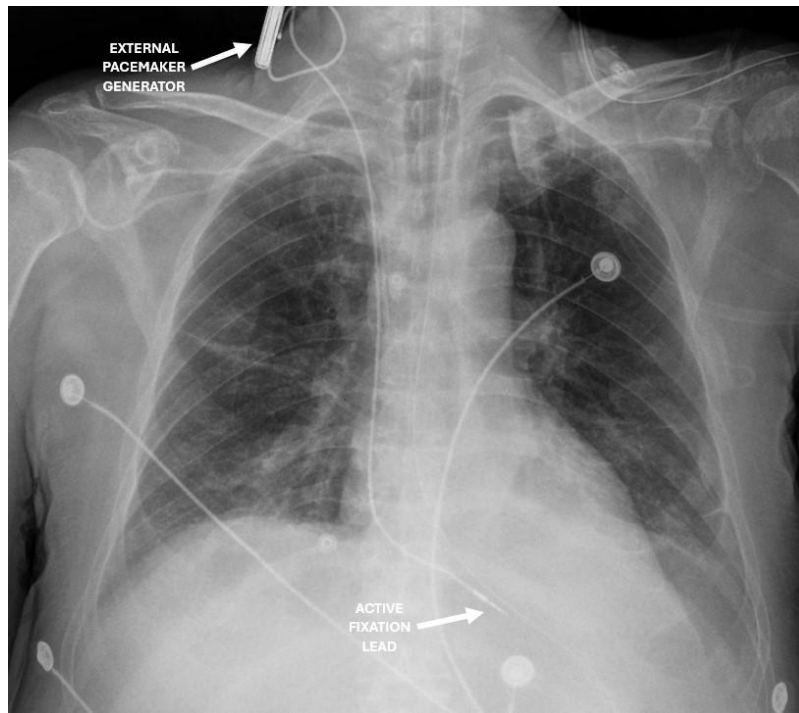
Abstract Body: **Background:** Temporary cardiac pacing is usually performed with external generators and electrodes without fixation. However, a disadvantage of these devices is its high rate of dislocation, which can be a serious problem in some cases.

Case: A 75-year-old man present to our service with severe pneumonia and third degree AV block. Due to active infectious process, the implantation of permanent pacemaker was contraindicated, conditioning an indication for temporary stimulation. Besides, due to severe hypoxemia, the patient required invasive mechanical ventilation in prone position, which represented a challenge for temporary cardiac stimulation with an electrode without fixation.

Decision-making: Right jugular venous approach was decided to place an active fixation electrode to the right ventricle connected to an external pacemaker generator, thereby achieving safe mobilization of the patient for pronation, maintaining an effective ventricular capture at all times. The patient had favorable evolution, with permanent pacemaker implantation before discharge.

Conclusion: There are scenarios where temporary stimulation may be unsafe.

Although this procedure presented is uncommon, it turns out an effective alternative for temporary pacing stimulation. However, it's essential to ensure asepsis during implant and subsequent handling of external devices thus reducing the risk of infection to the minimum, without a difference compared to standard temporary stimulation.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 6

Topic 1: Electrophysiology

Publishing Title: CARDIAC RESYNCHRONIZATION THERAPY IN LEFT VENTRICULAR NONCOMPACTION CARDIOMYOPATHY. WHEN OPTIMAL MEDICAL TREATMENT IS NOT ENOUGH.

Author Block: Marisol Martínez Galindo, Milton E. Guevara Valdivia, Torres Jaimes Oscar, Rosas Aragon Flore Teresita, Ana Livia Martinez Raga, Diego Harim Nicolás Silva, Joaquin Gomez Leon, Jonhatan Manuel Cota Arce, Centro Medico Nacional La Raza. Hospital de Especialidades Dr. Antonio Fraga Mouret., México, Mexico

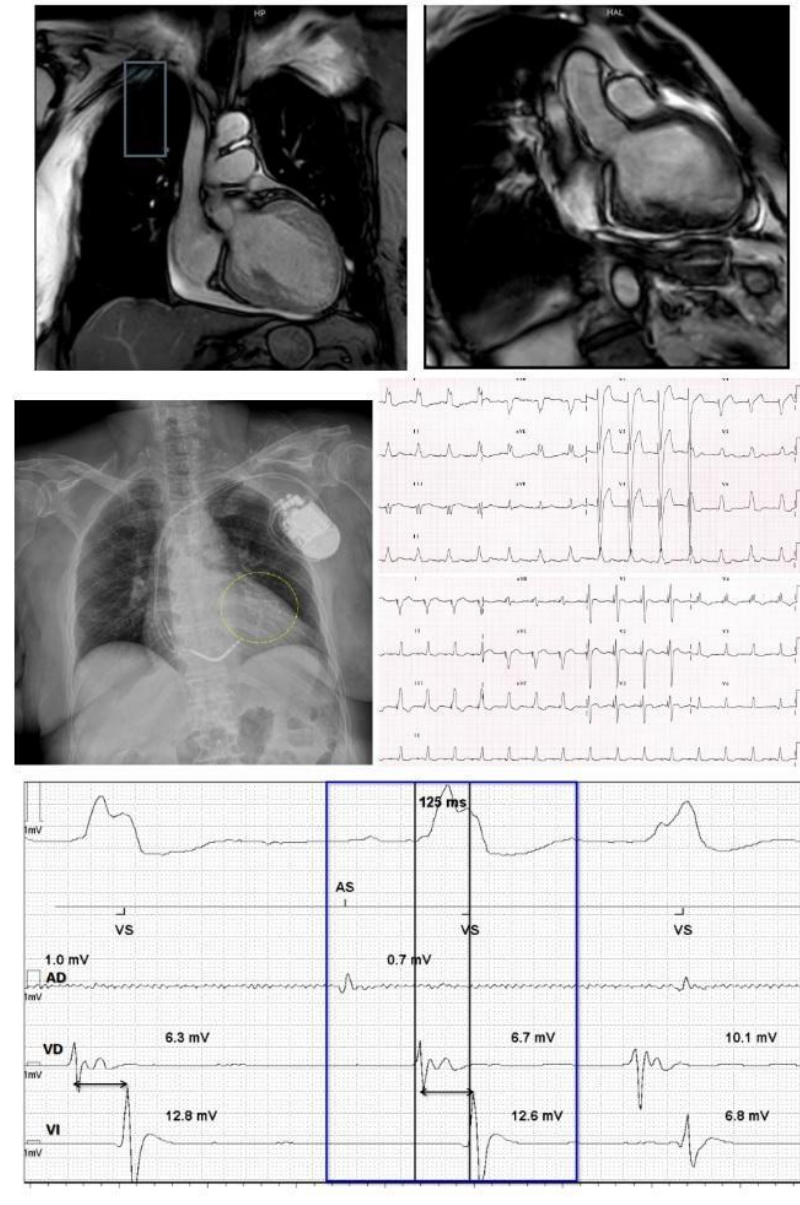
Background: Left ventricular noncompact heart disease is associated with left systolic ventricular dysfunction, cardiac resynchronization therapy can improve quality of life.

Abstract Body: **Case:** A 70-year-old female patient with a family history of sudden death, NYHA functional class III, with complete left branch block with QRS 200 ms, echocardiogram with impaired left ventricle ejection fraction, eccentric hypertrophy, hypertrabeculation with apical predominion, ratio of maximum thickness of the noncompacted myocardium to compacted myocardium was more than 2.8 in on her magnetic cardiac resonance, suggestive of left ventricle noncompaction and coronary arteries without obstructive lesions.

Decision-making: Although medical treatment for heart failure was initiated, patient continued with functional class impairment, so cardiac resynchronization therapy implemented. An electrode is placed towards the coronary sinus, ventricular electrode and atrial electrode, programming a delay from left ventricle to right ventricle of 125 ms, obtaining a QRS of 100 ms and implanted a defibrillator. During patient's follow-up, functional class

improved.

Conclusion: Cardiac resynchronization therapy is indicated in NYHA functional class II-III, LVEF <35% and left bundle branch block with QRS 130-149 ms in order to narrow QRS, providing greater ventricular coupling, with improvement in functional class. Being part of management of chronic heart failure in left ventricular noncompaction cardiomyopathy.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 7

Topic 1: Electrophysiology

Publishing Title: AGGREGATIBACTER ACTINOMYCETEMCOMITANS INFECTION CARDIAC DEVICE-RELATED ENDOCARDITIS, A CASE REPORT

Author Block: LUIS BERNAL, OSMAR ALBERTO PEREZ, LUIS HERRERA, Diego Ortega-Gomez, Fundación Clínica Shaio, BOGOTA, Colombia

Background: Aggregatibacter actinomycetemcomitans (Aa), is a slow-growing Gram-negative coccobacillus that forms part of the HACEK group. Few cases of Aggregatibacter endocarditis in patients with pacemaker devices have been reported

Methods: We report a case of a 78-year old male, with a background history of ischemic heart disease, atrial fibrillation, arterial hypertension, type 2 diabetes mellitus, chronic kidney disease stage III. He had a pacemaker implanted 10 years ago and system upgrade with cardiac resynchronization therapy for heart block and heart failure 2 years ago. He presented with dizziness, dyspnoea. On physical examination he was disoriented and febrile, showing haemodynamic instability and a set of blood cultures were collected. Five days later, blood cultures were positive for Aggregatibacter actinomycetemcomitans. In view of the bacteraemia in a patient with an intra-cardiac device, a trans-oesophageal echocardiogram was performed, which revealed vegetation (1 cm size) on ventricular lead

Abstract Body: **Results:** The patient received intravenous ceftriaxone for a total of six weeks. Treatment of pacemaker devices infection involves early and complete removal of all parts of the system. However, the patient and the medical team did not accept the removal of the device due to a very high surgical risk. Ceftriaxone was continued, and subsequent repeat blood cultures remained

negative

Conclusion: This case highlights the importance of identifying rare causes of endocarditis. the complexity of the management of intra-cardiac device infections of complication risk with device extraction

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 8

Topic 1: Electrophysiology

Publishing Title: ADVANCED HEART FAILURE, LASER ELECTRODE EXTRACTION AND PHYSIOLOGICAL RESYNCHRONIZATION WITH LEFT BRANCH STIMULATION

Author Block: Aura Maria Gomez Valencia, Laura Fernanda Gilon Cordoba, FERNAN MENDOZA BELTRAN, David Santacruz Pacheco, Juan Felipe Betancourt Rodríguez, Fernando Rosas Andrade, Juan Manuel Camargo Ballestas, Victor Manuel Velasco Caicedo, Orlando Sarmiento Agamez, Javier Eduardo Prieto Bermudez, Fundacion Clinica Shaio, Bogota, Colombia

Background: In patients with heart failure, the number of cardiac stimulation device implantations has increased and the need to remove devices and electrodes has also increased. There are different techniques to achieve extraction, which are complex and carry a risk for the patient, which requires technical and training capacity of the staff and adequate instruments to resolve possible complications.

Abstract Body: **Case:** This is a 52-year-old patient who has been followed up for 14 years due to symptoms of heart failure of valvular etiology, with mechanical mitral valve replacement in 1996. Initial left ventricular ejection fraction (LVEF) of 7%, cardiodefibrillator was implanted as primary prevention of sudden death and after medical treatment improvement in ventricular function was achieved with LVEF up to 40% and improvement in symptoms. He was readmitted due to high-voltage electrode dysfunction and appearance of left bundle branch block and new deterioration of LVEF to <20%, functional class II (NYHA), with optimal guideline-directed medical therapy.

Decision-making: Extraction and resynchronization therapy were indicated, as the electrode was implanted 14 years ago, extraction was performed with

a laser technique and the device was updated to a cardioresynchronizer and resynchronization therapy with left bundle branch stimulation. The procedure was successful without complications.

Conclusion: The management of heart failure has evolved over time, with the inclusion of disease-modifying medications and the use of devices such as implantable defibrillators to prevent sudden death, resynchronizers, and within the latter, new physiological beam stimulation techniques. of His or the left branch. The case of a patient is presented in whom, after being listed for heart transplant, an improvement in functional class and ejection fraction was achieved with medical management, with improvement in quality of life and hospitalizations. Due to high-voltage electrode dysfunction, instrumented extraction was performed using a laser technique without complications and subsequent defibrillator implantation and resynchronization with a physiological stimulation electrode of the left branch.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 9

Topic 1: Electrophysiology

Publishing Title: CLINICAL CHARACTERISTICS AND PROGNOSTIC IMPLICATION OF ATRIAL FIBRILLATION IN THE POSTOPERATIVE PERIOD OF CARDIAC SURGERY WITH EXTRACORPOREAL CIRCULATION

Author Block: Cesar Yldifonso Salinas Ulloa, Daniel Manzur Sandoval, Edgar Garcia Cruz, Gustavo Rojas Velasco, Rodrigo Gopar Nieto, Instituto Nacional de Cardiologia Ignacio Chavez, Mexico City, Mexico

Background: Despite innovation in surgical techniques and circulatory hemodynamic support, atrial fibrillation is a common arrhythmia in patients undergoing cardiac surgery, which is associated with adverse outcomes in the perioperative and postoperative period.

Methods: An observational, single-center, retrospective study of patients who underwent cardiac surgery with extracorporeal circulation from January 1, 2022 to December 31, 2023 at the “Instituto Nacional de Cardiologia Ignacio Chavez” in Mexico City was conducted. 545 patients without a background of atrial fibrillation were included. Variables that have been correlated with atrial fibrillation and adverse events in patients with cardiac surgery were evaluated.

Abstract Body: **Results:** Of the 545 patients, 309 (56.8%) were male with a median age of 57 years (45-65 years). The most prevalent comorbidities were hypertension (41.7%), heart failure (27%) and diabetes mellitus (23%). The most frequent cardiac intervention was aortic valve replacement (28.9%). The incidence of cardiac surgery post-operative atrial fibrillation (CS-POAF) was 11.9%. In comparison to patients without CS-POAF, patients that developed CS-POAF were older (62 vs. 57 years: $p < 0.01$), underwent aortic and mitral valve

replacement more frequently (15.4% vs. 6%: $p=0.01$), had higher concentrations of serum lactate measured at 12 hours after admission on cardiovascular intensive care unit (3.3 vs. 2.5 mmol/L: $p=0.01$) and had higher SOFA score at 72 hours (5 vs. 3: $p<0.01$). Univariate logistic regression analysis revealed that CS-POAF predicted the following complications: Hospital-acquired pneumonia ($p<0.01$), renal replacement therapy ($p<0.01$), vasoplegic syndrome ($p<0.07$), intra-hospital mortality ($p<0.22$) and acute kidney injury ($p<0.08$).

Conclusion: Atrial fibrillation is a high-risk feature due to its correlation with adverse outcomes. The prevention, early detection, and treatment of CS-POAF could have prognostic implications.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 10

Topic 1: Electrophysiology

Publishing Title: FROM BLOCK TO BREAKDOWN: THE ROLE OF LBBB IN DILATED CARDIOMYOPATHY AND CARDIAC ARREST

Author Block: Shaber Seraj, Syifa R. Djunaedi, Omar Haider, Mohamed Abdelazeem, Uneza Khawaja, Fadi Chalhoub, UMass Baystate Medical Center, Springfield, MA, USA

Background: Left Bundle Branch Block (LBBB) is prevalent in individuals with Dilated Cardiomyopathy (DCM). While the relationship is complex, recent literature increasingly recognizes LBBB-induced cardiomyopathy as a disease entity. We highlight a case of LBBB-induced DCM, resulting in cardiac arrest.

Abstract Body: **Case:** A 37-year-old male presented to the ER following an episode of ventricular tachycardia cardiac arrest. ROSC was achieved after one defibrillation and 150mg of amiodarone. Upon arrival to the ER, the patient was intubated and mechanically ventilated. Initial evaluation revealed a widened mediastinum on CXR, along with evidence of LBBB on EKG. Laboratory findings showed leukocytosis, hyperkalemia, transaminitis, and a troponin trend of 1, 5, 2003. Bedside echocardiography revealed an anterior wall motion abnormality. Urgent cardiac catheterization was performed, ruling out obstructive CAD. Formal echocardiography revealed an LVEF of 20-25% with severe global hypokinesis. Subsequent MRI confirmed an LVEF of 30-35% without evidence of ischemic or infiltrative disease. The patient underwent cardiac resynchronization therapy and defibrillator (CRT-D) and was discharged. A three-month follow-up echocardiography showed an improved LVEF of 40-45%.

Decision-making: LBBB is a common finding in patients with DCM and is associated with adverse outcomes, including progressive left ventricular

dilatation and reduced ejection fraction. The asynchronous myocardial activation caused by LBBB can lead to ventricular remodeling, which worsens LV dysfunction and contributes to the progression of DCM.

LBBB-induced cardiomyopathy is increasingly recognized as its own pathological entity. This is characterized as LV dysfunction and dilatation that can be reversed with CRT, as seen in this case. The American Heart Association, along with recent literature, acknowledges the existence of LBBB-CM and suggests that CRT may be beneficial as it can improve LV function and outcomes.

Conclusion: In summary, we highlight a unique case of LBBB-induced DCM and cardiac arrest. This case highlights the need for further research into LBBB-CM as a diagnosis and the importance of interventions such as CRT.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 11

Topic 1: Electrophysiology

Publishing Title: SICK SINUS SYNDROME IN SEVERE DENGUE: THE FORGOTTEN COMPLICATION

Author Block: Juliana Leal Bernal, Stefano Valsangiacomo, Fabio Andres Torres Villamizar, Santiago Gelvez, Luis Carlos Acevedo, Jose Francisco Peñaranda, Fabian Castellanos, Maria Inmaculada Cantillo, Rosy Katherine Castellanos Tinjaca, Jonatan Alvarez, Johan Ricardo Gonzalez Rodriguez, Daysy Quesada, Massiel Cañavera, Andres Felipe Ochoa Diaz, Juan Sebastian Salcedo Pedraza, Fundacion Cardiovascular de Colombia FCV, Floridablanca, Colombia

Abstract Body: **Background:** Dengue is a viral infection transmitted by mosquitoes, common in tropical regions; It is a public health problem since it most frequently affects poor populations. In Colombia, cases have been increasing during the year 2024. Its natural evolution is usually benign; although different complications may arise, such as major bleeding, liver failure, respiratory failure and shock; neurological and cardiac complications are less frequent.

Case: Below we present a 54-year-old male patient with no history, who consults for acute febrile syndrome; Initial blood count with severe thrombocytopenia, also showing extreme bradycardia. Troponins are measured, which are elevated, thus considering acute myocarditis due to severe dengue; holter document sick sinus syndrome given by extreme sinus bradycardia and 55 significant sinus pauses (see Image 1).

Decision-making: Given the hemodynamic stability, he required only clinical monitoring, with resolution of the condition.

Conclusion: Sick sinus syndrome could be a potentially lethal complication of severe dengue; could eventually require a transvenous pacemaker due to the

risk of asystole; which was not necessary in our patient given his hemodynamic stability.

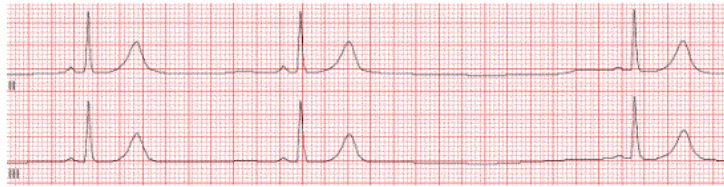


Image 1. 24-hour Holter. Extreme sinus bradycardia with 2.9 second sinus pause

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 12

Topic 1: Electrophysiology

Publishing Title: SANDWICH-TYPE ABLATION FOR PVC, AN EFFECTIVE STRATEGY FOR SYMPTOM RELIEF: A CASE REPORT.

Author Block: Juan Carlos Ibarrola-Pena, Rafael García, Daniel Lira-Lozano, Christian Juarez-Gavino, Monica Flores, Marisol Molina Aviles, Christian Giovanni Camacho Mondragon, Carlos Jerjes Sánchez, Guillermo Torre Amione, Mauricio Cortes Aguirre, Tecnológico de Monterrey, Monterrey, Mexico

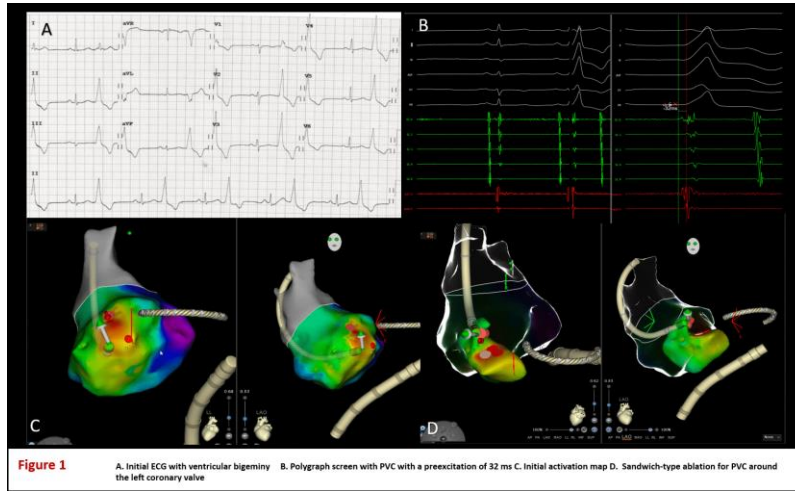
Abstract Body: **Background:** There is an established association between premature ventricular complexes (PCVs) and functional deterioration and reduced quality of life (QOL)

Case: A 54-year-old female with a past medical history of myocarditis sought consultation complaining of dyspnea and palpitations. A Holter monitor (HM) showed an 11% burden of monomorphic PVCs, and a stress test was negative for ischemia but reported decreased exercise capacity. Medical therapy didn't improve her symptoms. Subsequent HM revealed a 13% burden, which led to catheter ablation. Electroanatomical mapping identified an arrhythmogenic focus near the non-coronary cusp and left coronary cusp at the left coronary sinus (LCS) level, with a preexcitation of 35 ms. A sandwich-type ablation around LCS with 120 seconds of RF successfully terminated the ectopic burden. Follow-up showed improved functional capacity and eradication of symptoms and a subsequent HM with 2% of PVC burden.

Decision-making: PVC ablation is an uncommon procedure in Mexico and Latin America. Symptomatic PVC with a burden greater than 10% are associated with functional deterioration and reduced QOL, RF ablation is viable for patients with frequent PVCs whose QOL is diminished and are

refractory to medical therapy

Conclusion: In selected patients, PVC ablation in combination with medical treatment can be an effective strategy for symptom relief



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 13

Topic 1: Electrophysiology

Publishing Title: POLYMORPHIC CATECHOLAMINERGIC VENTRICULAR TACHYCARDIA DURING SEXUAL INTERCOURSE; ASSOCIATED WITH LEFT VENTRICULAR TRABECULATION

Author Block: María Guadalupe Barradas Cedillo, Jair Arevalo Arrazate, Manlio Fabio Marquez Murillo, Instituto Nacional de Cardiología, "Ignacio Chávez", Mexico city, Mexico

Abstract Body:

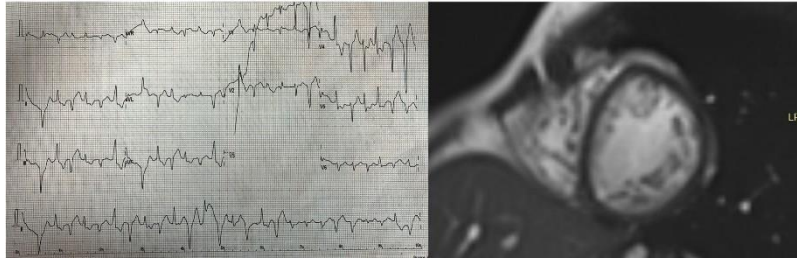
Background: A 48-year-old woman with no known chronic-degenerative history, began on with holocranial headache and fatigue.

Case: Nodal rhythm with hemodynamic instability was documented, requiring vasopressor and inotropic support. During monitoring bidirectional tachycardia was evident, so dopamine was suspended, and a temporary transvenous pacemaker was placed. ETT documented concentric hypertrophy of the LV, preserved LVEF. Coronary CT angiography, without evidence of obstructive coronary artery disease. We decided to implant a permanent pacemaker and medical treatment with beta-blocker. One month after discharge an CMR was performed showing LV with increased trabeculation without evidence of late reinforcement. In the follow-up medical check-up appointment, she regretted having presented syncope during the sexual act; the pacemaker was questioned having documented an event corresponding to ventricular tachycardia lasting 2 minutes.

Decision-making: To continue the study: Stress test, presenting doublets and episodes of ventricular bigeminy, and an MNSTV event of 5 beats at maximum effort. Genetic study showed mutation in RyR2, exon 3 deletion. So we decided to change the treatment with non-cardioselective beta blocker according to

the guidelines.

Conclusion: There are few reports of sudden cardiac death during sexual intercourse, with arrhythmias associated with cardiomyopathies being part of those documented.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 14

Topic 1: Electrophysiology

Publishing Title: WIDE COMPLEX TACHYCARDIA OUTSIDE THE DIAGNOSTIC ALGORITHMS

Author Block: Diego F. Holguin Riaño, Santiago Giraldo, Boris M. Hernandez, Carlos A. Tapias, Fundación Cardioinfantil- LaCardio, Bogotá D.C., Colombia, Universidad El Bosque, Bogotá D.C., Colombia

Abstract Body: **Background:** Wide complex tachycardia is a challenge given its difficulty in adequately identifying its origin, the algorithms designed to approach it sometimes do not allow us to clearly elucidate it.

Case: A 27-year-old man with a history of syncope and sudden death in his maternal aunt, who presented with palpitations, chest pain and syncope, ECG with wide complex tachycardia with irregular R-R interpreted as pre-excited atrial fibrillation, cardioversion was performed with 200 J returning to sinus rhythm with evidence of alterations in repolarization from V1 to V3, the electrophysiological study identified monomorphic ventricular tachycardia suggestive of origin in the RVOT, cMRI showed mild biventricular dysfunction without LGE.

Decision-making: Ablation of VT was performed, and subcutaneous ICD was implanted, the diagnosis of ARVD/C was made (two major criteria of Padua criteria), a genetic panel was performed, which is pending reporting. The patient was discharged and is under outpatient follow-up.

Conclusion: Wide complex tachycardia is a challenge for those who interpret the electrocardiographic tracing, its identification and determination of its origin could not be achieved through known algorithms, in this sense the multimodal study is the key for determining the origin, establish its prognosis

and treatment.

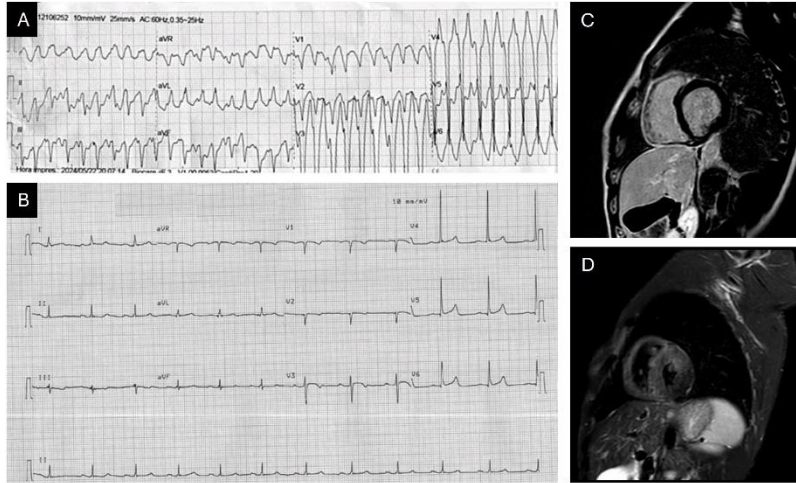


Image A. Wide QRS complex tachycardia, with irregular R-R with basal rhythm with delta wave. **Image B.** Sinus rhythm with repolarization disorder from V1 to V3. **Images C and D.** cMRI without evidence of areas of myocardial edema in the STIR sequence or areas of enhancement/scarring in the late enhancement study.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 15

Topic 1: Electrophysiology

Publishing Title: RARE PRESENTATION OF COCCAINE INDUCED ATRIAL FLUTTER WITH DEVELOPMENT OF MASSIVE RIGHT ATRIAL THROMBUS

Author Block: Xavier Delgado Lopez, Ismael J. Valle, David R. Bermudez, Christian O. Camacho Ramirez, Hector Martinez, Mayaguez Medical Center, Mayaguez, PR

Abstract Body:

Background: Atrial flutter (AFL), a supraventricular arrhythmia, is one of the most common rhythm disturbances of the heart. It is characterized by a fast atrial rate with a fixed or variable ventricular rate that can lead to thrombus formation. Right heart thrombosis (RAT) is a rare and life-threatening condition, with an almost 100% mortality rate if not treated.

Methods: Case of a 67 y/o with unknown PMHx presented with hypertensive emergency due to cocaine intoxication. After EMS administered Beta blocker therapy, the patient had severe tachycardia, most likely due to unopposed mixed alpha beta blocker effect. He was treated empirically with Glucagon for reversal of betablocker effect. Patient was presenting with acute respiratory distress after glucagon administration for which we proceeded with endotracheal intubation as prevention to an impending respiratory failure subsequently was transferred to Intensive care unit. EKG reviewed and found with sustained tachycardia of >140bpm with a typical AFL pattern 2:1 ratio noted.

Results: 2D-Echo was performed and showed a right atrium moderately dilated with a large sized thrombus in the right atrial chamber which appears pedunculated with irregular borders. Patient received Full Dose Anticoagulation and Rate Control therapy w/o adequate response for which patient became severely hypotensive unresponsive to vasopressor.

Electrophysiology evaluation determines that due to massive thrombus in his Right Atrium, cardioversion and antiarrhythmics were contraindicated. Patient's poor prognosis was discussed with family members who decided to start comfort measures allowing for treatment but no aggressive measure like vasopressors and DNR consent was signed.

Conclusion: In the absence of an evidence-based guideline to approach RAT, management should be individualized for each patient, based on the type of thrombi, hemodynamic status, and presence or absence of associated pulmonary emboli. Despite technological advances over the past few decades, which have helped improve the diagnosis and management of RAT its mortality remains high. Early recognition and diagnosis are imperative to ensure timely management optimal clinical outcomes.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 16

Topic 1: Valvular Heart Disease

Publishing Title: DOUBLE-EDGED AORTA: SEVERE STENOSIS AND CORONARY ANOMALY

Author Block: Roberly Marcelino Camilo, Santiago Mena, Ricardo Perello, José Iribarren, Cesar J. Herrera, CEDIMAT, SANTO DOMINGO, Dominican Republic

Abstract Body:

Background: Coronary artery anomalies (CAA) affect at least 1 in 1000 individuals, anomalous origin from the opposite sinus is the most clinically relevant. The prevalence in bicuspid aortic valves is almost double that of tricuspid aortic valves, being more common a left coronary artery-dominant circulation, short left main coronary artery, and separate ostia of the left anterior descending and circumflex coronary arteries.

Case: A 41-year-old woman diagnosed a year ago with bicuspid severe aortic stenosis, presented with a one-month history of exertional dyspnea and palpitations. During evaluation for AVR, a CAA with a right coronary artery originating from the left coronary sinus with an interatrial course was evident.

Decision-making: An echocardiogram and coronary CT were performed (see Figure). During surgery, a posterior annulus enlargement with a bovine pericardium patch plus aortic valve replacement with # 21 Edwards valve was performed. No intervention was done for the CAA given the absence of symptoms.

Conclusion: The prognostic relevance of more common forms of CAA remains uncertain. Surgery or observation may be reasonable for asymptomatic patients with anomalous origin from the opposite sinus without ischemia or anatomical or physiologic evaluation suggesting potential for compromise of

coronary perfusion.

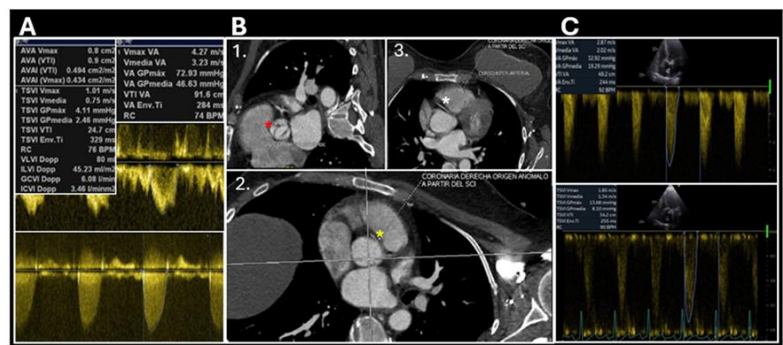


Figure A. Preoperative echocardiogram with continuous and pulsed wave Doppler demonstrated a maximum velocity of 4.2 m/s, mean gradient of 46 mmHg, and a valve area of 0.8 cm² consistent with severe aortic stenosis. B. Coronary CT angiography (B1) revealed a bicuspid aortic valve (red asterisk) with an (B2) anomalous origin of the right coronary artery (RCA) from the left sinus of Valsalva (yellow asterisk) with an (B3) interarterial and intramural course (white asterisk). C. Postoperative echocardiogram depicted normal aortic valve and LVOT velocities.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 17

Topic 1: Valvular Heart Disease

Publishing Title: GIANT LEFT ATRIUM: FROM SYMPTOMS TO SURGERY

Author Block: Erika Yamali Ramirez Marcano, Marco Antonio Rodríguez Pablo, Juan Héctor Larios Lara, SR, Jose Carlos Campos, Rodrigo Gopar-Nieto, Daniel Sierra, Hector Gonzalez-Pacheco, Eduardo Chuquiure-Valenzuela, Instituto Nacional de Cardiología Ignacio Chávez, Ciudad de México, Mexico

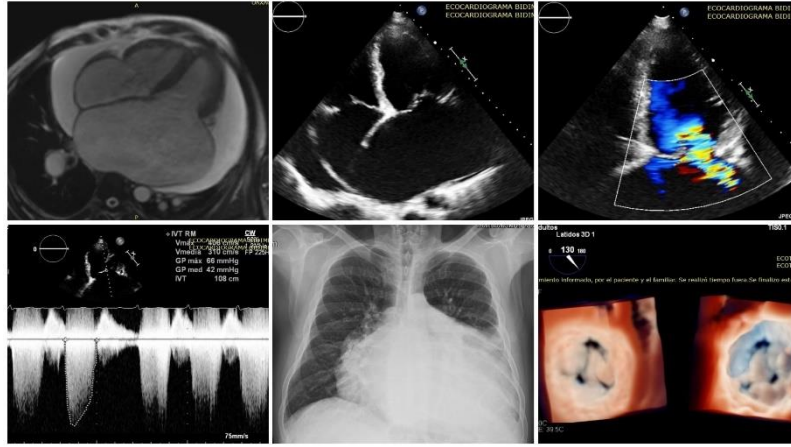
Abstract Body: **Background:** Mitral valve prolapse (MVP) can lead to severe mitral regurgitation (MR), left atrial (LA) dilation and pulmonary hypertension (PH) with right ventricular (RV) dysfunction and pericardial effusion serving as poor prognostic indicators. Early diagnosis and intervention are vital to mitigate these complications.

Case: A previously healthy 51-year-old male presented with dyspnea on exertion, orthopnea, and fatigue. Physical exam revealed jugular vein distension, pulmonary crackles, a loud S2, mitral holosystolic murmur, and an occasional mid-systolic click. Chest X-ray demonstrated global cardiomegaly and ECG revealed atrial fibrillation. Transesophageal echocardiogram (TEE) showed severe MR due to A2-P2 prolapse, pericardial effusion, and severely dilated LA with a volume of 418 mL/m². Cardiac magnetic resonance corroborated giant LA, and RV dysfunction. Right heart catheterization (RHC) confirmed post-capillary predominant PH with mean pulmonary artery pressure of 63 mmHg, pulmonary capillary wedge pressure of 23 mmHg, and pulmonary vascular resistance of 16 Wood units.

Decision-making: Given the severity of MR and combined PH, the Heart Team opted for surgical mitral valve replacement with a mechanical prosthesis and a

pericardial window.

Conclusion: This case emphasizes MVP as a cause of severe MR and PH, and its timely recognition using TEE and RHC. Elevated pulmonary vascular resistance underscores the severity of PH highlighting the importance of prompt intervention.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 18

Topic 1: Valvular Heart Disease

Publishing Title: TWICE THE TROUBLE: DUAL VALVE PERFORATION FROM INFECTIVE ENDOCARDITIS

Author Block: Erika Yamali Ramirez Marcano, Marco Antonio Rodríguez Pablo, Juan Héctor Larios Lara, SR, Rodrigo Gopar-Nieto, Daniel Sierra, Hector Gonzalez-Pacheco, Alexandra Arias-Mendoza, Instituto Nacional de Cardiología Ignacio Chavez, Ciudad de Mexico, Mexico

Abstract Body:

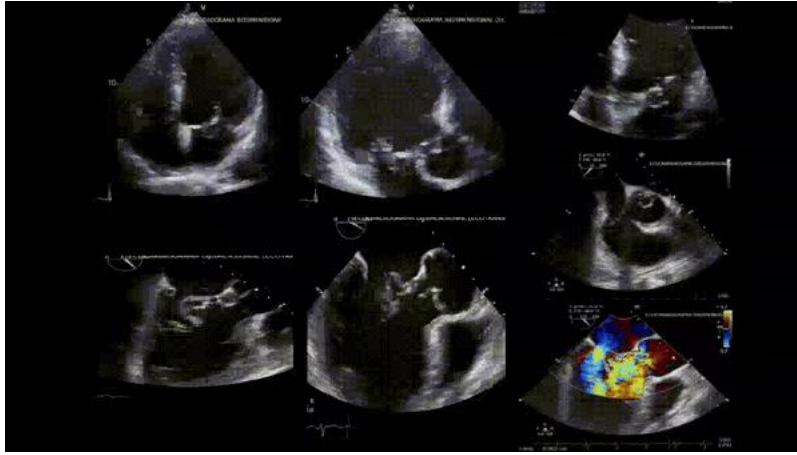
Background: Infective endocarditis of native heart valves can lead to severe complications such as valve perforation and heart failure. Prompt diagnosis and treatment are essential to prevent irreversible damage and improve outcomes.

Case: A 38-year-old male presented with malaise, fever, chills, and dyspnea. Physical examination revealed a Corrigan's pulse, a holodiastolic aortic murmur, and a holosystolic mitral murmur. Transthoracic and transesophageal echocardiography (TEE) showed endocarditis involving the aortic and mitral valves, with anterior mitral valve perforation and non-coronary aortic valve perforation. Blood cultures grew *Streptococcus mitis*.

Decision-making: Given the severity of the valve damage, the Heart Team decided to proceed with surgical intervention: aortic and mitral valve replacement with mechanical prostheses was performed.

Conclusion: This case highlights the importance of recognizing and treating endocarditis, which can cause serious valvular complications even in previously healthy native valves. The dual valve replacement surgery, combined with targeted antibiotic therapy, led to significant clinical improvement. This underscores the critical role of timely surgical intervention

and appropriate antimicrobial treatment in managing severe infective endocarditis. Additionally, TEE played a crucial role in the comprehensive evaluation, providing detailed imaging necessary for accurate diagnosis and guiding effective treatment.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 19

Topic 1: Valvular Heart Disease

Publishing Title: ALL IN ONE, A CATASTROPHIC PRESENTATION OF INFECTIVE ENDOCARDITIS

Author Block: Angel Alexander Ramos Gil, Luis Acevedo Aquino, Isabel Rodriguez Candelario, Andrea San Antonio Sierra, Rafael J. Rivera, Ernesto R. Soltero, Centro Medico Episcopal San Lucas, Ponce, PR, USA

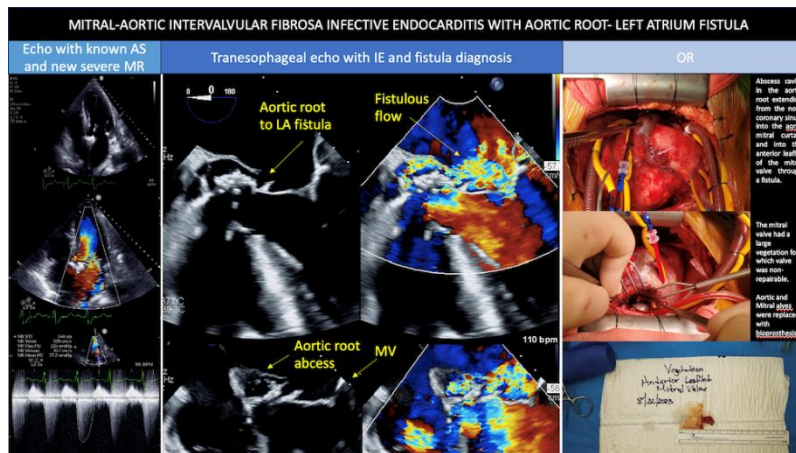
Abstract Body: **Background:** Abscess formation in patients with infective endocarditis (IE) carries an increased morbidity and mortality (32- 45%). Failing to diagnose and treat promptly can lead to rare and potentially deadly complications, including fistula formation within the aorto-mitral curtain, with an incidence of 1.8%.

Case: 76-year-old male with history of HTN, CAD, severe AS and gout, presented with a two-day history of progressive SOB and orthopnea. Two weeks prior, he was discharged from the hospital after treatment with broad spectrum antibiotics, despite negative cultures, and anti-inflammatories for what appeared to be a gout flare, fever, and a type 2 NSTEMI. Initial transthoracic echocardiogram (TTE): LVEF 40-45%, severe AS, mild MR. During readmission, repeat TTE: LVEF 55%, severe AS, severe MR. Transesophageal echocardiogram revealed: mitral-aortic intervalvular fibrosa aneurysm with rupture into left atrium, aortic valve infective abscess, severe MR, and severe AS.

Decision-making: Case was presented to cardiothoracic surgeon. Surgery yielded highest benefits in setting of new diagnosis vs previously considered TAVR for AS. Extensive surgical reconstruction with dual valve prosthesis led to a complicated recovery at the cardiac care unit resulting in death.

Conclusion: Insidious IE with silent initial presentation often needs surgical

intervention due to complications. Recognizing high risk patients with severe valvular disease is crucial to promptly consider surgical measures.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 20

Topic 1: Valvular Heart Disease

Publishing Title: NEW ONSET SYNCOPE DURING PREGNANCY SECONDARY TO SEVERE AORTIC STENOSIS

Author Block: Daniel Lira-Lozano, Jaime Alberto Guajardo Lozano, Christian Juarez-Gavino, Juan Carlos Ibarrola-Pena, Monica Flores, Christian G. Camacho-Mondragon, Marisol Molina-Aviles, Guillermo Torre Amione, Carlos Jerjes Sánchez, Jahir Rodriguez-Rivera, Paola Gutierrez-Gallegos, Tecnológico de Monterrey, Monterrey, Mexico

Background: Cardiovascular pathology is present in 1 to 4% of pregnancies, with aortic stenosis being one of the causes of syncope.

Abstract Body: **Case:** A 35-year-old woman with a 24-week pregnancy and no previous medical history presents to the ER with syncope, at 14 weeks of gestation, she experienced a first episode. Vital signs were stable, and a systolic grade IV murmur was heard in the aortic focus. The ECG shows signs of LVH and labs with a troponin of 54 and a BNP of 67, the rest in normal parameters. TTE showed the presence of a trivalve aortic valve with mild insufficiency, and severe stenosis, an area of 0.5 cm², a Vmax of 4.2 m/s and a MPG of 44 mmHg, with an LVEF of 68% and LV concentric remodeling. A cardiac MRI confirmed AS with an area of 0.48 cm². We started a beta-blocker and referred the patient to an international center where, due to persistent symptoms, TAVI was performed at 32 weeks, with the subsequent satisfactory resolution of the pregnancy via C-section.

Decision-making: During pregnancy, hemodynamic changes lead to increased preload and cardiac output. A fixed obstruction explains why these changes are poorly tolerated in women with severe aortic stenosis. There is no

effective medical treatment, and valve intervention is recommended in cases of severe stenosis and refractory symptoms, with TAVI being considered as an option due to the high risk of surgical intervention.

Conclusion: Severe AS during pregnancy requires a complete diagnosis workup and expert management to determine the proper treatment strategy.

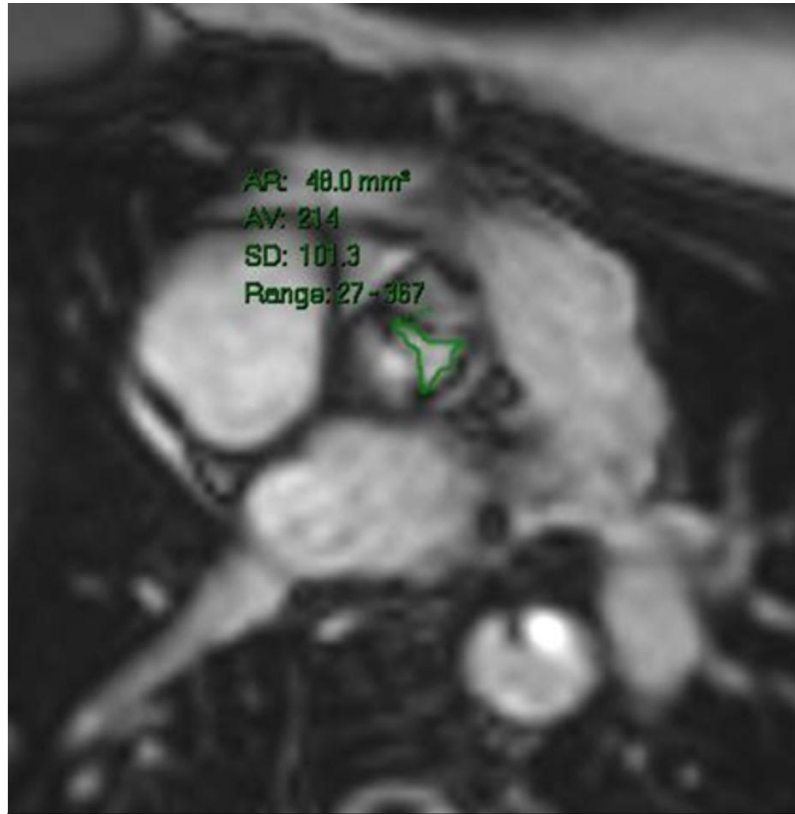


Figure 1. Cardiac MRI with aortic measurements demonstrated an area of 0.48 cm².

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 21

Topic 1: Valvular Heart Disease

Publishing Title: CLINICAL-EPIDEMIOLOGICAL CHARACTERISTICS AND OUTCOMES OF INFECTIVE ENDOCARDITIS IN A DEVELOPING COUNTRY IN THE CARIBBEAN

Author Block: FULGENCIO MARCELO SEVERINO, SR, Anabel Sanchez, Patricia Severino, Salvador B Gautier, Santo Domingo, Dominican Republic

Background: Infective endocarditis (IE) is a serious infection characterized by the inflammation of the endocardium, typically caused by bacterial or, less commonly, fungal pathogens. Endocarditis is a complex disease process involving the interplay of microbial virulence factors, host defense mechanisms, and structural abnormalities of the heart, leading to potentially life-threatening complications if left untreated. Early diagnosis and prompt initiation of appropriate antimicrobial therapy are crucial to improving patient outcomes.

Abstract Body: **Methods:** A retrospective observational study of 46 hospitalized patients with a definitive diagnosis of infective endocarditis according to the main guidelines and modified Duke criteria at the Dr. Salvador Bienvenido Gautier Hospital in the Dominican Republic, Clinical, microbiological, and laboratory data were collected. The continuous variables were presented as mean and standard deviation, the qualitative variables as proportions, and mortality were compared with clinical and demographic variables in 2*2 tables using the Chi² test.

Results: The average age was 51.74 ± 17.74 years, 76.1% were male. The most frequent symptom was fever 62.24% followed by dyspnea 54.3% and heart failure 58.73%. The positive culture was only present in 40%, the most frequent germs were Staphylococcus aureus 38.88% and Gram-negative

33.33%. The most affected valves were the mitral 30.4%, Aorta 21.7%, tricuspid 21.7% and pacemaker cable 10.9%. The most used antibiotics were vancomycin 87.8%, followed by ceftriaxone 53.54%. Uncontrolled infection was present in 19.8%. Mortality was 28.3%, with the two most frequent causes of death being sepsis, 46.7%, and heart failure, 46.15%. The only factor associated with mortality is uncontrolled infection (χ^2 13.53, $P < 0.05$)

Conclusion: Endocarditis is a disease with high hospital mortality despite the wide availability of antibiotic therapy, and uncontrolled infection is related to increased mortality.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 22

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: UNVEILING TAKOTSUBO CARDIOMYOPATHY'S LETHAL POTENTIAL

Author Block: Omar Haider, Matthew T. McAuliffe, Shaber Seraj, Syifa R. Djunaedi, Mohamed Abdelazeem, rishard abdul, Amir S. Lotfi, Baystate Medical Center, Springfield, MA, USA

Abstract Body:

Background: Stress cardiomyopathy (SCM), or takotsubo cardiomyopathy, presents challenges in diagnosis and management, resembling acute myocardial infarction. We present a case of a 77-year-old female who developed a left ventricular free wall rupture (FWR) after SCM.

Case: Our patient, with type 2 diabetes and hypertension, presented with left-sided abdominal and shoulder pain, and left upper extremity numbness. Electrocardiogram (ECG) indicated ST-elevation myocardial infarction (STEMI), and elevated high-sensitivity troponin (HST) was noted. Urgent cardiac catheterization revealed hyperdynamic basal function but poor apex visualization. Echocardiography (EC) revealed apical akinesis and a left ventricular ejection fraction of 30-35%. 24 hours post-hospitalization, the patient experienced a bradycardic arrest while on the commode, with return of spontaneous circulation achieved following brief cardiopulmonary resuscitation. Repeat EC indicated progressive anterior pericardial effusion in the apex area, suggestive of FWR.

Decision-making: SCM is characterized by transient ventricular dysfunction without obstructive coronary angiography. Electrocardiographic abnormalities in SCM include ST-segment elevation (STE) in the anterior and precordial leads, T-wave inversions and abnormal Q waves. HST levels are

also seen to be elevated in all patients with SCM. Distinctive EC features include apical segment expansion and basal hyperkinesis. While most patients recover fully, complications such as cardiogenic shock and arrhythmias can occur. Ventricular FWR, though rare, poses significant risk, particularly in patients with comorbidities like hypertension and advanced age. An autopsy was not conducted in our patient but literature suggests that histopathological analysis reveals contraction band necrosis, indicating catecholamine toxicity.

Conclusion: Our case highlights the diagnostic and therapeutic challenges of SCM which emphasize the importance of early recognition and vigilance for complications like ventricular FWR. Despite efforts, our patient was transitioned to comfort care due to underlying medical conditions.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 23

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: NO ASSOCIATION BETWEEN INCOME AND OUTCOMES IN PERIPARTUM CARDIOMYOPATHY: INSIGHTS FROM NATIONAL INPATIENT SAMPLE

Author Block: Yomary Jimenez, Nelson Ivan Barrera, Alejandro Nieto Dominguez, Francisco Gallegos Koyner, Mushrin Malik, Manoj Ghimire, Maria Fernanda Solorzano, Roberto Cerrud-Rodriguez, St. Barnabas Hospital, Bronx, NY, USA, University of Florida, Gainesville, FL

Background: Peripartum cardiomyopathy (PPCM) is characterized by left ventricular dysfunction and heart failure that occurs within the peripartum period and is associated with significant morbidity and mortality in the pregnant population. Despite its rarity, the incidence of PPCM has been increasing. Our study sought to identify outcomes of patients diagnosed with PPCM according to income levels.

Methods: Using the 2016-2020 National Inpatient Sample, we studied patients aged ≥ 15 and ≤ 55 years admitted with a primary diagnosis of PPCM. Patients were divided into two cohorts based on patient income as determined by median household income from the patient's ZIP code. The low-income group (I-) ($< \$50,000$) included patients in the first quartile of income, while the high-income (I+) ($\geq \$50,000$) group comprised patients in the second, third, and fourth quartiles of income. The primary outcome was overall inpatient mortality; secondary outcomes included cardiogenic shock (CS), ECMO use, left ventricular assist device use (LVAD), and heart transplantation (HT). Univariate logistic regression analysis was performed.

Abstract Body: **Results:** A total of 23,100 were analyzed with a mean age of 32 years old. Of this 9933 were in the I- cohort, and 13,167 in the I+. Overall inpatient mortality

was not significantly different in the I- vs I+ cohorts (OR 1.10, CI 0.06- 1.83, $p=0.714$). Also was no significant difference in the incidence of CS (OR 0.97, CI 0.76-1.25, $p=0.84$), use of ECMO (OR 0.78, CI 0.42-1.45, $p=0.44$), LVAD usage (OR 1.06, CI 1.06-1.25, $p=0.84$), and HT (OR 1.88, CI 0.87-4.00, $p=0.84$) respectively.

Conclusion: No statistically significant disparities were observed in terms of mortality, CS, ECMO utilization, LVAD usage, and HT among PPCM patients based on their income levels.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 24

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: HIGH DOSES OF BETA-BLOCKERS ALTERED THE LIPID TRANSFER TO HDL OF HEART FAILURE PATIENTS WITH REDUCED EJECTION FRACTION

Author Block: Milena Curiati, Fatima Freitas, Priscila Carvalho, Antonio Barretto, Raul Santos, Mucio Oliveira Jr, Raul Maranhao, Heart Institute (InCor) - University of São Paulo Medical School, Sao Paulo, Brazil

Abstract Body:

Background: Despite evidence that low concentration of high-density lipoprotein (HDL) cholesterol is related to a worse prognosis in heart failure (HF), other functional aspects of HDL should be taken into consideration. This study aimed to evaluate the functional aspects of HDL in patients with HF of ischemic and non-ischemic etiologies, symptomatic, with functional classes II and III and LVEF<40%.

Methods: Patients were divided into: (1) with ischemic HF (n=24); (2) with non-ischemic HF (n=24); (3) with CAD without HF (n=26); and (4) control group of hypertensive individuals without HF and without CAD (n= 27). The transfer of unesterified and esterified cholesterol to HDL was measured by an in vitro assay using an artificial lipid donor nanoemulsion.

Results: Esterified cholesterol transfer was lower in the HF patients compared to the non-HF ($p<0.05$). Unesterified cholesterol transfer was lower in the non-ischemic HF group compared to the other three groups. In all patients, the transfer of both cholesterols, esterified and unesterified, was lower in patients taking beta adrenergic blockers (beta-blockers) compared to non-users ($p<0.01$); in those taking higher doses of beta-blockers, the transfers of unesterified and esterified cholesterol was even lower than in those taking lower doses ($p<0.001$). In patients with HF, the reduction in

cholesterol transfers observed in two groups was independent of the use of beta-blockers. Triglyceride and non-HDL cholesterol concentrations were lower in the non-ischemic HF compared to the CAD group ($p < 0.05$).

Conclusion: The fact that transfer of esterified cholesterol to HDL has emerged as a marker of the presence of HF independently of its etiology and the finding of dose-dependent effects of beta-blockers on cholesterol transfer suggest that defects in HDL metabolism may be involved both in HF and in beta-blocker users.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

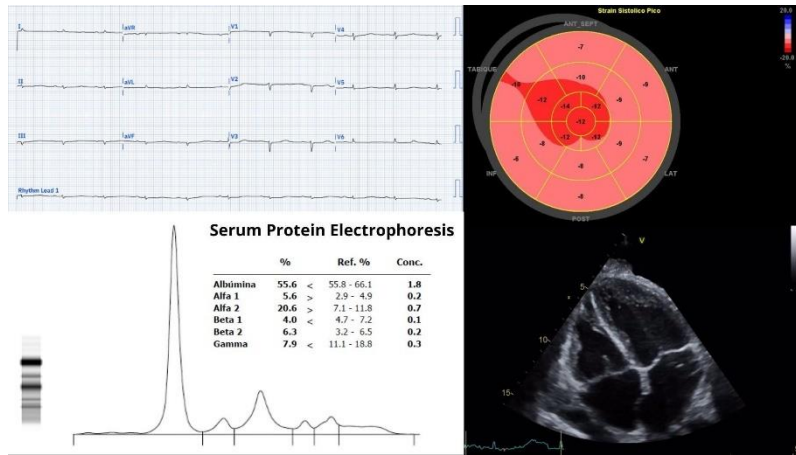
Poster Board Number: 25

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: A CHALLENGING CLINICAL CASE OF CARDIAC AMYLOIDOSIS

Author Block: Cesar Gomez Rodriguez, Jesús S. Serrano-García, Solimar Castro, Luis R. García-Tapia, José D. García-Romero, Leonel Gerardo Lopez Villaseñor, Estela Isabel Carvajal Juarez, Jose Luis Briseño De La Cruz, Alexandra Arias-Mendoza, Erick Alexanderson Rosas, Instituto Nacional de Cardiología "Ignacio Chávez", Ciudad de México, Mexico

Abstract Body: **Background:** An elderly man with only a history of primary hypothyroidism. **Case:** Initially presented with weight loss, anorexia, and abdominal distension. Despite inconclusive endoscopic examinations, his condition worsened, manifesting as dyspnea, peripheral edema, and fainting episodes. Evaluation by a cardiologist revealed pericardial effusion and preserved heart function. However, his symptoms deteriorated over a month, prompting referral to our center. Upon admission, he was diagnosed with pneumonia, and antibiotic therapy resulted in improvement. Subsequent diagnostics identified nephrotic syndrome with polyneuropathy, and cardiac abnormalities, including low voltage on EKG, elevated cardiac biomarkers, and biventricular dysfunction.



Decision-making: Due to suspicion of amyloidosis, immunofixation electrophoresis and free chains quantification were requested with negative results. Additionally, a ^{99m}Tc -pyrophosphate scintigraphy was performed with a negative report. Despite these results and high clinical suspicion, a biopsy of the lip and abdominal fat pad was performed, revealing amorphous material that stained orange with Congo red staining and exhibited apple green birefringence under polarized light.

Conclusion: Despite negative results in various studies, maintaining a high clinical suspicion is crucial for continuing the diagnostic process. In this case, a conclusive skin biopsy led to appropriate referral and management for the patient.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 26

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: CARDIAC LIGHT CHAIN AMYOLOIDOSIS: COMPLEX DIAGNOSIS.

Author Block: Marisol Martínez Galindo, Hilario Jimenez Orozco, Ana Livia Martinez Raga, Flor Teresita Rosas Aragón, Ramirez Davila Diana Patricia, Ivan Alejandro Hernandez Valdez, Joaquin Gomez Leon, Beatriz Marlen Trujillo Ortega, Centro Medico Nacional La Raza. Hospital de Especialidades Dr. Antonio Fraga Mouret., México, Mexico

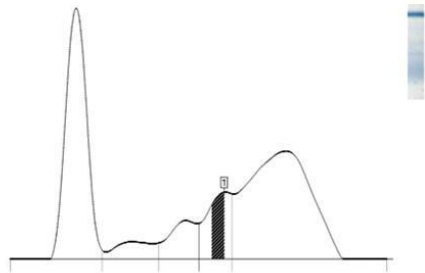
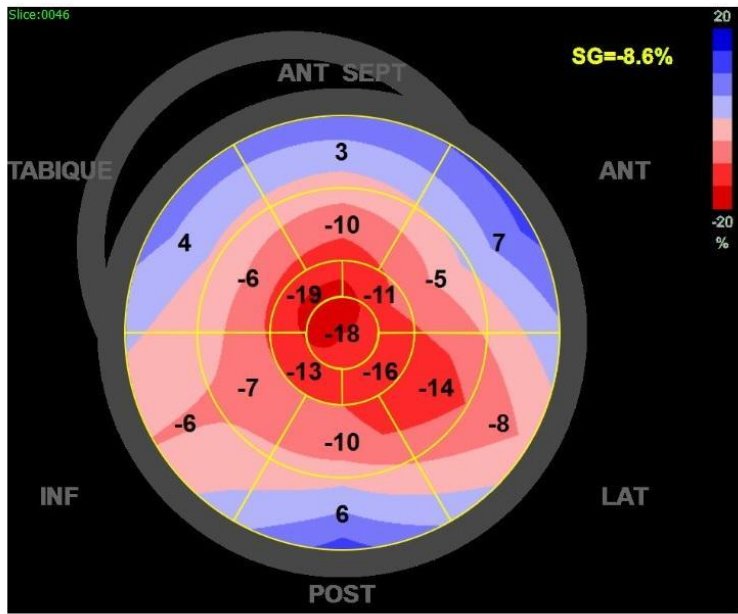
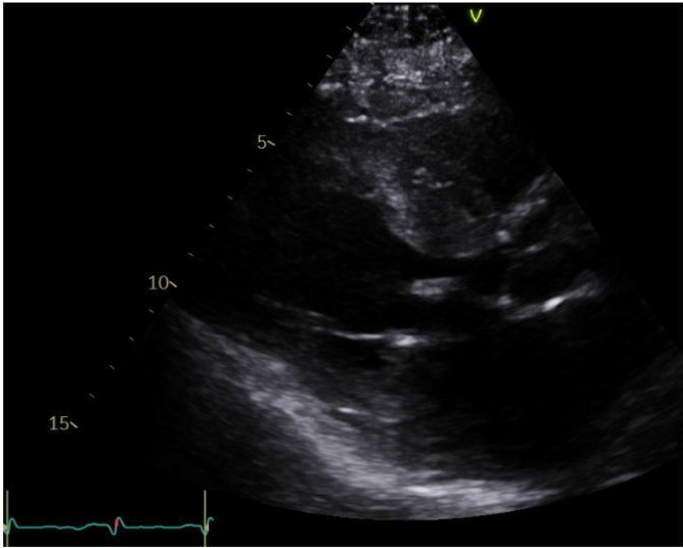
Abstract Body: **Background:** Ligh chain amyloidosis is an infiltrative disease caused by deposition of amyloid fibrils, when it occurs at cardiac level, carries the worst prognosis of any involved organ, being the cardiac (AL) amyloidosis the most serious form of the disease.

Case: A 49-year-old female admitted to the internal medicine service with a diagnosis of tachycardia, reported persistent dizziness for 1 year, dysesthesia in the lower extremities and palms, chronic constipation and emotional lability. Electrocardiographically with atrial fibrillation rhythm, pseudoinfart pattern in lower leads, small ventricular complexes, biochemically with kidney injury, hypochromic macrocytic anemia and moderate thrombocytopenia.

Decision-making: Due to the clinical suspicion of amyloidosis with cardiac involvement, a transthoracic echocardiogram with strain was performed with interventricular septum of 25 mm with, ventricular mottling, thickened leaflets, left ventricular diastolic dysfunction, left ventricular ejection fraction 65%, global longitudinal strain -8.6%, cherry on top image and 5-5-5 sign, and protein electrophoresis with high concentrations of light chain immunoglobulins.

Conclusion: The overlap of multiple symptoms caused by the infiltration of amyloid protein into multiple tissues, makes the diagnosis delayed with a dismal prognosis, is important early diagnosis of cardiac AL amyloidosis for

proper management thus offering a better quality of life for patients.



Electroforesis de Proteinas

Fracciones	%		Ref. %	Conc.
Albumina	33.8	<	59.8 - 72.4	0.18
Alfa 1	4.4	>	1.0 - 3.2	0.02
Alfa 2	6.9	<	7.4 - 12.6	0.04
Beta	10.2	<	7.5 - 12.9	0.05
Gamma	44.7	>	8.0 - 15.8	0.23

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 27

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: HYPERTROPHIC CARDIOMYOPATHY: A CASE REPORT

Author Block: Katihurca Almonte, ROSA GENESIS MEJIA MARTE, Asociación Instituto Dominicano de Cardiología, Santo Domingo, Dominican Republic

Abstract Body:

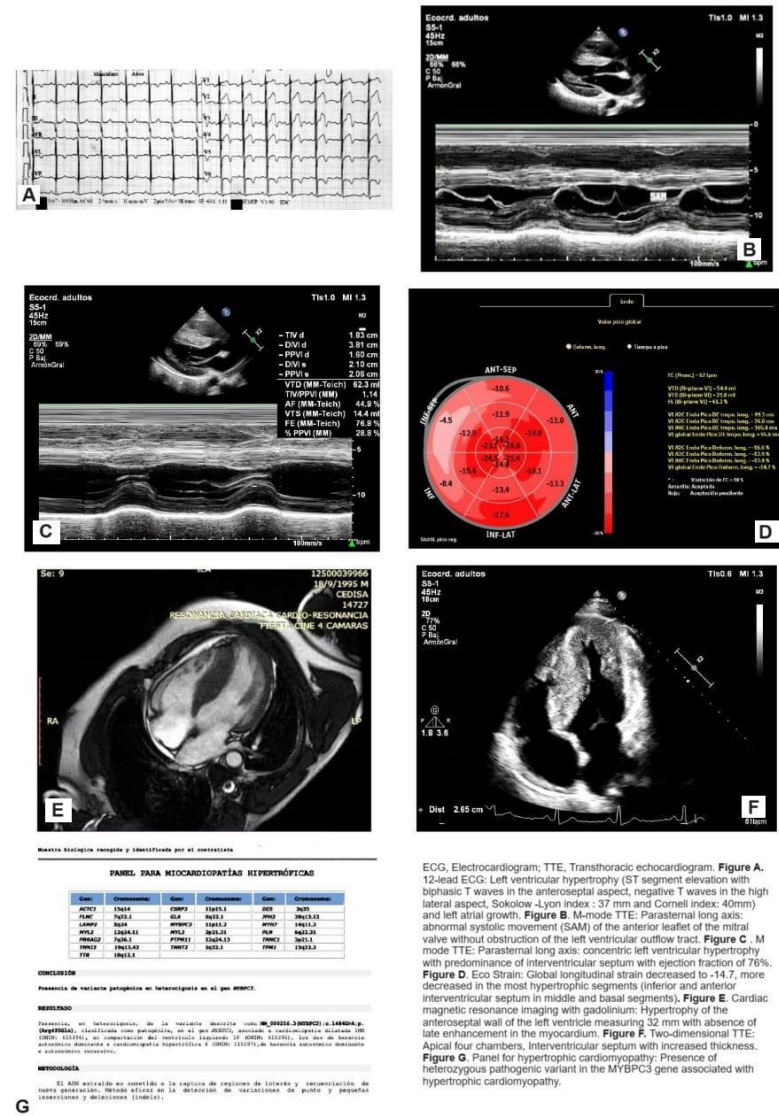
Background: Hypertrophic cardiomyopathy is a myocardial pathology characterized by increased mass of the left ventricle (LV) with an estimated global prevalence of 0.05-0.2%. It is a frequent cause of sudden death in young people, due to LV outflow tract obstruction and ventricular arrhythmias.

Case: 26-year-old man, without morbid history, with oppressive and substernal chest pain of strong intensity, not irradiated, that increases with effort and electrocardiogram with LV hypertrophy and left atrial growth.

Decision-making: The 2D echocardiogram revealed LV hypertrophy with predominance of interventricular septum with abnormal systolic movement of anterior mitral leaflet without obstruction, LV ejection fraction in 76%, grade II LV diastolic dysfunction, left atrial dilation and mild mitral and aortic insufficiency. It shows a global longitudinal strain decreased to -14.7. Treated with Bisoprolol 2.5mg, with favorable response. Cardiac magnetic resonance imaging (CMR) showed hypertrophy of the inferoseptal wall of 32 mm, without late enhancement. Genetic testing identified a mutation in myosin binding protein C3 (MYBPC3), also identified in his brother.

Conclusion: A 5-year risk of sudden death of 3.85% was calculated, equivalent to low risk; Therefore, in this case the implantation of an automatic defibrillator as primary prevention is not indicated. Estimation of the risk of sudden death, family screening and optimal treatment were tools used for the

proper management of this disease.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 28

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: OCTOPUS A SINGLE CENTER TAKOTSUBO COHORT IN LATIN AMERICA

Author Block: Francisco José Mañan De La Cruz, Miguel Delgado, SR, Samuel Gabino Guzman, Lia M. Joubert, Marlon Miguel Espaillat, Jose A. Vargas Jerez, Cesar J. Herrera, Carlos Garcia Lithgow, SR, cedimat, Santo Domingo De Guzmán, Dominican Republic

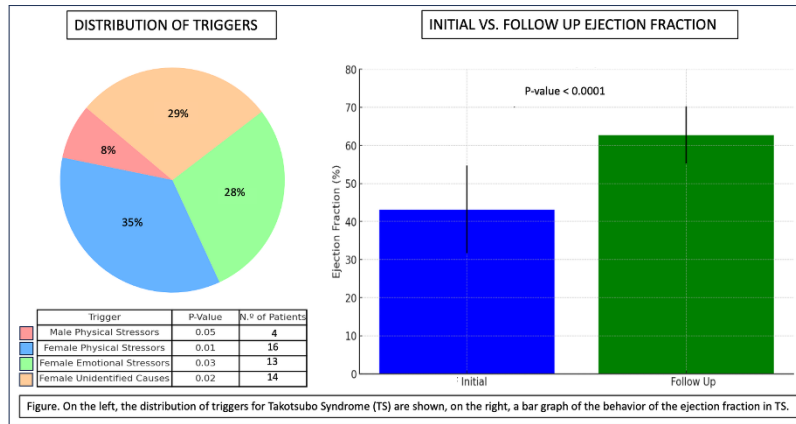
Abstract Body: **Background:** Takotsubo syndrome (TS), as an acute form of reversible heart failure has had increasing recognition. Its prevalence and clinical characteristics in low-middle income nations remain unexplored. Since no Latin American countries are enrolled in the major TS international registries, we aimed to delineate epidemiology, clinical features, and outcomes of TS in the Dominican Republic, as an initial step towards creating a regional registry.

Methods: Patients with confirmed TS were retrospectively identified in a tertiary care academic urban hospital through Electronic Medical Records. Demographic, clinical, imaging and laboratory data were registered.

Results: From 2016 to 2024, 47 consecutive patients were identified: 91.19% female, mean age 66.19±15.19 years. In males, 100% of triggers were physical, including infection, post-surgical state, and intense exercise; 37.19% of the triggers in females were physical, 30.34% emotional, and 32.47% unidentifiable cause. Mean initial EF by echo was 40.91% ±13.57, and mean follow-up 60.91%±7.75. Classification by ventriculography showed 85.32% had an apical ballooning pattern, 11% focal, 2.2% mid-ventricular, and 2.2% basal.

Conclusion: In this preliminary study, physical triggers as detonants to TS

were more frequent in men. Most patients had significant recovery of EF 6 weeks post presentation. Given LATAM's geographic, ethnic, and cultural variations, a larger cohort is needed to obtain further insights into this entity.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 29

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: HYPERTRABECULATED LEFT VENTRICLE ASSOCIATED WITH FHOD3 MUTATION, ANOTHER GENE FOR THIS ENTITY?: CASE REPORT

Author Block: Zenen Rua, Riguey Cecilia Mercado Marchena, Bryan David Hernandez Nieto, Hernán Calvo-Muñoz, Jeison Torrens, Alberto Cadena-Bonfanti, Manuel Urina-Triana, Miguel A. Urina-Triana, Faculty of Health Sciences, Simón Bolívar University, Barranquilla, Colombia, Department of Cardiology, Clínica de la Costa, Barranquilla, Colombia

Background: Hypertrabeculated left ventricle (HTLV) features prominent trabeculations in the left ventricle (LV) with a thin compact layer and deep intertrabecular recesses communicating with the LV cavity. It often overlaps with other cardiomyopathies, particularly hypertrophic cardiomyopathy (HCM). The heterozygous c.4190G>C (p.Arg1397Pro) variant in the FHOD3 gene is linked to familial HCM, but its role in HTLV is not well documented.

Abstract Body: **Case:** A 25-year-old woman presented with chest pain and dyspnea, with a similar episode two years earlier. Echocardiography revealed generalized LV hypokinesia and an ejection fraction of 39%. Coronary angiography showed normal epicardial arteries, while cardiac MRI confirmed hypokinesia in medial and apical segments, with a trabecular/myocardial ratio >3 in apical segments. Genetic testing identified the heterozygous c.4190G>C (p.Arg1397Pro) variant in FHOD3, marking the first report of HTLV associated with this mutation in Colombia.

Decision-making: Heart failure medical therapy was initiated according to guidelines, resulting in clinical improvement and continued strict follow-up. This case underscores the importance of genetic studies in HTLV patients and

highlights the need for further research on FHOD3's role in this disease.

Conclusion: The heterozygous c.4190G>C (p.Arg1397Pro) variant in FHOD3 is associated with HTLV, emphasizing the importance of genetic analysis in cardiomyopathies and the need for more research in Latin American.

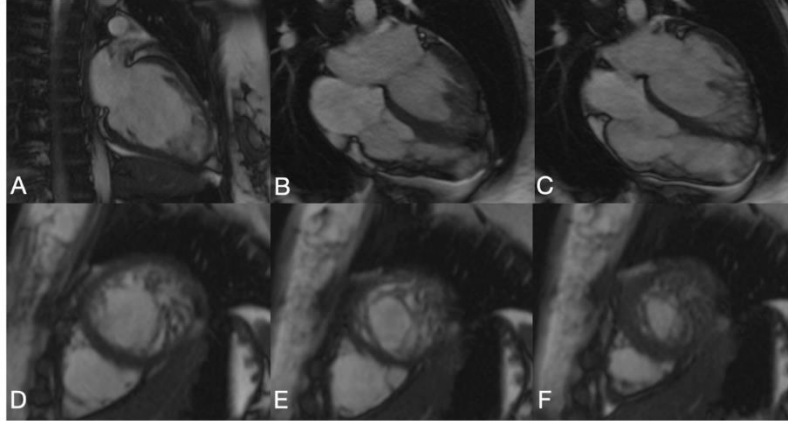


Fig 1. Cardiac magnetic resonance images of hypertrabeculation of the left ventricle, especially in the apical segments, Two-chamber (A), four-chamber views at end of systole and end of diastole (B and C). Short axis view in medial (D) and apical (E and F) segments.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 30

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: VA-ECMO AS A BRIDGE TO RECOVERY IN PATIENTS WITH FULMINANT MYOCARDITIS: EXPERIENCE IN A LATIN AMERICAN CENTER

Author Block: David Alberto Ocampo, [Diego Ortega-Gomez](#), Claudia Poveda, Claudia Jaramillo, Fundación Clínica Shaio, Bogotá D.C., Colombia

Background: Early initiation of veno-arterial extracorporeal membrane oxygenation (VA-ECMO) support has shown to improve outcomes in patients with fulminant myocarditis as a bridge to recovery, transplantation, or long-term assist device implantation. This study aimed to describe the clinical characteristics and outcomes of adults diagnosed with fulminant myocarditis who underwent VA-ECMO therapy.

Methods: Observational descriptive case series study

Results: Ten patients were included, with 50% being male and a median age of 35 years. Notably, 80% had no comorbidities. Etiologies included Coxsackievirus infection in one case, meglumine antimoniate use in another, while the cause remained unknown in the remaining cases. Following VA-ECMO initiation, a decrease in variables such as lactate and creatinine was observed, alongside a transient increase in liver enzyme levels. Additionally, there was a notable increase in left ventricular ejection fraction (LVEF) from a median of 16.5% to 40.5%. The overall survival rate was 90%, albeit with notable complications such as acute kidney injury (50%) and infections (30%).

Abstract Body:

Conclusion: Our study points out the pivotal role of ECMO support in the management of fulminant myocarditis. We observed a high survival rate, significant improvement in perfusion variables, and notable recovery in LVEF.

These findings highlight the benefits of VA-ECMO as a bridge to recovery in this patient population. Further research is warranted to validate these findings and optimize therapeutic strategies in the management of fulminant myocarditis.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 31

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: A RARE CONGENITAL CARDIAC ANOMALY: TETRALOGY OF FALLOT WITH ABSENT PULMONARY VALVE SYNDROME

Author Block: Liseth Hernandez Gonzalez, Fernando Arriaga Pérez, [Ana M. Coeto](#), Stephanie Angulo, Daniel Manzur Sandoval, Ricardo Sánchez Moreno, Isaac Caletí espinosa, Ricardo Alvarez-Santana, Carlos Villegas, Roberto García Tapia, Jorge Sanchez-Nieto, Edgar Garcia Cruz, Sergio Patrón-Chi, Miguel Barrera, National Institute of Cardiology Ignacio Chavez, Mexico City, Mexico

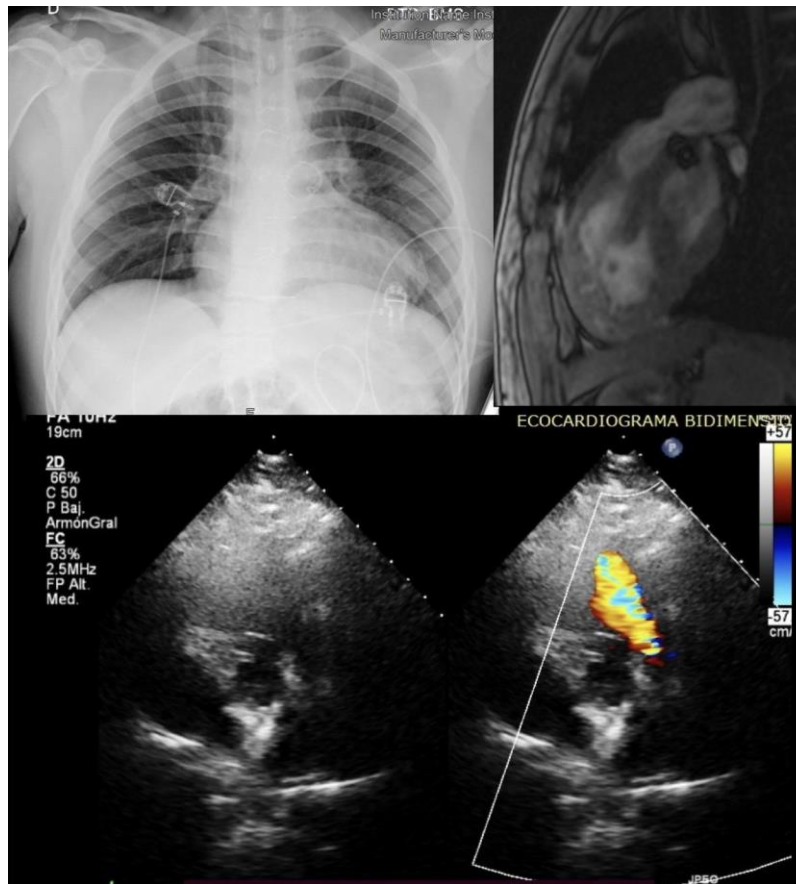
Background: Tetralogy of Fallot (TOF) with absent pulmonary valve is an uncommon congenital anomaly found in only 3% of patients with this condition. It is characterized by features of TOF with the complete absence of pulmonic valve tissue or rudimentary ridges and usually with a hypoplastic pulmonary valve annulus.

Abstract Body: **Case:** A 21-year-old male with a diagnosis of Tetralogy of Fallot and absent pulmonary valve syndrome, infundibular lung injury causing significant stenosis and moderate insufficiency, perimembranous ventricular septal defect, and preserved biventricular systolic function was being followed up by our center.

Decision-making: Total correction surgery was performed with closure of interventricular septal defect with redirection of flow from the left ventricle to the aorta + widening of the right ventricle outlet tract with bovine pericardium patch, biological aortic prosthesis in lung position and 4 mm interatrial fenestra.

Conclusion: This case highlights the complexities of managing Tetralogy of Fallot with absent pulmonary valve syndrome, emphasizing the importance for

precise diagnostic differentiation from standard TOF. It should be suspected with mild cardiomegaly, enlargement of the left pulmonary artery and right aortic arch on chest x-ray. Some echocardiographic features of TOF-APVS include: Large ventricular septal defect, Overriding aorta, Dilated main pulmonary artery and branch pulmonary arteries, and Main pulmonary artery larger than the atrium.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 32

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: STERNAL OSTEOMYELITIS DUE TO MYCOBACTERIUM TUBERCULOSIS IN A HEART TRANSPLANT PATIENT

Author Block: David Alberto Ocampo, [Camilo Hernandez](#), Fernan del Cristo Mendoza-Beltran, Carlos Orozco-De la Hoz, William M. Rios, Fundación Clínica Shaio, Bogotá D.C., Colombia

Background: Mycobacterium tuberculosis (MT) infection remains a leading cause of morbidity and mortality in immunocompromised individuals. Heart transplant patients are at increased risk for opportunistic infections due to immunosuppressive therapies; a high clinical suspicion plays a crucial role in the early diagnosis and treatment of MT infections.

Abstract Body: **Case:** A 43-year-old patient with a history of advanced Chagas cardiomyopathy and reduced left ventricular ejection fraction underwent a heart transplant 5 years ago and received immunosuppressive therapy. During follow-up, the patient developed chronic discharge from the sternum wound with subsequent purulent discharge. Chest CT revealed a dehiscence of the sternal wire with granuloma formation. The bone scan confirmed chronic sternal osteomyelitis, which led to the surgical removal of a sternal wire. The sternal biopsy showed granulomas with multi-nucleated Langhans cells; The culture test was positive for MT with sensitivity to conventional RHZE treatment. Surgery was performed to completely remove the sternal wire, followed by anti-tuberculosis therapy for a six-month treatment course, which led to favorable wound healing.

Decision-making: The formation of granulomas, especially in chronic diseases in immunocompromised patients, should quickly provoke a high

clinical suspicion. Chronic sternal wound infection with low inflammatory features and presence of foreign body led to a delay in diagnosis during the follow-up of our patient. Past medical history of heart transplant and high clinical suspicion of MT infection as the cause of granuloma led to a prompt diagnosis and management.

Conclusion: This case illustrates the atypical presentation of MT infection as sternal osteomyelitis in an immunocompromised heart transplant patient. Timely recognition and treatment initiation are essential for managing these cases, emphasizing the need for a high index of suspicion and comprehensive diagnostic evaluation in immunocompromised individuals presenting with chronic infections.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 33

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: WINTER BROKEN HEART. TAKOTSUBO CARDIOMYOPATHY PRESENTING AS DE WINTER PATTERN

Author Block: Lisseth Hernandez Gonzalez, Carlos A. Nuñez Castellanos, Fernando Arriaga Páez, Diego Araiza Garaygordobil, Alexandra Arias-Mendoza, Katia Lorena Moyado Ocampo, Ana M. Coeto, Gian Manuel Jiménez Rodríguez, SR, Instituto Nacional de Cardiología Ignacio Chavez, Ciudad de Mexico, Mexico

Abstract Body: **Background:** A 59-year-old man presented with angina-like chest pain and the Winter ECG pattern, suggesting coronary occlusion. Despite normal coronary arteries on catheterization, he was diagnosed with Takotsubo cardiomyopathy. **Case:** On Christmas evening, a healthy 59-year-old man arrived at the emergency with chest pain radiating to his left arm for two hours, suggestive of angina. His ECG displayed the de Winter's pattern: >1 mm upsloping ST depressions in V3-V6, tall T waves in V3-V5, ST elevation in aVR, and 1 mm ST elevation in V1-V2. Vital signs were stable, and physical exam was normal. Cardiac troponin T and MB fraction-creatinine kinase were elevated (84 ng/ml and 3.89 IU/l, respectively). A repeat EKG showed ST elevation in V1-V5, peaking at 4 mm in V3.

Decision-making: Cardiac catheterization revealed angiographically normal coronary arteries, moderately impaired left ventricular function (EF 40%), with dyskinesia of the apical anterior wall and apex consistent with Takotsubo cardiomyopathy. Transthoracic echocardiography confirmed apical dyskinesia consistent with Takotsubo cardiomyopathy. Discharged home with goal-directed medical management for heart failure with reduced ejection fraction. At 6-month outpatient follow-up, clinical improvement noted without signs of

heart failure.

Conclusion: Takotsubo cardiomyopathy can mimic acute coronary syndrome, necessitating prompt recognition and management for favorable outcomes.



Figure 2. Ventriculography in RAO view showing motion abnormalities of the left ventricle.



Figure 4. Repeat 12-lead electrocardiogram demonstrating elevation of the ST segment of V1-V5.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 34

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: HEMATOLOGICAL TREATMENT IMPROVED HEART FAILURE IN A MULTIPLE MYELOMA-ASSOCIATED LIGHT CHAIN (AL) CARDIAC AMYLOIDOSIS

Author Block: Daniel Lira-Lozano, Christian G. Camacho-Mondragon, Jorge Joya, Erasmo De La Pena-Almaguer, Christian Juarez-Gavino, [Juan Carlos Ibarrola-Pena](#), Monica Flores, Marisol Molina-Aviles, Guillermo Torre Amione, Carlos Jerjes Sánchez, Jahir Rodriguez-Rivera, Paola Gutierrez-Gallegos, Tecnológico de Monterrey, Monterrey, Mexico

Abstract Body:

Background: Cardiac AL amyloidosis is a cause of heart failure, with complexity in the diagnosis.

Case: We admitted a 56-year-old female, without a past medical history, for dyspnea and signs of heart failure. ECG had low voltage. A blood test showed anemia, normal hs-cTn, mild hypercalcemia, hyponatremia, and elevated creatinine, globulins, BNP, and D dimer. TTE with biatrial and RV dilation, and preserved biventricular systolic function. Normal CT angiography was reported. A right heart catheterization revealed elevated PAWP, RA, and RV pressures. Serum free-chain and protein electrophoresis confirmed multiple myeloma (MM). A cardiac MRI reported infiltrative cardiomyopathy, preserved LVEF, and a reduced RVEF and biventricular global longitudinal strain (GLS). Successful decongestion was achieved. We discharged her after starting treatment with iSGLT, ARNI, and steroids plus bortezomib. A follow-up cardiac MRI reported improved T1 mapping, extracellular volume, RVEF, and LV GLS.

Decision-making: The presentation and laboratory findings led to the diagnosis of MM, a critical association with AL amyloidosis. The cardiac MRI findings corroborated the diagnosis, revealing infiltrative cardiomyopathy as

the cause of HF. The improvements in the follow-up cardiac MRI demonstrate the potential for recovery with hematological and HF treatment.

Conclusion: Our case highlights the association of HF and AL amyloidosis, the systemic nature of the disease, and the potential for cardiac recovery.

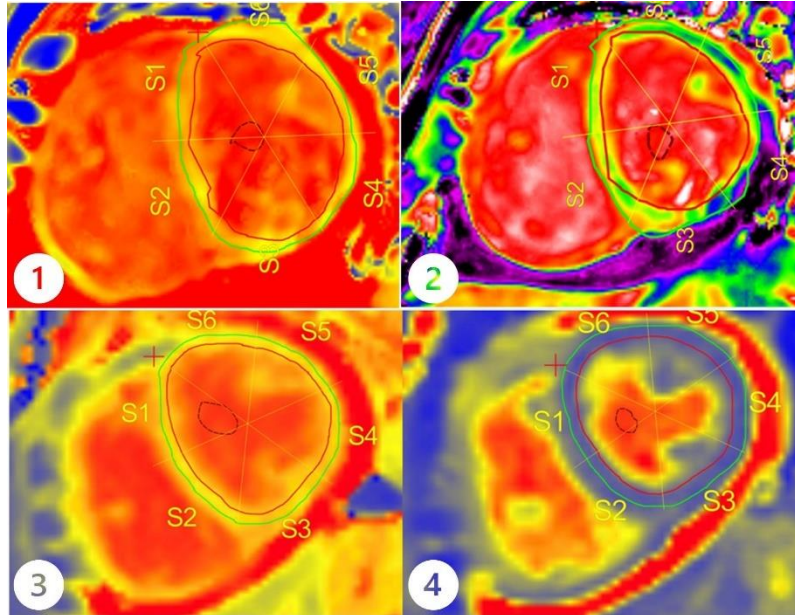


Image 1. Number 1 and 2 correspond to the T1 mapping mean value of 1430 and ECV quantification of 77% on the first cardiac MRI. 3 and 4 correspond to the same measurements of the follow-up cardiac MRI with values of 1,187 and 43.8%, respectively, showing the improvement after initial treatment.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 35

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: ARRHYTHMOGENIC CARDIOMYOPATHY, THE FINAL DIAGNOSIS ON A YOUNG WOMAN WHO PRESENTED PALPITATIONS DURING EXERCISING: A CASE REPORT

Author Block: Ana Karla Tobias, IMSS Hospital General Regional, Mexico City, Mexico, National Institute of Cardiology, Mexico City, Mexico

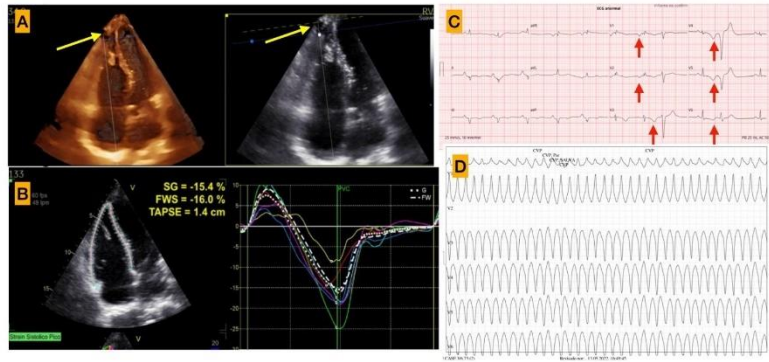
Background: Arrhythmogenic cardiomyopathy presents challenges, notably in women with exercise-induced arrhythmia and syncope.

Case: A 38-year-old woman had 5 years of exercise-related palpitations and syncope. She denied any disease or drug intake. She had a normal physical exam but abnormal resting ECG (Figure1, part C) with incomplete right bundle branch block, negative T waves from V1-V6, and a premature ventricular complex with left bundle branch block. Focused cardiac ultrasound showed RV dilation and dyskinesia.

Abstract Body: **Decision-making:** Resting echocardiography (Figure1, part B and C) revealed normal LV but dilated RV with wall motion abnormalities, abnormal RV free wall longitudinal strain, tricuspid annular plane systolic excursion, and apical aneurysm. Holter monitoring showed nonsustained ventricular tachycardia and numerous ventricular extrasystoles. During the 2nd stage of Bruce Protocol of a treadmill test she developed chest pain and sustained ventricular tachycardia (Figure 1, part D) that ended with amiodarone. Cardiac MRI confirmed RV dilation, wall motion abnormalities, and reduced RV ejection fraction. Genetic test revealed a PKP2 mutation.

Conclusion: According to the ESC, criteria were met with 1 major and 2 minor criteria for arrhythmogenic cardiomyopathy. ECG abnormalities along with

focused cardiac ultrasound aids rapid outpatient diagnosis, while advanced imaging and genetic testing provide accurate diagnosis.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 36

Topic 1: Heart Failure and Cardiomyopathies

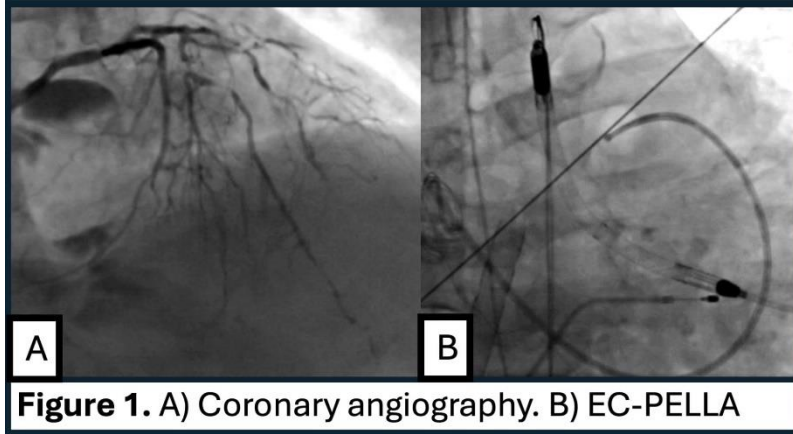
Publishing Title: EXPANDING THE POINT OF CARE: ON-SITE ECPR FOR OUT-OF-HOSPITAL CARDIAC ARREST. CASE REPORT.

Author Block: Christian Juarez-Gavino, Guillermo Torre Amione, Vicente Jimenez-Franco, Juan Alberto Quintanilla, Rene Gomez-Gutierrez, Guillermo Quezada-Valenzuela, Erasmo De La Pena-Almaguer, Jaime Alberto Guajardo Lozano, José Alfredo Salinas-Casanova, Jorge Joya-Harrison, Monica Flores, Daniel Lira-Lozano, Juan Carlos Ibarrola-Pena, Carlos Jerjes Sánchez, Tecnológico de Monterrey, Monterrey, Mexico

Background: In Mexico, mechanical circulatory support with ECMO is available only in selected institutions. Furthermore, on-site ECPR represents a therapeutic challenge

Abstract Body: **Case:** A 63-year-old male with a past medical history of coronary artery disease and diabetes presented sudden onset chest pain while at work. Later he became unresponsive, which prompted emergency services request. Upon arrival, paramedics noticed the absence of carotid pulse and started cardiopulmonary resuscitation. Following refractory out-of-hospital cardiac arrest (OHCA), our Shock Team was transported to the site. He was a candidate for mechanical circulatory support and the team began V-A cannulation for ECPR. Therapy started 105 minutes after OHCA. After the return of spontaneous circulation, he was admitted to our hospital and underwent coronary angiography that showed multivessel disease without a culprit lesion. A right heart catheterization reported PCWP 27 mmHg, and PASP 40 mmHg. The Team escalated the support to EC-PELLA. Initial tests reported pH <6.8, lactate >15 mmol/L, and LVEF of 23%. EEG revealed absence of brain

electrical activity. His condition deteriorated with multiple organ failure leading to his death.



Decision-making: As the first OHCA ECPR case of our hospital, we encountered multiple logistic difficulties, however, the primary aim of ECPR was achieved.

Conclusion: This case presents our initial experience of on-site ECPR for OHCA. This approach is feasible and more experience could improve outcomes.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 37

Topic 1: Heart Failure and Cardiomyopathies

Publishing Title: DIFFICULTY IN CLOSING THE MOUTH AS THE CHIEF COMPLAINT OF SYSTEMIC AMYLOIDOSIS WITH CARDIAC INVOLVEMENT

Author Block: Juan David Marin Escobar, Carlos E. Vesga-Reyes, Diana C. Carrillo-Gomez, Indira C. Lambertinez-Alvarez, Fundación Valle del Lili, cra 98 No. 18-49, Cali, Colombia, Universidad ICESI, Facultad de Ciencias de la salud, Cali, Colombia

Abstract Body:

Background: A 75-year-old male with a history of well-controlled hypertension and no evidence of target organ damage.

Case: The patient presented to an otolaryngologist with a 4-month history of macroglossia, preventing him from closing his mouth properly. Initial management with antihistamines was ineffective. A year prior, the patient had bilateral carpal tunnel release surgery. At the same time, he was under cardiology assessment for persistent hypotension, leading to the discontinuation of antihypertensive therapy. He also exhibited new onset left ventricular hypertrophy and proteinuria despite optimal blood pressure control. Further evaluation of the proteinuria revealed non-albuminuric proteinuria and a monoclonal spike on serum protein electrophoresis. Comprehensive serum, imaging, and histopathological investigations confirmed a diagnosis of light chain (AL) amyloidosis with cardiac involvement.

Decision-making: AL amyloidosis is an uncommon systemic disorder with a diverse range of symptoms and signs that affects multiple organ systems, leading to significant delays in diagnosis. Clinical manifestations such as macroglossia occur in 10-20% of cases, cardiac involvement in 50-60%, and

proteinuria in 20-30% of cases. Studies indicate that about 10% of patients undergoing carpal tunnel release surgery have amyloid deposits, suggesting that carpal tunnel syndrome may be an early indicator of the disease. In this case, the presence of unexplained left ventricular hypertrophy is another isolated finding indicative of amyloidosis.

Conclusion: Recognizing isolated signs of amyloidosis, such as macroglossia, carpal tunnel syndrome, unexplained left ventricular hypertrophy and proteinuria, is crucial for the early detection of this systemic disease. Early identification and diagnosis can significantly impact patient survival outcomes.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 38

Topic 1: Multimodality Imaging

Publishing Title: THE UNSEEN CULPRIT UNRAVELED: INTERPRETING CARDIAC MRI IN MYOCARDIAL INFARCTION WITH NON-OBSTRUCTIVE CORONARY ARTERIES

Author Block: Eddiana Colon, Marcos Alejandro Rodríguez Almonte, Derys Valerio, Aramis E. Gomez, Christopher Luna Estrella, Daniel Alejandro Rivera, Clinica Universitaria Union Medica del Norte, Santiago de los Caballeros, Dominican Republic, Cenicardio, Santiago de los Caballeros, Dominican Republic

Abstract Body: **Background:** Cardiac magnetic resonance imaging (CMRI) has become pivotal in the diagnostic armamentarium for ischemic heart disease guiding therapeutic decision-making and risk stratification.

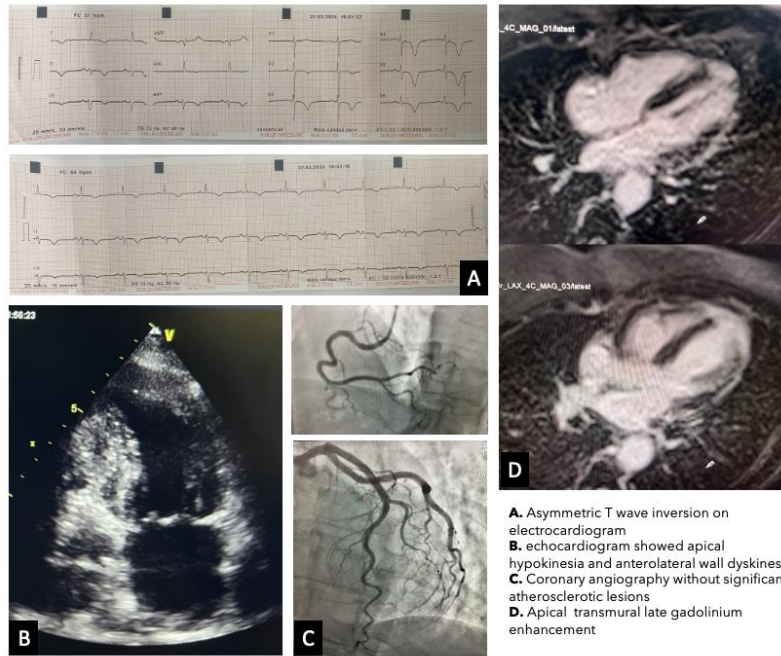
Case: A 61-year-old female with 1 year of sporadic, sudden onset severe chest pain (CP) at rest leading to multiple emergency room visits and hypertension presented with a 3-day history of CP. Electrocardiogram findings revealed asymmetric negative T waves on anterolateral (V2-V6, I, and aVL) and inferior leads (aVF, II, and III), along with an elevated Troponin T level of 391 pg/ml.

Echocardiography revealed apical hypokinesia and anterolateral wall dyskinesia. Emergency coronary angiography showed the main epicardial coronary arteries to be devoid of significant atherosclerotic lesions, microvascular disease was considered.

Decision-making: After admission in the Cardiac Intensive Care Unit Cardiac CMRI showed transmural apical late gadolinium enhancement concerning for LAD and diagonal branch territory coronary artery disease. Upon initiating treatment with calcium channel blockers, her anginal episodes resolved.

Conclusion: As a critical diagnostic resource, CMRI assumes a central role in the examination of ischemic heart disease, particularly when pinpointing the

definitive cause of chest pain presents challenges. This essential role influences subsequent strategic decisions in patient. care.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 39

Topic 1: Multimodality Imaging

Publishing Title: CORONARY ARTERY ANOMALY: A RARE CAUSE OF ANGINA

Author Block: Juan Carlos Maldonado Chang, Fabio Enrique Parada Cabrera, GUSTAVO SOTO MORA, Hospital Roosevelt, Guatemala, Guatemala

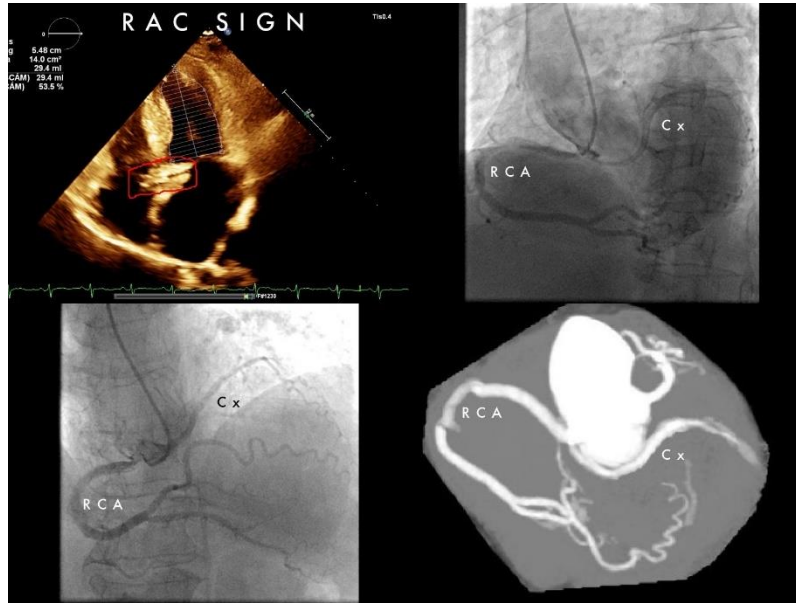
Abstract Body: **Background:** Anomalous coronary arteries represent a congenital disorder with an anomalous location of the coronary ostium, vascular course and/or origin. Multimodality imaging techniques play a pivotal role in the assessment of this individuals

Case: 79-year-old female with known history of hypertension and diabetes was admitted with atypical angina of 1 month, associated with dyspnea, on the electrocardiogram subepicardial ischemia was evidenced and then was referred. On admission, an echocardiogram was performed, no contractility disorders and a tubular image located on the atrial side of the atrioventricular groove. A coronary angiography was performed, and follow-up was defined with the findings.

Decision-making: In the catheterization laboratory, anomalous origin of the left circumflex artery from the ostium of the right coronary artery, without angiographic lesions. Coronary CT angiography was performed to better characterization, showing benign retroarctic course. Then, a study is carried out to rule out ischemia, which resulted negative, and medical treatment and follow-up were given.

Conclusion: Diagnosis of anomalous coronary arteries should not automatically mandate surgery, any presumed benefits should be carefully balanced. Decisions toward patient management should incorporate clinical

information, age, and possible hemodynamical significance and high-risk features depicted by multimodality imaging, that plays a crucial role in the evaluation



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 40

Topic 1: Multimodality Imaging

Publishing Title: CORONARY PLAQUE BURDEN & TYPES IN KIDNEY TRANSPLANT CANDIDATES: A CROSS-SECTIONAL STUDY

Author Block: Rigüey Cecilia Mercado Marchena, Zenen Rua, Bryan David Hernandez Nieto, Jeison Torrens, Alberto Cadena-Bonfanti, David Camargo-Solano, Henry González-Torres, Manuel Urina-Triana, Miguel A. Urina-Triana, Faculty of Health Sciences, Simón Bolívar University, Barranquilla, Colombia, Department of Cardiology, Clínica de la Costa, Barranquilla, Colombia

Abstract Body: **Background:** Chronic kidney disease (CKD) patients on renal transplant waiting list are at high risk for coronary artery disease (CAD). This study describes coronary plaque burden and types using coronary CT angiography (CTA) in CKD patients awaiting renal transplantation.

Methods: A cross-sectional, retrospective study reviewed data from CKD patients on renal transplant waiting list at a hospital in Barranquilla, Colombia, from 2021 to 2022. Eighty patients over 40 years old with CTA results were included. Coronary plaque burden and types were categorized using CAD-RADS. An imaging cardiologist expert reviewed all studies.

Results: Among 80 patients (60% male, mean age 56 years old), 38% had no coronary stenosis. Of those with stenosis, 40% had CAD-RADS 1 and 34.6% had CAD-RADS 4. Plaque burden was mild (≤ 2 segments) in 53%, moderate (3-4 segments) in 26%, severe (5-7 segments) in 12.2%, and extensive (≥ 8 segments) in 8%. Fibrolipidic plaques were predominant in the proximal right coronary artery (66%) and left anterior descending artery (LAD) (50%). Fibrocalcific plaques were mainly in the medial segment of the LAD (100%).

Conclusion: Renal transplant candidates exhibited various coronary plaques

types, predominantly calcific and NHRP fibrolipidic and fibrocalcific. The significant prevalence of calcified plaques underscores the need for thorough cardiovascular evaluation. These findings highlight the importance of coronary CTA in evaluation of CAD in renal transplant candidates.

Table 1: Relationship between coronary plaque burden and types according to artery segments in kidney transplant candidates (n=80).

Artery	Segments	Plaque Burden	Plaque Type					p
			Fibrolipidic		Fibrocalcific		Calcific	
			NHRP	HRP	NHRP	HRP	NHRP	
RCA	Proximal (1)	Mild	2 (66,67%)	-	-	-	4 (57,14%)	0,1610
		Moderate	-	1 (100,00%)	2 (28,57%)	-	1 (14,29%)	
		Severe	-	-	2 (28,57%)	-	2 (28,57%)	
		Extensive	1 (33,33%)	-	3 (42,86%)	-	-	
	Medial (2)	Mild	2 (50,00%)	-	-	-	2 (40,00%)	0,3230
		Moderate	1 (25,00%)	-	2 (25,00%)	-	1 (20,00%)	
		Severe	1 (25,00%)	-	4 (50,00%)	-	2 (40,00%)	
		Extensive	-	-	2 (25,00%)	1 (100,00%)	-	
	Distal (3)	Mild	-	-	-	-	1 (50,00%)	0,8286
		Moderate	1 (50,00%)	-	-	1 (100,00%)	1 (50,00%)	
	Posterior descending artery (4)	Severe	1 (50,00%)	-	2 (100,00%)	-	-	1,0000
		Extensive	1 (100,00%)	-	-	-	1 (100,00%)	
LAD	Proximal (6)	Mild	1 (50,00%)	-	6 (35,29%)	1 (100,00%)	7 (50,00%)	0,9136
		Moderate	-	2 (100,00%)	5 (29,41%)	-	3 (21,43%)	
		Severe	1 (50,00%)	-	3 (17,65%)	-	3 (21,43%)	
		Extensive	-	-	3 (17,65%)	-	1 (7,14%)	
	Medial (7)	Mild	1 (100,00%)	1 (100,00%)	1 (20,00%)	-	3 (42,86%)	0,3373
		Moderate	-	-	2 (40,00%)	-	2 (28,57%)	
		Severe	-	-	-	-	2 (28,57%)	
		Extensive	-	-	2 (40,00%)	-	-	
	Distal (8)	Moderate	-	-	-	-	1 (100,00%)	1,0000
		Severe	-	-	1 (100,00%)	-	-	
	First Diagonal (9)	Severe	1 (100,00%)	-	-	-	1 (16,67%)	0,4286
		Extensive	-	-	-	-	4 (66,67%)	
	Second Diagonal (10)	Severe	-	-	1 (100,00%)	-	1 (25,00%)	0,4000
		Extensive	-	-	-	-	3 (75,00%)	
LCX	Proximal (11)	Mild	1 (100,00%)	-	1 (12,50%)	-	1 (9,09%)	0,5809
		Moderate	-	-	3 (37,50%)	-	4 (36,36%)	
		Severe	-	-	2 (25,00%)	-	5 (45,45%)	
		Extensive	-	-	2 (25,00%)	-	1 (9,09%)	
	First Obtuse marginal (12)	Mild	1 (100,00%)	-	-	-	1 (100,00%)	0,0667
		Moderate	-	-	-	-	-	
		Severe	-	-	2 (50,00%)	-	-	
		Extensive	-	-	2 (50,00%)	-	-	
	Distal (13)	Severe	2 (100,00%)	-	-	-	1 (50,00%)	0,6000
		Extensive	-	-	2 (100,00%)	-	1 (50,00%)	
	Second Obtuse marginal (14)	Severe	1 (100,00%)	-	-	-	-	1,0000
		Extensive	-	-	-	-	-	
	Posterior descending (15)	Moderate	1 (100,00%)	-	-	-	-	0,3333
		Extensive	-	-	2 (100,00%)	-	-	
IMB (16)		Mild	-	-	-	-	1 (25,00%)	0,7333
		Moderate	-	-	-	-	2 (50,00%)	
		Severe	-	-	1 (50,00%)	-	-	
		Extensive	-	-	1 (50,00%)	-	1 (25,00%)	
LM (5)		Mild	-	-	1 (50,00%)	-	3 (27,27%)	0,7949
		Moderate	-	-	-	-	2 (18,18%)	
		Severe	-	-	-	-	4 (36,36%)	
		Extensive	-	-	1 (50,00%)	-	2 (18,18%)	

NHRP: Non-High-Risk Plaque; HRP: High-Risk Plaque; RCA: Right Coronary Artery; LAD: Left Anterior Descending Artery; LCX: Left Circumflex Artery; IMB: Intermediate Branch; LM: Left Main.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 41

Topic 1: Prevention and Health Promotion

Publishing Title: CARDIAC REHABILITATION AND THE DILEMMA BETWEEN KNOWING A THERAPY AND NOT HAVING IT FOR THE BENEFIT OF PATIENTS

Author Block: Francina Frías, HEMMI, Santiago, Dominican Republic, Clínica Brugal Mejía López, Puerto Plata, Dominican Republic

Background: Cardiac rehabilitation programs are designed to accelerate the recovery of patients with cardiovascular events (myocardial infarction, myocardial revascularization, heart transplant or hospitalization for heart failure) with the aim of improving quality of life.

Methods: In order to describe the knowledge, attitudes and practices on cardiovascular rehabilitation of cardiologists in the Dominican Republic. This research was descriptive-prospective in nature. A universe of 36 respondents, according to inclusion criteria. The sample was represented by 100% of the universe, the technique used collected information using a questionnaire administered to specialists in the cardiology area.

Abstract Body:

Results: 91.7% aware of cardiovascular rehabilitation centers in the country. 94.4% stated that the post-AMI indication according to the AHA for cardiovascular rehabilitation is Class I. 97.2% established that patients after cardiovascular revascularization had criteria for cardiovascular rehabilitation referral. 100% know cardiovascular rehabilitation approaches. The understanding about the activities that involve cardiovascular rehabilitation was 100% understood as exercise advice and education. 47.2% discovered that they had knowledge about the duration, frequency and intensity of physical training. 83.3% state that it is very effective. Lack of coverage by health risk insurers is 80.6% thought to be the main obstacles to

implementing the programs. 91.7% disagree about the cost-effectiveness of the therapies. 55.6% reported being familiar with the rehabilitation guidelines. 27.8% expressed that they always refer to patients who qualify. 75% reported having knowledge about the patient referral process to the program. According to the distribution of the progress evaluation of patients referred to the program, 91.4% established that they improved exercise tolerance.

Conclusion: Although 100% of the doctors interviewed know cardiovascular rehabilitation approaches, we must develop guidelines and proposals to achieve better insurance coverage and expand the number of cardiovascular rehabilitation centers.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 42

Topic 1: Prevention and Health Promotion

Publishing Title: LONG-TERM MECHANICAL CIRCULATORY SUPPORT: THE CONSTANT NEED TO BE CONNECTED DESPITE GEOGRAPHIC BARRIERS IN COLOMBIA

Author Block: maria fernanda tamayo tamayo, Natalia Pineda Avellaneda, Carlos Miguel Santacruz Escudero, Maria Juliana Rodriguez Gonzalez, Fundación Cardioinfantil-LaCardio, Bogotá, Colombia

Abstract Body:

Background: Knowing the important role of the nurse in advanced heart failure that include LVAD patients and Knowing the need to close gaps between implantation time and complications; I describe the path in a reference center (RC) for heart failure (HF) in Colombia.

Case: 57 y/o man diagnosed with Chagasic Cardiomyopathy with advanced HF, his Echo showed biventricular dysfunction, No aortic valve disease. non-reactive pulmonary hypertension, referred for LVAD implantation. Patient remained hospitalized 2 months with inotropic support. Heart Team decided to implant a LVAD. Because social condition, patient residency far from our RC and need to be connected to other Cardiovascular center (CC), we carry out an education and first aid route outside our RC.

Decision-making: After recovery, rehabilitation, patient was ready to go home but challenge began. The nurse team started to work in ways getting educated the community and hospital staff, where patient belongs to. Our team needed to spread awareness and knowledge about medical management, complications and treatments to reassure the patient would receive the best care and support. The gap existed in the remote management of the emergencies of LVAD patients. The multidisciplinary team led by nurse began to plan follow-up, make his health insurance

understood the emergency route to get full coverage due to place of living. We build cardiovascular network between our RC and CC involved. Medical staff, nurses and administrative staff were trained in emergency route to transfer the patient and maintain cardiovascular follow-up. A path was created for emergency calls. Electrical networks, aqueduct systems and access roads were evaluated.

Conclusion: LATAM countries approach therapies in different ways due to health differences.

Despite geographical barriers, networks implementation make therapies successful and reachable; expanding knowledge about advanced therapies in management of HF. Education by nurses is essential to spread knowledge about the device and its complications to health providers and families. This guarantees re-integration of patient to his environment. First network reported in Colombia for shared treatment of Advanced HF

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 43

Topic 1: Prevention and Health Promotion

Publishing Title: COMPLEX CONGENITAL HEART DISEASE AND VERY HIGH-RISK PREGNANCY: A CALL FOR ACTION.

Author Block: Isaac Espinosa Caleti, Ricardo Sánchez Moreno, Stephanie Teresa Angulo Cruzado, Jorge Sanchez, Miriam Guadalupe Zuñiga Salcedo, Yessenia Máyory Téllez López, Edgar Garcia, Instituto Nacional de Cardiología Ignacio Chávez, Ciudad de México, Mexico, Ciudad de México

Abstract Body: **Background:** Eisenmenger syndrome is a rare and serious complication of congenital heart defects with high maternal mortality in pregnancies. **Case:** A 37-year-old woman with a history of Patent Ductus Arteriosus (PDA) and Eisenmenger syndrome, previously with three uncomplicated pregnancies, was transferred to the INC from the INPER at 32 weeks of pregnancy for resolution with sildenafil and iloprost treatment. Physical examination revealed a systolic murmur, peripheral cyanosis, clubbing fingers, and reduced oxygen saturation. Her vital signs were BP 105/56 mmHg, HR 73 bpm, RR 18 rpm, and SpO2 81%. Laboratory results showed creatinine 0.55 mg/dl, NTproBNP 2309 pg/ml, and D-dimer 2060 ug/ml. A cesarean section was performed following pulmonary maturation, resulting in the birth of a healthy baby. Within 24 hours post-cesarean, the patient experienced dyspnea and reduced oxygen levels. Ultrasound and X-ray indicated venocapillary hypertension, suggesting pulmonary edema due to vasodilators. Sildenafil and iloprost were discontinued, leading to improvement, and the patient was discharged. A month later, she was readmitted for progressive dyspnea and headache, suspected of pulmonary embolism. An echocardiogram and CT pulmonary angiogram revealed an

additional Atrial Septal Defect (ASD) and abnormal pulmonary vein connection. She is now in functional class I and is under follow-up at the Adult Congenital Heart Disease (ACHD) clinic.

Decision-making: Eisenmenger syndrome poses high risks during pregnancy, with mortality rates exceeding 80% for patients with oxygen saturations below 85%. In our ACHD population, 55% of women have become pregnant, and 25% had Pulmonary Arterial Hypertension (PAH).

Conclusion: A multidisciplinary approach is essential to reduce obstetric risks and improve outcomes for both mother and fetus. Not all Eisenmenger syndrome patients tolerate pulmonary vasodilators, especially those with multiple shunts or ventricular dysfunction. Effective family planning and counseling should address pregnancy risks in ACHD patients with PAH.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 44

Topic 1: Prevention and Health Promotion

Publishing Title: ACUTE MYOCARDIAL INFARCTION IN A YOUNG MAN SECONDARY TO ANTIPHOSPHOLIPID SYNDROME; CASE REPORT-MANAGEMENT IN SECONDARY PREVENTION

Author Block: Jose Valentin Gonzalez-Iniguez, Guillermo Llamas-Esperon, SR, Montserrat Ramirez Moreno, Derek Harrison-Rangle, Francisco Javier Campos-Hernandez, Eduardo Nieves-Paredes, Daniel Gamez-Gonzalez, Juan Antonio Robles-Jaime, Hospital Cardiologica Aguascalientes, Aguascalientes, Mexico

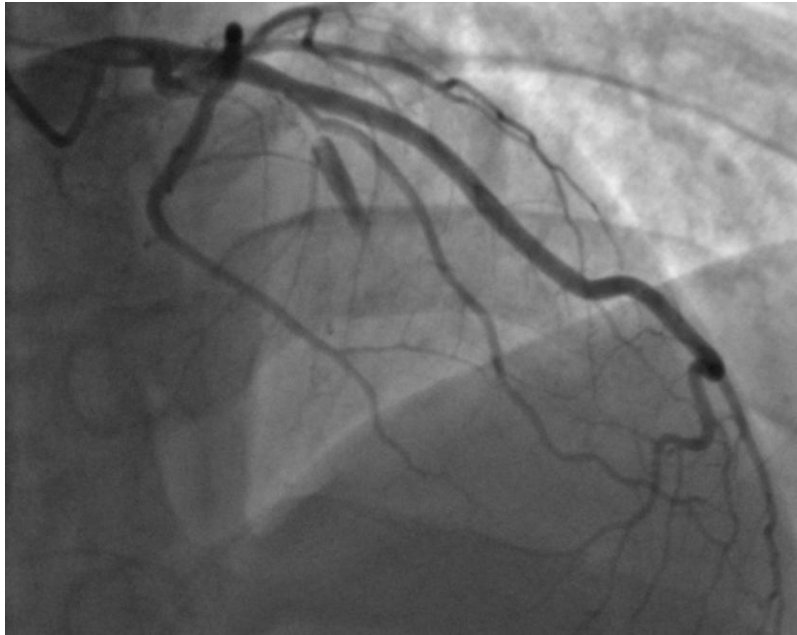
Abstract Body: **Background:** In young patients presenting with thrombosis and no apparent risk factors, coagulation disorders should be considered. Antiphospholipid syndrome (APS) has a relatively low prevalence among male patients. We will present a case of myocardial infarction (MI) secondary to APS and discuss its management in secondary prevention.

Methods: A 30-year-old male, without significant medical history, reporting dyspnea, angina and diaphoresis, in EKG elevation of the ST segment in V1-V4, Coronary CT angiography showed a lesion with an image suggestive of a thrombus in the left anterior descending artery. Cardiac catheterization showed total occlusion with an image of thrombus. Patient with positive antibodies for APS were reported.

Results: APS is a coagulation disorder that manifests with venous and arterial thrombosis. A systematic review included 40 patients with acute MI secondary to APS, of whom 33 patients were classified as first thrombotic event, MI was the first presentation of APS in 80% of these cases.

Conclusion: Warfarin is an oral anticoagulant that has long been used in the treatment and prevention of blood clots in people with APS. DOACs, are newer

alternatives to warfarin, although their routine use has not yet been fully established. Evidence suggests that DOACs are less effective than warfarin for recurrent thrombosis prevention in patients with APS, especially in those with a history of arterial events. However, the use of DOACs may be reasonable in a few selected cases.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 45

Topic 1: Prevention and Health Promotion

Publishing Title: ACUTE MYOCARDIAL INFARCTION IN YOUNG ADULTS IN A UNIVERSITY HOSPITAL IN BOGOTÁ, COLOMBIA

Author Block: HERNAN RAMIREZ, Juan Francisco Figueroa, Andres Felipe Buitrago, Fundacion Santa Fe de Bogota, Bogota, Colombia

Background: Understanding the characteristics of young adults with acute myocardial infarction helps identify their most common risk factors and highlights differences from older patients. This knowledge is crucial for improving prevention strategies and treatment outcomes for this specific population.

Methods: An observational, retrospective cohort study was conducted. Patients with acute myocardial infarction (AMI) from November 2019 to June 2023 were included and compared by age groups. Risk factors, characteristics of coronary disease, and outcomes were analyzed. This study aims to evaluate cardiovascular mortality outcomes, current incidence, risk factors, clinical presentation, and differences in care in patients under 50 years of age.

Abstract Body:

Results: Patients under 50 with AMI had lower rates of diabetes, smoking, dyslipidemia, hypothyroidism, obstructive sleep apnea, and chronic kidney disease compared to those aged ≥ 65 . Younger patients had higher average weights (80 kg vs. 70 kg) and BMIs (27 kg/m^2 vs. 25 kg/m^2). STEMI occurred in 45% of cases, and NSTEMI in 55%. Most patients were classified as Killip-Kimball class I. Nearly all patients underwent coronary angiography. The average door-to-balloon time for STEMI was 87 minutes, while NSTEMI patients had angiography within 16 hours. The median door-to-balloon time

for young adults under 50 was 111 minutes, compared to 70 minutes for adults over 65. Significant lesions in two or more vessels were found in 21% of patients, with severe left main coronary artery involvement in 2%. No significant coronary lesions were documented in 12% of angiographies, with 58% of these showing ectasia or slow flow. Thrombotic occlusion was more common in younger patients (47%). Younger patients were less likely to receive stent or balloon angioplasty.

Conclusion: The rate of AMI was inferior in individuals under 50 years of age. The vast majority of young patients received all recommended secondary prevention medications, aligning with standards seen in international reference centers. These results underscore the importance of emphasize the crucial role of counseling in preventing future adverse events.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 46

Topic 1: Prevention and Health Promotion

Publishing Title: IMPACT OF DENTAL PLAQUE ON THE OUTCOMES OF CARDIOVASCULAR INTENSIVE CARE UNIT PATIENTS

Author Block: José Manuel Reynoso Ortiz, SR, Jesus D. Escobar García, Dolores Mejia De La Cruz, Pura M. Henriquez, Karla M. Disla Pineda, Lia M. Chaddy Báez, Hospital General Plaza de la Salud, Santo Domingo, Dominican Republic

Background: Periodontal disease (PD) and Coronary Artery Disease (CAD) are a growing clinical problem. Dental plaque in PD has been linked to atherosclerotic plaque formation, a leading cause of CAD. This study aimed to identify the potential impact of dental plaque presence on the outcomes of cardiovascular intensive care unit (ICU) patients and its relation with CAD in the Dominican population.

Methods: Cross-sectional study, conducted in April 2024, based on patient surveys and periodontal evaluations in the Cardiovascular ICU at Hospital General Plaza de la Salud in Santo Domingo, Dominican Republic.

Abstract Body: **Results:** A total of 40 patients were examined. Their mean age was 57.9 years (SD 13.0), with 52.5% (21/40) men and 47.5% (19/40) women. 77.5% (31/40) were identified with dental plaque and spent a mean of 7.97 days (SD 5.78) in the Cardiovascular ICU. In contrast, patients without dental plaque had a mean stay of 5.71 days (SD 4.57). CAD was present in 77.4% (24/31) of patients with dental plaque, compared to 33% (3/9) of patients not exhibiting plaque. The most common admission diagnoses on patients with dental plaque were: Non-ST-elevation myocardial infarction, 32.3% (10/31); ST-elevation myocardial infarction, 16.1% (5/31); and unstable angina 9.7% (3/31). Regarding the group with dental plaque, patients with CAD had the

following prescriptions: statins, 58.1% (18/31); antidiabetics, 48.4% (15/31); antihypertensives, 74.2% (23/31); and anticoagulants or antiplatelet agents, 51.6% (16/31). Additionally, smoking history was noted in 22.6% (7/31) of cases, and 45.2% (14/31) acknowledged alcohol intake.

Conclusion: In this group of patients, dental plaque was associated with CAD and a longer time in the Cardiovascular ICU. However, further studies are needed.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 47

Topic 1: Interventional and Structural

Publishing Title: RARE PRESENTATION OF ACUTE THROMBOTIC OCCLUSION STATUS POST PERCUTANEOUSTRANSLUMINAL CORONARY ANGIOPLASTY WITH THROMBUS EXTRACTION UNDERGOING TRANSCATHETER AORTICVALVE REPLACEMENT (TAVR).

Author Block: Xavier Delgado Lopez, Christian O. Camacho Ramirez, Freddy Madera, Mayaguez Medical Center, Mayaguez, PR

Abstract Body: **Background:** Aortic stenosis (AS) is caused by progressive calcification of the valve and is the most common cause of left ventricular outflow tract obstruction. Surgical aortic valve replacement has been the standard treatment for patients with severe symptomatic AS. Previously, patients determined to be at high risk for surgery could only be offered diuretics and balloon valvuloplasty, which served as palliative treatment and had no effect on long-term outcomes. The development of transcatheter aortic valve replacement (TAVR) has emerged as a lifeline for patients considered to be inoperable providing both improvement in symptoms and statistically significant mortality benefit.

Case: Case of a 74 years-old male patient with past medical history of AS, Hypertension, Coronary Artery Disease, Chronic Kidney Disease, Morbid Obesity, Diabetes Mellitus type II. A 2D-Echocardiogram and a Cardiac CT-scan angiogram as part of pre TAVR procedure screening, showed Severe aortic stenosis with moderate aortic annulus calcification extending into the Left Ventricular Outflow Tract. During Valvuloplasty for TAVR procedure a clot was detached occluding the Left main Artery, the patient became severely hypotensive unresponsive to vasopressor therapy subsequently developed

cardiac arrest with ventricular tachycardia treated with electrical cardioversion.

Decision-making: Coronary angiography performed that showed thrombotic occlusion of the LM, required guidewire advancement and PTCA for clot retrieval which was successfully achieved. Rapidly angiography performed with stent placement restoring flow to all vessels with no residual clot and the decision to continue with valve placement was made. After procedure patient showed to be hemodynamically stable for which was transferred to Cardiac Care Unit for 24 hours of continuous monitoring. Guideline-directed medical therapy was recommended.

Conclusion: As with any medical procedure, there are certain risks associated with such a lifesaving procedure, and we saw how our cardiovascular team reacted and executed appropriate management without harming the patient's health, avoiding a fatal outcome.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 48

Topic 1: Interventional and Structural

Publishing Title: SUCCESSFUL TRANSCAROTID ACCESS FOR TAVR, A CASE REPORT.

Author Block: Christian Juarez-Gavino, Jahir Rodriguez-Rivera, Juan Alberto Quintanilla, Jaime Alberto Guajardo Lozano, Vicente Jimenez-Franco, Guillermo Torre-Amione, Pedro Echeverria, José Alfredo Salinas-Casanova, Jorge Joya, Monica Flores, Daniel Lira-Lozano, Juan Carlos Ibarrola-Pena, Marisol Molina-Aviles, Christian Camacho-Mondragon, Carlos Jerjes Sánchez, Hospital Zambrano Hellion, TecSalud, Monterrey, Mexico

Abstract Body:

Background: Transfemoral is the preferred access for TAVR. However, peripheral artery disease (PAD) often precludes this approach. Transcarotid access is a feasible alternative, and no reports exist of its use in our country. Possibly, we report the first transcarotid TAVR case in Mexico.

Case: A 76-year-old male presented to cardiology consult for preoperative evaluation. Past medical history included PAD with a left carotid stent and CABG for ischemic heart disease. Evaluation revealed previous syncope and a mid-systolic aortic murmur, leading to the diagnosis of a D2 aortic stenosis. CT angiography reported severe stenosis of both common iliac arteries, preventing a transfemoral TAVR. The Heart Team deemed left carotid access as the most appropriate approach.

The surgical team performed a left cervical incision for carotid access. Next, we proceeded with the transcatheter implantation of a self-expanding aortic valve. Transesophageal echocardiography showed adequate positioning and no significant regurgitation. The carotid access was surgically closed.

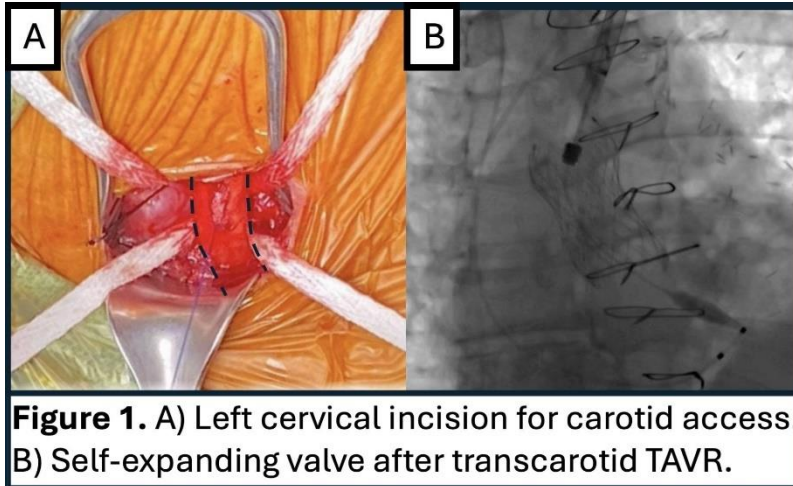


Figure 1. A) Left cervical incision for carotid access.
B) Self-expanding valve after transcatheter TAVR.

Decision-making: For this patient, transfemoral access was not possible. The team considered transapical and transaortic approaches more invasive and discarded transaxillary access due to the small artery diameter.

Conclusion: To the best of our knowledge, this report presents the first transcatheter access for TAVR in Mexico. Although the procedure succeeded, further experience should be obtained by routinely performing this technique.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 49

Topic 1: Interventional and Structural

Publishing Title: TRANSCATHETER AORTIC VALVE IMPLANTATION (TAVI): A CASE STUDY WITH AORTIC VALVE DISEASE

Author Block: Guillermo Barros, Carlos H. Cotes Aroca, Franco J. Vallejo García, Daniel Porto, Carlos Renowitzky, Manuel E. Urina Triana, Zenen Rua, Miguel A. Urina-Triana, Faculty of Health Sciences , Simón Bolívar University, Barranquilla - Colombia, Colombia, Clinica Centro, Barranquilla, Colombia, Colombia

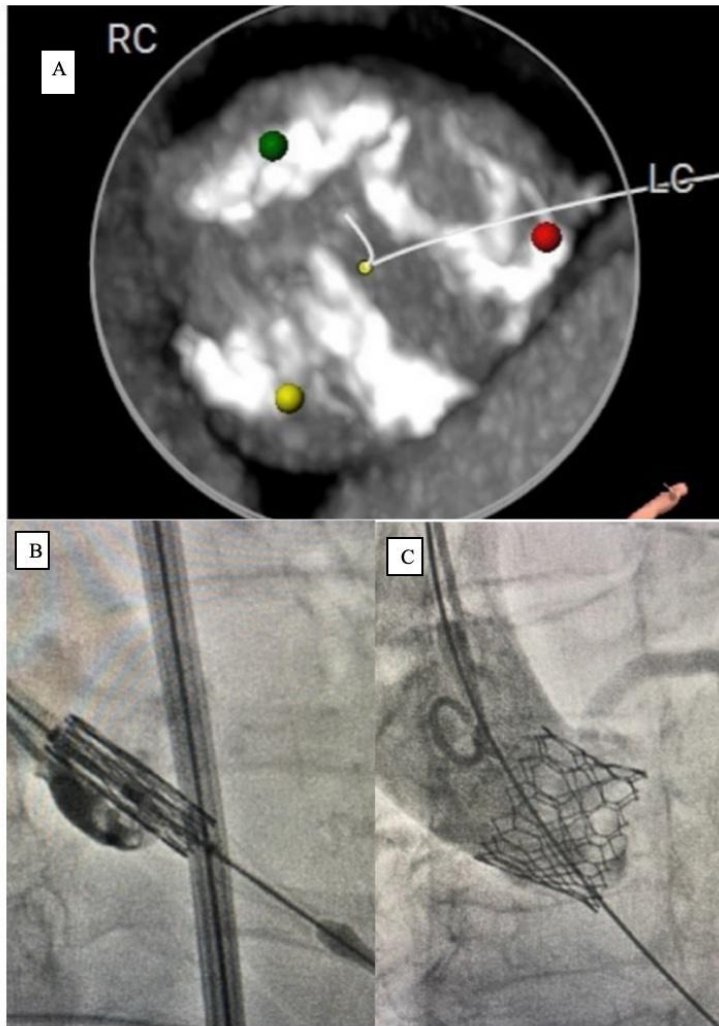
Abstract Body:

Background: Transcatheter aortic valve implantation (TAVI) has emerged as an effective and safe therapeutic option for patients with severe aortic stenosis who are not candidates for conventional aortic valve replacement surgery.

Case: A 75 year old female, who consulted due to dyspnea of one month's duration, associated with chest pain in the last few hours. TTE and TEE showed a trileaflet aortic valve with severe annular and valves calcification and restrictive opening movement, PG 92 mmHg (velocity 4.8 m/sec) and MG 56 mmHg with aortic valvular area of 0.4 cm² (continuity equation), associated with central regurgitation jet classified as moderate in different Doppler modalities, generalized hypokinesis, LVEF 29%. Coronary angiogram showed epicardial arteries without significative obstructive lesions. Diagnosed with severe aortic stenosis and moderate aortic insufficiency, given her fragility, she was considered not a suitable candidate for conventional aortic valve replacement surgery. The patient underwent successful TAVI. Patient experienced immediate symptomatic improvement.

Decision-making: The presentation of this clinical case highlights the importance of TAVI as a suitable option for patients with severe aortic stenosis and high surgical risk.

Conclusion: The case presented highlights the positive impact of TAVI on severe aortic stenosis patients and high surgical risk stratification, leading to an improvement of quality of life.



A: CTA with severe aortic leaflet calcification. **B:** Placement of catheter in position for TAVI implantation in hemodynamics laboratory. **C:** Results after TAVI implantation in aortic position without complications.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 50

Topic 1: Interventional and Structural

Publishing Title: SEVERE AORTIC COARCTATION WITH SUBVALVULAR AORTIC STENOSIS AND A BICUSPID AORTIC VALVE IN A 23-YEAR-OLD PATIENT

Author Block: Karen Lorena Castillo Soto, Luis A. Arboine Aguirre, Eva Palacios, Jose A. Peña Peña, Jorge Alberto Meza Chacon, Unidad Medica de Alta Especialidad No 34, Dr. Alfonso J. Trevino Trevino, IMSS, Monterrey, Mexico

Abstract Body:

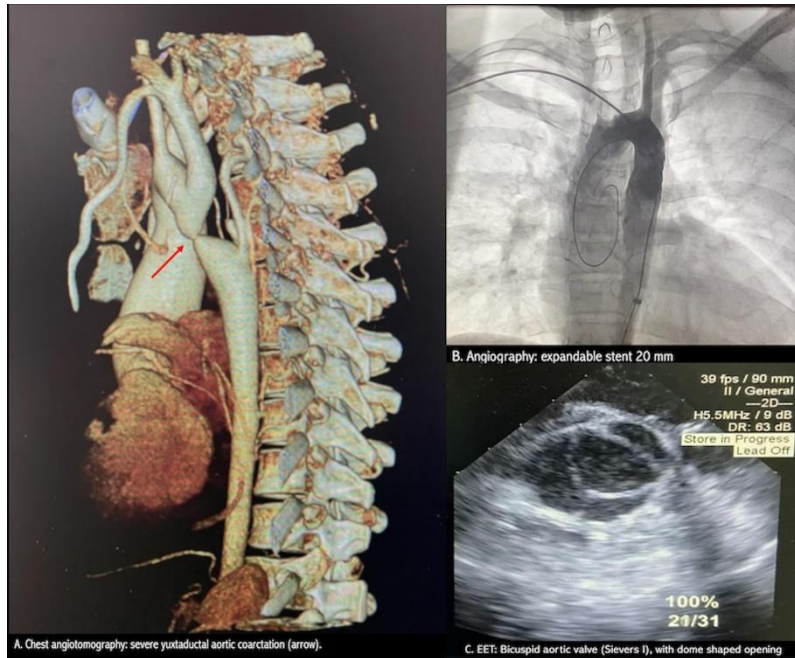
Background: A 23-year-old male with history of systemic arterial hypertension, as well as a history of smoking, cannabis, and methamphetamine use.

Case: The patient presented with near-fainting and dyspnea. Differential systolic blood pressure measurements showed 180 mmHg in the arm and 109 mmHg in the leg. Transthoracic echocardiography revealed a subaortic ridge measuring 10 x 5 mm, with obstructive gradients (peak velocity of 4.8 m/s and a mean gradient of 58 mmHg). The aortic valve area was 2.2 cm² with moderate regurgitation. Aortic coarctation was noted with an obstructive gradient in the descending aorta, a peak velocity of 3.6 m/s, and a peak gradient of 54 mmHg. Chest CT angiography showed fusiform dilatation of the ascending aorta. The left aortic arch presented severe juxtaductal aortic coarctation and a lumen diameter of 7 mm with post-stenotic dilation and extensive arterial collateral formation (image A).

Decision-making: Angiography revealed a baseline gradient of 56 mmHg. A 20 mm balloon-expandable stent was implanted successfully (image B). A week later, a successful resection of the fibromuscular ridge was performed. Additionally, confirmation of a bicuspid aortic valve with a dome-shaped opening was obtained via transesophageal echocardiogram (image C).

Conclusion: This combination of congenital anomalies is rare, and treatment

typically involves correcting both anomalies through balloon angioplasty, resection and anastomosis surgery, or a combination of procedures.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 51

Topic 1: Interventional and Structural

Publishing Title: A HIDDEN THREAT: RUPTURED SINUS OF VALSALVA ANEURYSM IN A PATIENT WITH UNDERLYING CARDIOVASCULAR COMPLEXITY

Author Block: Karla Marie Garcia Almonte, José Eduardo Fuentes, Claudia Suero, Ana Paula Ureña Neme, Bradly Garcia, Sebastian Manosalvas, Héctor Pantaleón, Jorge Tarafa, Eduardo Lomba, Eliany Mejia Lopez, Medicina Cardiovascular Asociada (MCA), Santo Domingo, Dominican Republic

Abstract Body: **Background:** Rupture of a sinus of Valsalva aneurysm is a rare, life-threatening cardiac anomaly requiring prompt diagnosis and surgical intervention. Management depends on the rupture's anatomical location and pathways. Detailed imaging and interdisciplinary strategies are crucial.

Case: A 38-year-old male with a history of tobacco use, multiple sclerosis, bacterial endocarditis, ventricular tachycardia, and aborted sudden death presented with palpitations. TTE showed severe aortic root dilation, perimembranous ventricular septal defect with left-to-right shunt, bicuspid aortic valve, concentric left ventricular hypertrophy with an EF of 67%, mild right heart dilation and moderate pulmonary hypertension.

Decision-making: Due to uncertainty regarding the underlying mechanism of his presentation coronary angiotomography was requested, which revealed a ruptured right sinus of Valsalva aneurysm into the right ventricular outflow tract, membranous ventricular septal defect, and aortic annuloectasia. Due to the case's complexity, cardiac surgery was deemed necessary to repair the ruptured sinus of Valsalva aneurysm and the ventricular septal defect. Post-surgery, a subcutaneous implantable cardioverter-defibrillator would be considered.

Conclusion: Ruptured sinus of Valsalva aneurysms require high suspicion for timely diagnosis and intervention. Prompt surgical repair, multidisciplinary collaboration, and expertise are key to managing complex cardiac anomalies.



Figure 1. (A-B) CCTA shows a rupture of the right coronary sinus into the right ventricular outflow tract. (C) This 3D-VRT image shows the rupture of the right coronary sinus. CCTA: Cardiac Computerized Tomography Angiogram, VRT: Volume rendering technique.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 52

Topic 1: Interventional and Structural

Publishing Title: BRIDGE TO RECOVERY: CASE REPORT OF PERCUTANEOUS TRANSCATHETER CLOSURE OF POST-INFARCTION VENTRICULAR SEPTAL DEFECT

Author Block: Edgardo Bobadilla, José G. Sánchez, Guillermo Rodriguez Zavala, Hector Flores Salinas, Ricardo Saucedo, Francisco Lara, Evelin G. Gómez, Abel Salvador Becerra Flores, Natalia Jaime, Héctor A. Flores, Alonso Morales, Cesar M. Guzman, José B. Reyes, Jorge G. Delgado, Centro Médico Nacional de Occidente, Guadalajara, Jalisco, Mexico

Background: A 75-year-old woman with a four year history of type 2 diabetes mellitus, arterial hypertension and overweight

Case: The patient presented retrosternal chest pain, exacerbated by physical activity, lasting for 20 minutes. The initial electrocardiogram showed ST segment elevation from V2 to V4. Physical examination showed a loud holosystolic murmur, heard best at the level of the fourth intercostal space, left sternal border. Laboratory reported a high-sensitivity troponin of 599.7 g/l.

Abstract Body: Coronary angiography showed the left main coronary artery without lesions. Left anterior descending artery with total occlusion, TIMI grade 5 thrombus in mid-segment, first diagonal with 80% proximal lesion, circumflex artery with 50% distal lesion and right coronary artery with 80% lesion in mid-segment. Transthoracic echocardiogram reported left ventricle with anterior septal aneurysm and apical ventricular septal defect of 16 mm

Decision-making: In virtue of it being a simple defect, with sufficient margins and an adequate distance from the valve apparatus, percutaneous closure with a 22 mm occlusive device was performed. Final echocardiogram showed no evidence of shunt, and percutaneous coronary intervention of significant

coronary lesions was accomplished with good results. The patient had a good recovery and was discharged

Conclusion: In appropriately selected patients, Percutaneous Transcatheter Closure of Post-infarction Ventricular Septal Defect appears to be a safe option



Figure 1. Apical four chamber view of transesophageal echocardiogram with ventricular septal defect (A). Percutaneous Transcatheter closure ventricular septal defect (B). Apical four chamber view of transesophageal echocardiogram without evidence of left to right shunt (C).

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 53

Topic 1: Interventional and Structural

Publishing Title: PERCUTANEOUS PLASTY VALVE IN VALVE TRICUSPID

Author Block: Abel Salvador Becerra Flores, Hector E. Flores Salinas, Evelin Guadalupe Gomez Enciso, Guillermo Rodriguez Zavala, Guillermo Delgado Gutierrez, Bobadilla Lopez Edgardo, Puga Niño Angel Daniel, Instituto mexicano del seguro social, centro medico nacional de occidente, Guadalajara, Jalisco, Mexico

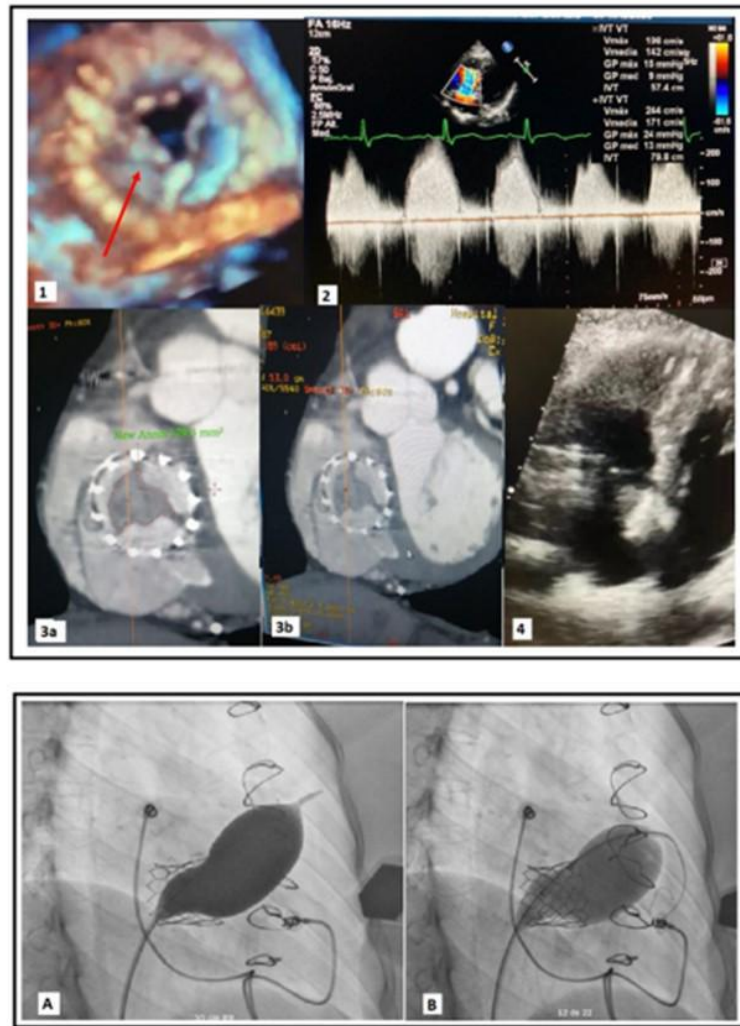
Abstract Body: **Background:** 30-year-old woman diagnosed with Ebstein's anomaly type C of Carpentier, detected at age 9, and underwent surgical correction with biological valve implantation at age 28 (2018). In November 2020, he required hospitalization for heart failure associated with prosthesis dysfunction with double lesions, both severe, and in December 2020, a percutaneous valve-in-valve implant was performed. However, two months later he attended a follow-up appointment with a new transthoracic echocardiogram that showed tricuspid prosthesis dysfunction due to obstructive thrombosis and fixed septal leaflet with a mean gradient of 13mmHg and area of 1.06cm.

Case: During his stay, grade II jugular engorgement and diastolic rumbling in the tricuspid focus were found, for which an alteplase regimen was administered and a transthoracic echocardiogram control projection was performed in which a decrease in mobility of one of the leaflets was observed, with a decrease in thrombus but with fusion of the commissure of two leaflets, with a valve area of 1.7cm² by CT and a mean gradient of 6mmHg

Decision-making: Due to these results, it was accepted for percutaneous balloon valvuloplasty, which is performed with a 34mm balloon that dilated

inside the biological prosthesis and with echocardiographic control, a decrease in the mean gradient to 4mmHg

Conclusion: Submitting this case to percutaneous plasty led to a decrease in gradients and resolution of the clinical case.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 54

Topic 1: Interventional and Structural

Publishing Title: RENAL ARTERY STENOSIS: A CASE OF REFRACTORY HYPERTENSION

Author Block: María Robles, Rodolfo Gutiérrez, Hospital Roosevelt, Guatemala, Guatemala

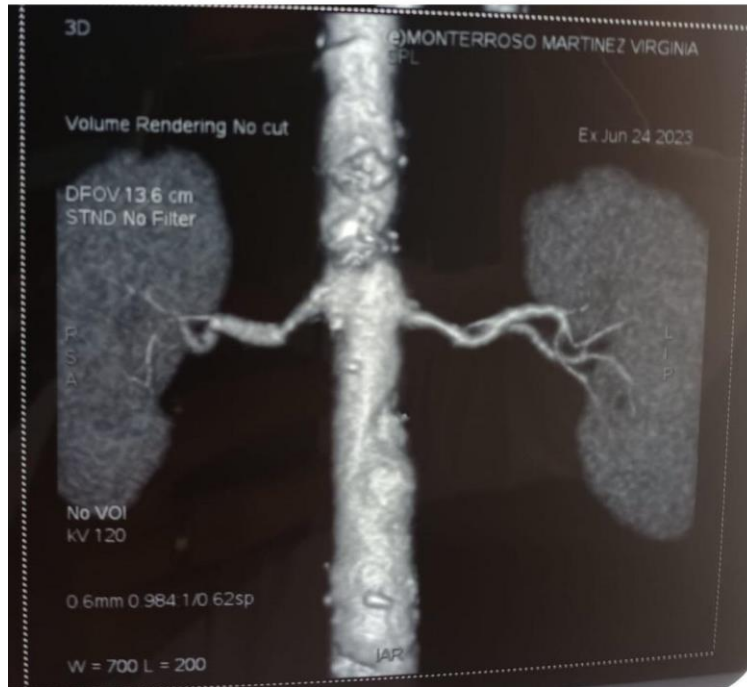
Background: Renal artery stenosis accounts for 1-5% of secondary hypertension cases, with renal atherosclerosis being the most common cause. It's more prevalent in elderly patients and associated with refractory hypertension.

Methods: A 75-year-old female with a history of hypothyroidism was diagnosed with hypertension 6 months ago. Despite treatment with 4 antihypertensive drugs, her blood pressure remained above 200/110 mmHg without symptoms.

Abstract Body: **Results:** Laboratory tests showed creatinine at 1.60 mg/dL and eGFR of 33.4 ml/min/1.73 m². Urinalysis revealed 150 mg/dL of protein and few renal cells. Renal ultrasound showed preserved corticomedullary ratio and normal kidney size, with a parvus et tardus waveform in the right renal artery. CT angiography reported bilateral renal artery stenosis with severe obstruction in the right artery. Selective right renal angioplasty revealed an 85% severe lesion with plaque presence. A 3.5 x 18 mm Onyx stent was placed at 16 atm. A 24-hour ambulatory blood pressure monitoring was performed four weeks later, showing normal SP load of 45.5% during night. Daytime averages were 128/49 mmHg and nighttime averages were 130/50 mmHg. Antihypertensive treatment was adjusted accordingly.

Conclusion: Secondary causes of hypertension should be suspected in

patients with refractory hypertension. Renal artery stenosis is a common cause in elderly patients. Renal artery revascularization is the treatment of choice for patients who do not respond to medical therapy.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 55

Topic 1: Interventional and Structural

Publishing Title: BIOLOGICAL PROSTHETIC STRUCTURAL VALVE DETERIORATION WITH HEMODYNAMIC DYSFUNCTION TREATED WITH PERCUTANEOUS BALLON INTERVENTION, COMPLICATED WITH SEVERE REGURGITATION, TREATED WITH TAVI IN TAVI

Author Block: Daniel Lizárraga, Jorge Guillermo Delgado, Guillermo Rodriguez, Hector Flores, Claudia Mariscal, Ricardo García, Pedro Hugo Solis, Ruben Alonso, Sergio Ramírez, Hector Enrique Flores, Edgardo Bobadilla, Angel Daniel Puga, Evelyn Guadalupe Gómez, Javier Enrique Cervantes, Francisco Lara, Abel Salvador Becerra Flores, Centro Médico Nacional de Occidente, Guadalajara, Mexico, Instituto Mexicano del Seguro Social, Guadalajara, Mexico

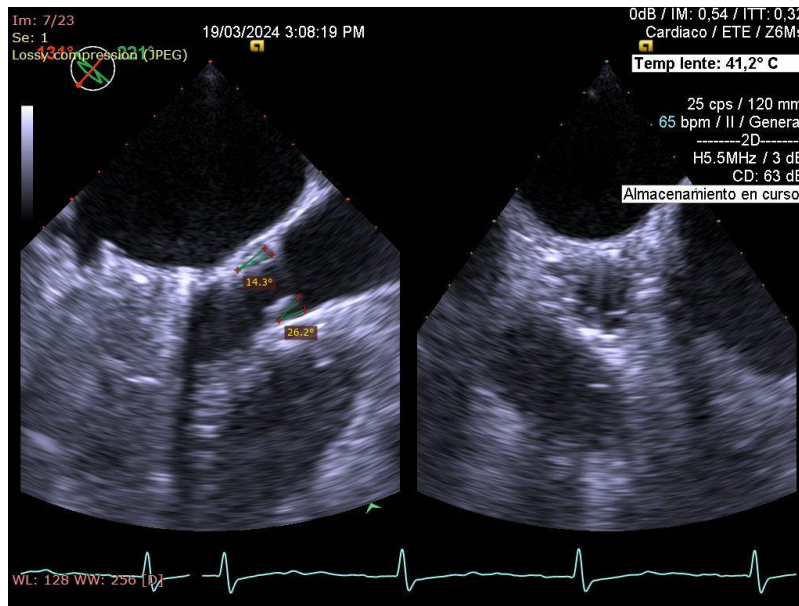
Abstract Body: **Background:** Structural valve deterioration (SVD) is associated with valve hemodynamic dysfunction and poor outcomes. The transcatheter valve in valve implantation is an option for treating patients with SVD and increased surgical risk. The purpose of this case report is to show our experience with a patient who was diagnosed with SVD and treated with TAVI in TAVI.

Methods: In this case report we present a 50 years old woman with history of multivalvular rheumatic disease (mitral severe stenosis and tricuspid severe regurgitation), treated with mitral and tricuspid valve surgery, who has a mechanical prosthetic valve in mitral position and a tricuspid valvuloplasty, and afterwards developed aortic stenosis and was treated with TAVI, which eventually developed SVD and hemodynamic dysfunction.

Results: The patient was admitted for dyspnea related to exercise, then she was diagnosed with SVD and hemodynamic dysfunction of bioprosthetic aortic valve by transthoracic and transesophageal echocardiography, and she was

treated initially with percutaneous balloon intervention, complicated with severe aortic regurgitation and then treated successfully with TAVI in TAVI.

Conclusion: The case is illustrative of the increasing prevalence of SVD, the percutaneous balloon intervention is not recommended and the Valve in Valve is a good option for patients with SVD and hemodynamic dysfunction who have a high surgical risk. A comprehensive evaluation by the heart team for every individual case is necessary.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 56

Topic 1: Interventional and Structural

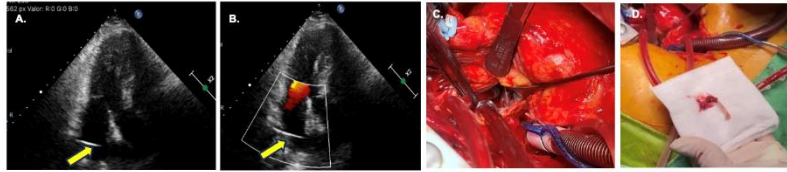
Publishing Title: FISHBONE IN THE LEFT ATRIUM WITH ESOPHAGO-ATRIAL FISTULA

Author Block: Jessica Liliana Ospino Guzman, CARLOS ALFONSO MADARIAGA CAROCCI, ANDRES MAURICIO BERMUDEZ DAZA, Diana vargas vergara, Jorge Leonardo Farjardo Ruge, Hospital de san jose, Bogota, Colombia

Background: A patient with chest pain and the presence of a foreign body in the left atrium with evidence of an esophago-atrial fistula.

Case: A 71-year-old female with a history of hypertension and hypothyroidism, presented with a 15-hour episode of moderate-intensity oppressive chest pain radiating to the back, associated with resting dyspnea. Physical examination was normal. Laboratory tests showed elevated troponin I with delta.

Abstract Body: Transthoracic echocardiogram revealed a hyper-echogenic mass measuring 2.5 x 0.3 cm on the roof in contact with the interatrial septum and posterior wall, entering the left atrium. Coronary angiography showed normal epicardial vessels. CT angiography revealed a linear hyperdense image in contact with the posterior wall of the left atrium and the wall of the esophagus. Endoscopy found a fistula approximately 0.5 cm in the distal third of the esophagus (at 33 cm), as well as a 1 cm ulcer in the stomach covered with fibrin. [\\$\\$MISSING OR BAD GRAPHIC SPECIFICATION \(DD8532D6-3802-45F1-A4B8-3B43F74C25A7\) \\$\\$](#)



In images A and B, a hyper-echogenic mass measuring 2.5 x 0.3 cm can be seen on the roof in contact with the interatrial septum and posterior wall, entering the left atrium. Images C and D show the surgical specimen.

Decision-making: We considered the implantation of an esophageal stent followed by surgical extraction, finding a fishbone.

Conclusion: The presence of an esophago-left atrial fistula carries a poor prognosis, most commonly caused by malignancy and the use of radiofrequency ablation. Its epidemiology is based on case reports, a rare complication with an incidence of approximately 0.02% and a 100% mortality rate for patients treated with medical management or esophageal stent placement alone, which reduces to 40% in patients undergoing surgery.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 57

Topic 1: Interventional and Structural

Publishing Title: SPONTANEOUS RUPTURE OF THE SINUS OF VALSALVA ASSOCIATED WITH VENTRICULAR SEPTAL DEFECT

Author Block: Wilnelia Acosta, Cleysi Galva, ASOCIACION INSTITUTO DOMINICANO DE CARDIOLOGIA, SANTO DOMINGO, Dominican Republic

Background: The aneurysm of the sinus of Valsalva is a rare pathology, its prevalence being less than 1% and the combination with a interventricular communication (CIV) and its spontaneous rupture even rarer.

Case: 35-year-old female, with no known morbid history, who presents with palpitations and dyspnea on exertion, decreased exercise tolerance for 10 days. On physical examination, she was hemodynamically stable, with a continuous murmur of intensity 3/6 at the high left parasternal border, with no other findings.

Abstract Body: **Decision-making:** The Transthoracic Echocardiogram reveals the presence of acyanogenic congenital heart disease, perimembranous ventricular septal defect type, aneurysmal dilation of the right coronary sinuses of Valsalva with a break in continuity at the level of the right sinus corresponding to a ruptured sinus of Valsalva towards the right ventricle. The transesophageal echocardiogram corroborates these findings in addition to moderate aortic insufficiency. Surgical intervention was decided by resecting the native aortic valve and direct closure of the CIV, repair of the ruptured sinus of Valsalva with a patch of treated autologous pericardium and placement of a mechanical prosthesis.

Conclusion: CIV can weaken the middle wall of the sinus of Valsalva over the aortic valve annulus, which produces dilation and rupture towards one of the 4

cardiac chambers or the mediastinum. Surgical repair with or without aortic valve replacement has been the ideal treatment.

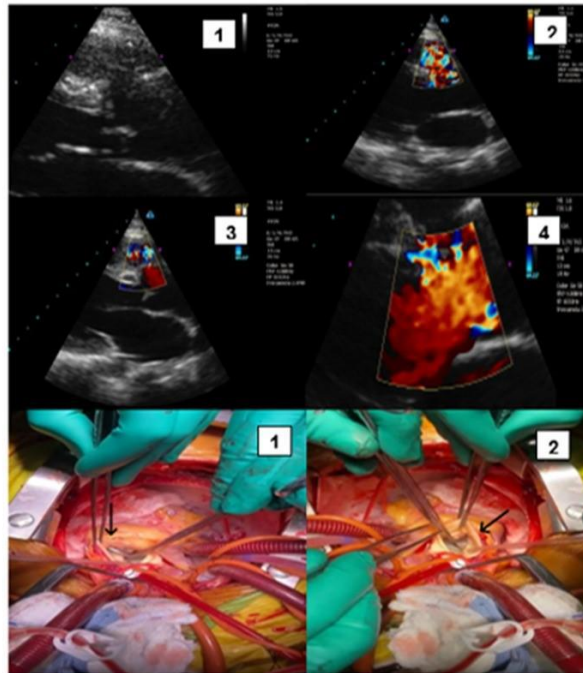


Figure 1. Echocardiographic images. 1. Continuity defect at the perimembranous SIV level. 2. color flow from the VI to the VD 3. Aneurysmal dilation of the right coronary sinus with rupture 4. Color flow from the aorta to the VD. Figure 2. Intraoperative images. 1. Ruptured sinus of Valsalva 2. CIV. Both draining to the VD

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 58

Topic 1: Interventional and Structural

Publishing Title: NAVIGATING THE CHALLENGES OF TAVR: A CASE ON VALVE MIGRATION AND ADVANCED MANAGEMENT STRATEGIES

Author Block: Jathniel Panneflek, Benjamin D. Robalino, Jayanth Lakshmikanth, Mahmoud Barbarawi, Neeti Reddy, Doctors Hospital at Renaissance, Edinburg, TX, USA

Abstract Body:

Background: Transcatheter aortic valve replacement (TAVR) is an effective treatment for severe aortic stenosis in high-risk patients, though complications can occur. With the expansion of TAVR indications to younger, low-risk patients with longer life expectancies, understanding and managing these complications is essential.

Case: A 79-year-old male with ischemic cardiomyopathy, diastolic heart failure, paroxysmal atrial fibrillation on anticoagulation, sick sinus syndrome with a pacemaker, and prior coronary artery bypass grafting was diagnosed with severe symptomatic calcific aortic stenosis. Echocardiography showed severe stenosis with a peak gradient of 39 mmHg, a mean gradient of 26 mmHg, and an aortic valve area of 0.9 cm². His STS score indicated an acceptable risk for TAVR. He underwent TAVR with a 29 mm bioprosthetic valve. On post-procedure day 7, echocardiography revealed downward migration of the bioprosthetic valve into the left ventricle, causing severe paravalvular aortic regurgitation and acute on chronic CHF.

Decision-making: Due to valve migration and hemodynamic compromise, a redo TAVR was performed. The original valve was repositioned using snare techniques but migrated into the ascending aorta. A second 29 mm bioprosthetic valve was successfully deployed. The patient required brief vasopressor support and diuresis but stabilized within days. Repeat

echocardiography confirmed normal bioprosthetic valve function with a mean gradient of 9 mmHg, no paravalvular regurgitation, and normal left ventricular function. After completing inpatient rehabilitation, he was discharged home. A follow-up echocardiogram showed the bioprosthetic valve in adequate position with no residual aortic stenosis or regurgitation and normal left ventricular systolic function.

Conclusion: Despite remarkable advancements, TAVR remains a complex procedure with potential life-threatening complications. Repositioning a migrated valve using snare techniques is possible, but a second valve may be necessary. Precise valve orientation during implantation is crucial, as overlapping stent layers above the prosthesis can impede coronary access.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 59

Topic 1: Interventional and Structural

Publishing Title: SILENT CARDIAC INTRUDER: A RARE CASE PRESENTATION OF ATRIAL MYXOMA

Author Block: Luis Alfredo Acevedo Soto, Kimberly A. Pagan Marchese, Josean Reyes Flores, Edgar J. Vazquez Vargas, Eugenio Mulero Portela, Milton Carrero Quiñones, Mayagüez Medical Center, Mayagüez, PR, USA

Background: Cardiac tumors are rare, with an incidence of approximately 0.02 percent. In contrast, heart involvement from metastatic cancer is much more frequent, seen in up to 20 percent of cancer-related deaths.

Case: This case involves a 76- year- old Hispanic female with a medical history of breast cancer, hypertension, diabetes mellitus type II and dyslipidemia with several family members with cancer who presented to the emergency department of our hospital due to dyspnea on exertion for months with palpitations. Each palpitation was described as a pounding sensation in her chest with skipped beats. Associated symptoms were chest pain that was worse with ambulation, dizziness, and shortness of breath.

Abstract Body: Electrocardiogram was significant for Atrial fibrillation. Echocardiogram showed a 4 cm echogenic mass with a clear stalk attached to the left atrial aspect of the interatrial septum along with mitral valve regurgitation. Left atrial myxoma excision was performed, tolerating well. Despite hemodynamically stability, clinical course was complicated by atrial fibrillation.

Decision-making: A thorough assessment was necessary. Along with surgical excision, treatment was given with Beta-blockers, Amiodarone, and anticoagulation with Warfarin. This to avoid complications such as

embolization, obstruction, heart failure, or sudden death. Surveillance to monitor recurrence and follow-up was recommended along with cardiac rehabilitation that was adequately tolerated.

Conclusion: This presentation demonstrates the importance of following the clinical course and a detailed history of our patients. Atrial myxomas are related to other types of malignancy as breast cancer and if not routinely followed up it may bring serious complications that may put patient's lives on risk. Raising awareness about these rare cases are keystone in the early diagnosis, symptom recognition, and focused treatment in these life-threatening events.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 60

Topic 1: Interventional and Structural

Publishing Title: CARDIOPULMONARY COMPLICATIONS IN POST-CORONARY BYPASS SURGICAL INTERVENTION

Author Block: Alma María Hernández Gómez, Daniela Ortiz, Universidad Iberoamericana UNIBE, Santo Domingo, Dominican Republic

Abstract Body:

Background: Background: Coronary bypass surgery addresses diseases of the coronary arteries, generally considered safe and beneficial but with risks of cardiac and pulmonary complications. This research aims to identify these complications in patients undergoing coronary artery revascularization.

Methods: Methods: An observational, descriptive study with a retrospective and cross-sectional approach was conducted. Data were collected through online questionnaires based on records from a tertiary care hospital from September to December 2023. This research has been approved by the Research Ethics Committee (CEI) under the code CEI 2023-121. Additionally, patient records of coronary artery bypass grafting (CABG) procedures from 2018 to 2022 were comprehensively reviewed for data retrieval.

Results: Results: Of 180 patients meeting inclusion criteria, 19.4% experienced only cardiac complications, with cardiac arrhythmias being the most frequent at 41.5%, followed by hypertension at 24.5%, $p = < 0.001$. Regarding both cardiac and pulmonary complications, atrial fibrillation stands out with a $p = 0.335$ and diffuse alveolar opacities with a $p = 0.001$. The number of patients with only pulmonary complications was 6.1%, with pleural effusion being notable at 31.3%. The percentage of patients experiencing both complications simultaneously was 78.9%. Complications occurred predominantly within the first postoperative month 28.8%. The probability of

subsequent intervention based on age yielded a $p = 0.95$, and an association analysis of anastomosis and smoking patients resulted in $p = 0.8875$.

Commonly utilized anastomosis includes the left anterior descending artery 37.4%, and the saphenous vein 47.9%. Additionally, 11.1% of surgeries were combined with prosthetic valve replacements.

Conclusion: Conclusion: According to the results, the most common complications are related to the cardiac realm. An association was identified between patient comorbidities and potential complications. Individualized postoperative management for each patient is necessary. It was determined that the first four weeks are susceptible to complications.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 61

Topic 1: Ischemic Heart Disease

Publishing Title: CARDIOGENIC SHOCK IN MYOCARDIAL INFARCTION WITH ANOMALOUS ORIGIN OF RIGHT CORONARY ARTERY

Author Block: Jhoel Amores, Carlos Guerra, Jorge Vallée, Juan Carmelo Wong, Hospital Santo Tomás, Panamá, Panama

Abstract Body:

Background: Anomalous origin of right coronary artery (ARCA) from left coronary sinus can have dynamic narrowing causing myocardial ischemia. The prevalence of this anomaly ranges from 0.026% to 0.92%.

Case: A 65-year-old female patient with hypertension, presented to the emergency department with oppressive chest pain. Physical examination revealed pallor, moist skin, abnormal mental status and hypotension in relation with cardiogenic shock. The electrocardiogram showed ST elevation in inferior leads. Echocardiography demonstrated biventricular systolic dysfunction. Urgent catheterization revealed coronary arteries without obstructive lesions. The most relevant finding was an anomalous origin of the right coronary artery from left coronary sinus. Cardiac MRI showed transmural late gadolinium enhancement located on inferior wall of the left ventricle and lateral wall of right ventricle. During management in the cardiovascular ICU this patient had good response to support therapy.

Decision-making: ARCA is a rare condition often discovered as an incidental finding during the diagnostic approach for ischemic heart disease. However, sometimes myocardial ischemia could be the initial manifestation of this disorder. To determine the course and termination of the anomalous artery, indicating a coronary computed tomography angiography is the most reasonable next step. If an interarterial course is revealed, surgical repair may

be considered.

Conclusion: In patients presenting as ischemic cardiogenic shock with non-obstructive coronary arteries, congenital anomalies of coronary arteries should be included in the differential diagnosis. Multimodal cardiac imaging studies could clarify the implication of these disorders in major cardiovascular events.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 62

Topic 1: Ischemic Heart Disease

Publishing Title: BEHAVIOR OF AVERAGE PLATELET VOLUME IN ACUTE CORONARY SYNDROMES RELATIONSHIP WITH THE LEUKOGLYCEMIC INDEX

Author Block: Gastón Augusto Guzmán Souto, Guillermina Fanagua, Fatima S. Cabrera, Eduardo Moreyra, Julio O. Bono, Sanatorio Allende, Cordoba, Argentina

Background: The usefulness of mean platelet volume (MPV) and the Leukoglycemic Index (LGI) in prognosis of Acute Coronary Syndrome (ACS) has been demonstrated; however, it is not clear if the behavior is similar according to the type of ACS. Objectives: To evaluate if the MPV and the LGI have the same behavior according to the clinical picture of ACS. To determine if the MPV is related to the severity of coronary disease and the degree of myocardial injury.

Abstract Body: **Methods:** Observational, prospective study, carried out in the coronary unit of the Sanatorio Allende (Córdoba, Argentina). Patients consecutively admitted with suspected ACS and with an initial MPV value taken at the same time as the High Sensitivity Troponin were included. Patients with severe liver, kidney, or hematological diseases were excluded. They were divided into three groups: ACS with ST-segment elevation (STEACS), ACS without ST-segment elevation (NSTEMACS) and a patient control group with chest pain without a diagnosis of ACS.

Results: 300 patients were included whose average age was 60.7 years (21 to 93 years), 81% were men. 46.3% were NSTEMACS, 26.7% were STEACS, and the remaining 27% were control group patients. The prevalence of elevated MPV (a value greater than or equal to 9.1 fL) was 16% (48 patients). There were no statistically significant differences between MPV and the different

groups (STEACS, NSTEACS and control group) ($p = 0.971$). With respect to LGI, significant differences were observed according to the severity of the clinical condition ($p = 0.0001$). In patients with high MPV, greater restenosis was observed 25% vs 8.7% ($p=0.001$) and also a greater number of 3-vessel disease, although not statistically significant ($p=0.086$).

Conclusion: The LGI is increased according to the severity of the ACS, however, the elevated MPV is not related to the patient's clinical condition. MPV was associated with 3-vessel injury, although not statistically significant, and with a significant percentage of greater restenosis.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 63

Topic 1: Ischemic Heart Disease

Publishing Title: PERCUTANEOUS CORONARY INTERVENTION OF THE LEFT MAIN CORONARY ARTERY WITH ANOMALOUS ORIGIN FROM THE RIGHT SINUS OF VALSALVA.

Author Block: Marisol Martínez Galindo, Andres Garcia Rincon, Ana Livia Martinez Raga, Flor Teresita Rosas Aragon, Ivan Alejandro Hernandez Valdez, Jonhatan Manuel Cota Arce, Diana Patricia Ramirez Davila, Centro Medico Nacional La Raza. Hospital de Especialidades Dr. Antonio Fraga Mouret., México, Mexico

Abstract Body:

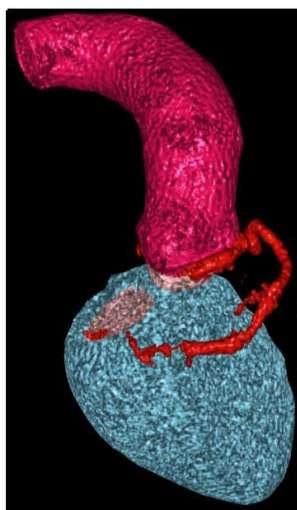
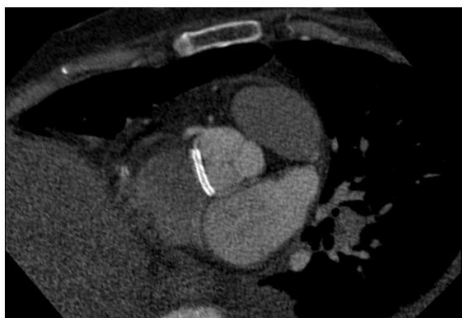
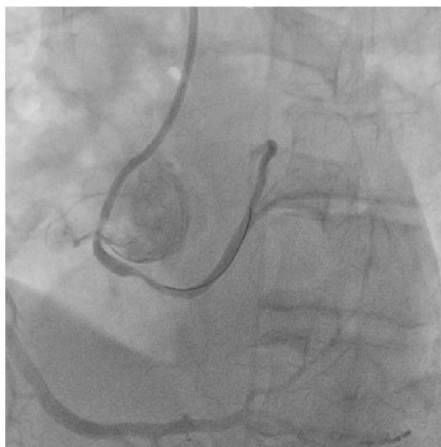
Background: The anomalous origin of the left coronary trunk from the right sinus of valsalva is rare, its presentation associated with acute coronary syndrome, this being the culprit vessel, is even more unusual.

Case: A 55-year-old female was admitted to the emergency department with oppressive precordial pain associated with diaphoresis and acute pulmonary edema, for which mechanical ventilation was initiated, electrocardiogram with elevation of the ST segment in avr and precordial leads with elevation of troponin I 55 and hyperlactatemia, thrombolysis was administered and sent to the hemodynamics service in the context of acute coronary syndrome, undergoing cardiac catheterization, finding an anomalous origin of the left coronary trunk from right sinus of valsalva with an 80% obstructive lesion

Decision-making: In the context of hemodynamic instability, it was decided to perform percutaneous coronary intervention on the left main coronary artery, Depleting medical treatment with diuretic was started, achieving extubation after 48 hours, with adequate clinical improvement, and she was discharged home.

Conclusion: The therapeutic action of acute coronary syndrome in the context of anomalous origin of the left main coronary artery has not been

standardized, so evidence is presented of an adequate evolution through PCI in patients with cardiogenic shock.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 64

Topic 1: Ischemic Heart Disease

Publishing Title: ONE-YEAR OUTCOME IN THE FIRST PUBLIC CATHETERIZATION LABORATORY IN A MIDDLE-INCOME COUNTRY: GUATEMALA'S AWAKENING PROCESS

Author Block: Nancy Paola Vargas-San José, Mariana Gil Salazar, Jose Miguel Alfaro Barrera, Carlos Andres Sandoval Santos, José Antonio Cornejo-Guerra, Hospital General San Juan De Dios, Guatemala, Guatemala

Abstract Body: **Background:** Guatemala is a middle-income country, its first cause of mortality is Acute Coronary Syndrome (ACS), and until 2023 there were no public cath labs available. This resulted in delayed treatment for patients with ACS. During 2020-2021, the first National ACS Registry was conducted (ACS-Gt registry), providing an overview of the diagnosis, treatment, and outcomes of these patients in the Public Health System. With the data of ACS-Gt registry, the Ministry of Health approved the establishment of the first cath lab in a Third level Public Hospital, leading to a significant improvement in outcomes. Here, we present the results from the first year.

Methods: 254 patients were registered, of which 152 had ACS. Patients were categorized based on the type of event (STEMI or NSTEMI/UA), and demographic data, ACS characteristics and outcomes were analyzed.

Results: Most patients were males (72.6%) with STEMI presentation. Of the 254 procedures performed, 152 were percutaneous coronary intervention (PCI) (60%), a reperfusion rate of 51% was observed. The remaining outcomes are detailed in Table 1.

TABLE 1

	STEMI	NSTEMI/UA	p
	n=95 (%)	n=57 (%)	
Pharmacological thrombolysis	34 (35.6)	-	NA
Successful	25 (73.5)	-	
Coronary procedure			0.17
Diagnostic angiography	22 (23.2)	19 (33.3)	
Angioplasty	73 (76.8)	38 (66.7)	
Type of angioplasty			NA
Primary	12 (12.6)	0 (0)	
Pharmacoinvasive	28 (29.4)	0 (0)	
Rescue	9 (9.5)	0 (0)	
Urgent	0 (0)	25 (43.9)	
Emergent	0 (0)	3 (5.3)	
Elective	7 (7.4)	9 (15.8)	
Late presenters with complication	26 (27.4)	0 (0)	
	Median (25-75)	Median (25-75)	
Number of stents per patients	2 (1-2)	1 (1-2.2)	0.55
	$\bar{X} \pm SD$	$\bar{X} \pm SD$	
Hours between thrombolysis to PCI	27.3 \pm 24	-	NA
In-hospital morbidity	26 (27.4)	8 (14)	0.002
Causes			0.23
Acute kidney injury	11 (42.3)	1 (12.5)	
Reinfarction	4 (15.3)	4 (50)	
Others	11 (42.3)	3 (37.5)	
In-hospital mortality	7 (7.4)	1 (1.8)	0.25
Causes			0.09
Reinfarction	3 (42.9)	0 (0)	
Cardiogenic shock	2 (28.6)	0 (0)	
Others	2 (28.6)	1 (100)	

Conclusion: The in-hospital mortality rate following the implementation of the catheterization lab was 5.2% (in our previous registry was 18.3%), shorter time between thrombolysis to PCI was noticed; these findings support that the establishment of a cath lab has improved the treatment and outcomes for ACS patients in Guatemala. The cath lab is the first step for reperfusion system of care.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 65

Topic 1: Ischemic Heart Disease

Publishing Title: ACUTE CORONARY SYNDROME CAUSED BY SPONTANEOUS CORONARY ARTERY DISSECTION IN A YOUNG HEART

Author Block: Juan Carlos Maldonado Chang, José Manuel De León García, Fabio Enrique Parada Cabrera, GUSTAVO SOTO MORA, RODOLFO Gutiérrez, Hospital Roosevelt, Guatemala, Guatemala

Abstract Body:

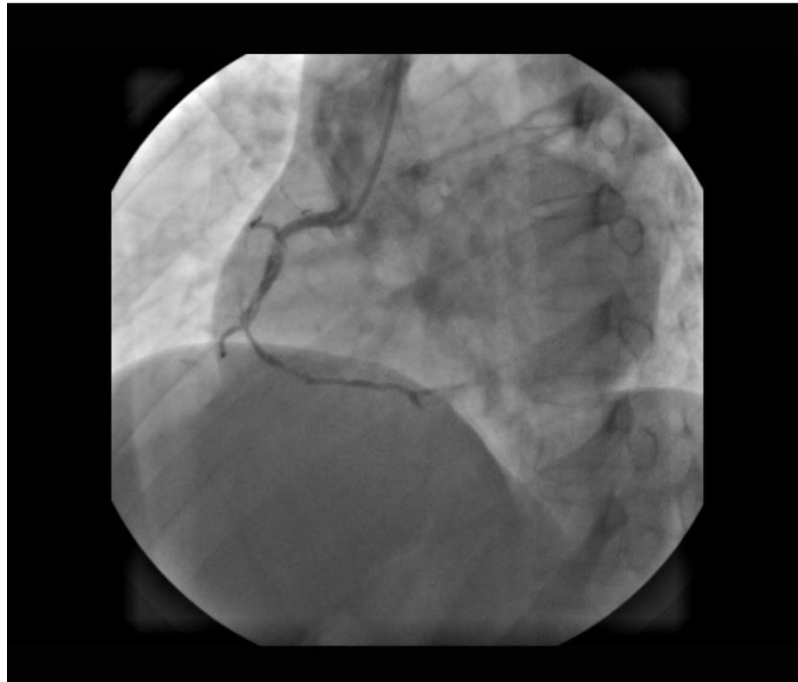
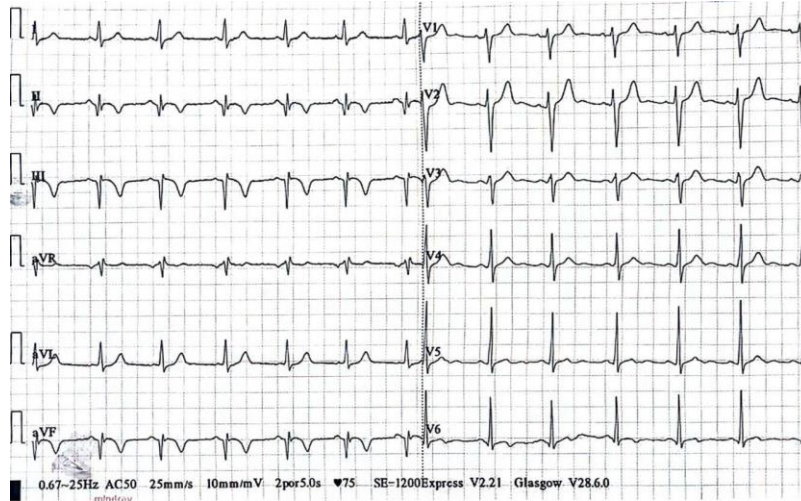
Background: Coronary artery dissection, whether spontaneous, traumatic or iatrogenic, its clinical presentation as a coronary syndrome is quite uncommon. An incidence between <1%, with greater affection in young women, and much rarer in young men.

Case: 28-year-old male patient, with history of moderate smoking for 10 years, with no consumption of other substances, consulted with 1 month of intermittent retrosternal pain, intensity of 7/10, irradiated to neck, exacerbated on exercise and improves at rest. An ECG was performed showing evidence of necrosis and subepicardical lesion on inferior wall leads, negative troponins, normal lipid profile. Transthoracic echocardiogram showed hypokinesia of the segments of the right coronary artery.

Decision-making: With the result of initial tests, stress echocardiogram was performed showing positive signs of inferior wall ischemia and viability for inferoseptal and anteroseptal segments, suggestive of lesion in the right coronary artery. Then it was decided to take him the catheterization lab showing dissection of the right coronary artery with distal small artery. Optimal medical therapy was established with outpatient followup and resolution of angina.

Conclusion: There is considerable controversy regarding the therapeutic

management of this group of patients, which depends on the clinical presentation, hemodynamic stability and diameter of the vessels. Including advice on exercise, rehabilitation, medications and revascularization.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 66

Topic 1: Ischemic Heart Disease

Publishing Title: THE MOIRAI: ATROPOS AND THE THREAD OF LIFE. CASE OF PATIENT WITH SINGLE CORONARY ARTERY WITH ORIGIN IN THE RIGHT CORONARY SINUS

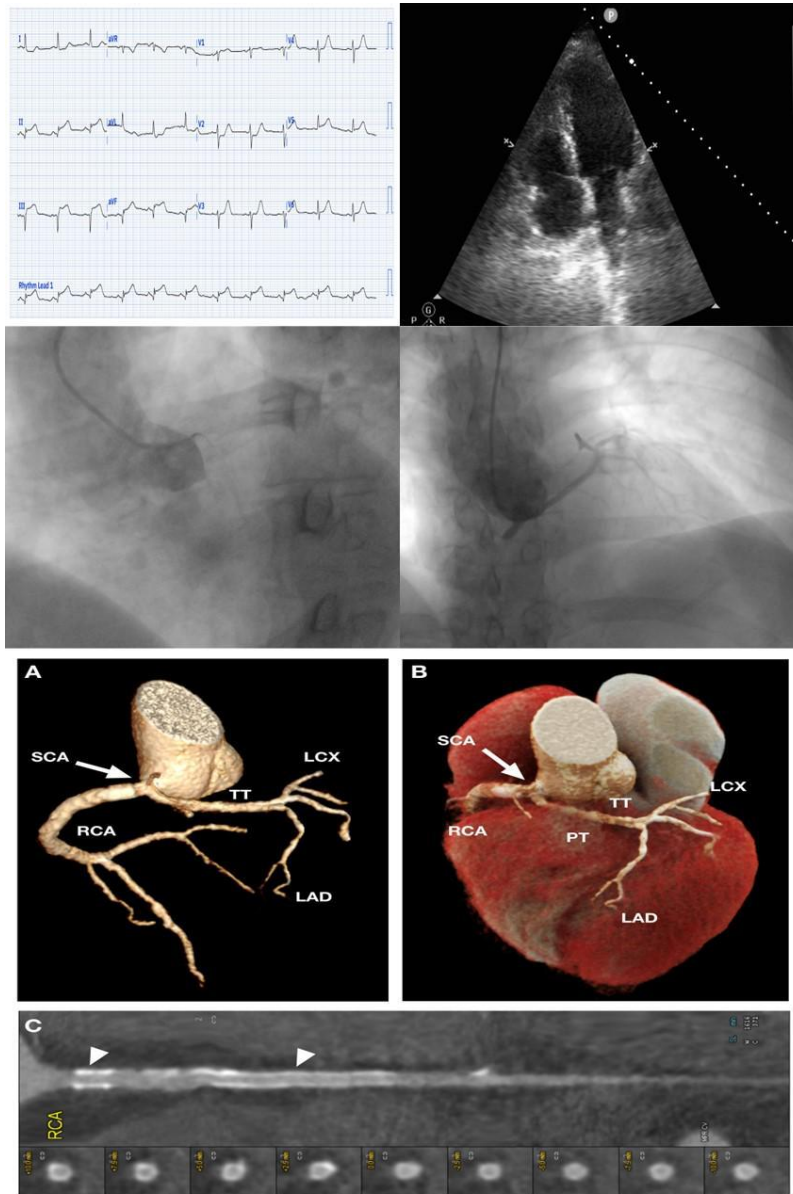
Author Block: Michel Alberto Aros Pérez, Gabriela Columba Fonseca Camarillo, Angel Alexis Priego-Ranero, Guillermo Bracamontes Castelo, Francisco Castillo Castellón, Abraham Romero-Beltrán, Aldo Emir Martínez Sarabia, Oscar De Jesús Gamboa Hernández, INSTITUTO NACIONAL DE CARDIOLOGÍA IGNACIO CHÁVEZ, CIUDAD DE MÉXICO, Mexico

Background: Single coronary artery (SCA) is a very rare coronary anomaly of origin. Most of patients are asymptomatic, however, many patients may present with chest pain, shortness of breath, and even sudden death.

Case: This is a 58-year-old man who presents cardiovascular risk factors. He presented to the emergency department with a clinical picture characteristic of STEMI evolving over 10 hours. Upon admission, an EKG was performed, which showed inferior STEMI with electrical extension to the RV. An echocardiogram was performed, revealing Right Ventricular Dysfunction. Medical treatment was initiated, and he was admitted to the Cath-Lab for angiography and PCI. During the procedure, the left coronary system could not be located, but a total thrombotic occlusion of the right coronary artery in its proximal segment was found. Angioplasty was performed with placement of 1 drug-eluting stent in the infarct-related artery. He was transferred to the coronary care unit with cardiogenic shock SCAI C, which resolved within the next 48 hours. He remained asymptomatic and had a good clinical course.

Decision-making: Coronary angiotomography was requested, revealing an anomalous origin of the left coronary system, arising the LMCA from the

proximal segment of the RCA. From this trunk, there is the origin of the LAD, LCx and Ramus Intermedius, with right-sided dominance. (RII-B from the Lipton SCA classification)



Conclusion: The patient was discharged after 11 days of hospital stay due to improvement.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 67

Topic 1: Ischemic Heart Disease

Publishing Title: UNEXPECTED MYOCARDIAL INFARCTION IN A 19-YEAR-OLD PATIENT: CASE REPORT OF ACUTE MYOCARDIAL INFARCTION INDUCED BY GRANULOMATOSIS WITH POLYANGIITIS

Author Block: Edgardo Bobadilla, Daniel Lizarraga, Francisco Lara, Natalia Jaime, Abel Salvador Becerra Flores, Evelin G. Gómez, Angel D. Puga, Héctor J. Ramírez, Centro Médico Nacional de Occidente, Guadalajara, Jalisco, Mexico

Background: A 19-year-old woman with a recent diagnosis of granulomatosis with polyangiitis with renal, pulmonary, ocular, and cutaneous involvement.

Case: The patient presented with dyspnea and sudden onset retrosternal chest pain lasting 30 minutes, leading her to the emergency department. The electrocardiogram showed non ST-segment elevation and elevated Troponins were reported.

Abstract Body: **Decision-making:** Acute myocardial infarction was diagnosed Cardiac catheterization was performed and revealed a dominant right coronary artery, a distal segment with a grade 4 thrombus and TIMI grade 3 flow, with the remaining coronary arteries showing no abnormalities. Thrombus aspiration was performed, and a bioabsorbable drug-eluting stent was implanted, resulting in a final distal TIMI flow 0. Due to the high thrombus burden, tirofiban was administered, and the procedure was concluded. The echocardiogram reported a normal-sized left ventricle, normal systolic function, without wall motion abnormalities, and a preserved right ventricle systolic function During her hospitalization she received treatment with dual antiplatelet therapy, beta-blockers, ACE inhibitor, high-intensity statin, and steroids. The patient had an adequate course, leading to her discharge.

Conclusion: A high index of suspicion for non-atherosclerotic coronary stenosis, as in the case of coronary vasculitis, should be maintained for early detection and treatment of a potentially life-threatening condition.

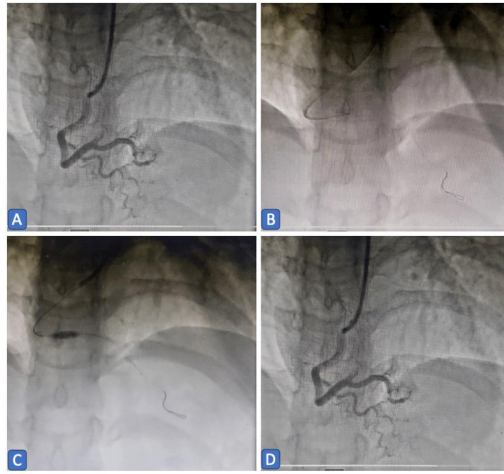


Figure 1. Angiogram of the right coronary artery showing large thrombus with occlusion of the distal vessel (A). Thrombus aspiration in primary percutaneous coronary intervention (B). Coronary stent implantation (C). Control coronary angiography demonstrates remnants of thrombus (D).

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 68

Topic 1: Ischemic Heart Disease

Publishing Title: IN-HOSPITAL OUTCOMES IN PATIENTS WITH MULTIVESSEL CORONARY ARTERY DISEASE WHO UNDERGO CORONARY ARTERY BYPASS GRAFT OR PERCUTANEOUS CORONARY INTERVENTION WITH STENT

Author Block: Stefano Valsangiacomo, [Juliana Leal Bernal](#), Claudia Lucia Figueroa Pineda, Sergio Andres Higuera Leal, Boris Eduardo Vesga Angarita, Universidad Industrial de Santander UIS, Bucaramanga, Colombia, Instituto del Corazón de Bucaramanga

Background: Multivessel involvement is usually evident in at least half of patients with coronary artery disease; This implies that at least half of these patients will require surgical or percutaneous intervention, which represents a risk of in-hospital outcomes.

Methods: Below we present an observational, retrospective, cross-sectional study, in which patients with multivessel coronary artery disease, undergoing any of the revascularization strategies, and presenting an in-hospital outcome were recruited. During 6 months we obtained a sample of 232 patients; of which 44 were surgical (CABG) and 188 were percutaneous (PCI).

Abstract Body: **Results:** The prevalence of in-hospital outcomes (see Table 1) in the CABG group was 31.82%, with a mortality of 0%; in the PCI group it was 18.62%, with a mortality of 1.6%. The prevalence of outcomes in surgical patients was higher than that reported in the literature (31.82% vs 20%), however, there was no mortality in the study group, while the literature reports a mortality between 3% and 5%.

Conclusion: In the sample studied, CABG and PCI had very low or no mortality; and can then be considered as safe procedures for our local

population.

Table 1. In-hospital outcomes in patients with multivessel coronary artery disease who undergo coronary artery bypass graft or percutaneous coronary intervention with stent

Variable	CABG n=44	PCI n=188
In-hospital outcomes		
Death	0	3 (1,6%)
Cardiorespiratory arrest	0	4 (2,13%)
Invasive mechanical ventilation for more than 24 hours	1 (2,27%)	2 (1,06%)
Percutaneous reintervention after PCI	0	8 (4,26%)
Acute kidney injury	2 (4,55%)	3 (1,6%)
Hemodialysis	2 (4,55%)	3 (1,6%)
Vascular complications	1 (2,27%)	2 (1,06%)
Pleural effusion	1 (2,27%)	2 (1,06%)
Sepsis	1 (2,27%)	3 (1,6%)
Atrial fibrillation	2 (4,55%)	3 (1,6%)
Cerebrovascular disease	1 (2,27%)	1 (0,53%)
Pulmonary embolism	2 (4,55%)	1 (0,53%)
Pneumonia	1 (2,27%)	0
Sex		
Male	34 (77,27%)	142 (75,53%)
Female	10 (22,73%)	46 (24,47%)
Age	70,27 years +/- 8,77 years	69,61 years +/- 9,76 years
Clinical presentation		
STEMI	2 (4,55%)	47 (25%)
NSTEMI	19 (43,18%)	65 (34,57%)
Stable coronary heart disease	18 (40,91%)	58 (30,85%)
Heart failure study	2 (4,55%)	8 (4,26%)
Pre-surgical study	0 (0%)	3 (1,6%)
Sudden death	1 (2,27%)	3 (1,6%)
Tachyarrhythmia	0 (0%)	2 (1,06%)
Syncope	2 (4,55%)	1 (0,53%)
Bradyarrhythmia	0 (0%)	1 (0,53%)
Medical history		
Arterial hypertension	36 (81,82%)	137 (72,87%)
Smoking	17 (38,64%)	78 (41,49%)
Diabetes mellitus	20 (45,45%)	66 (35,11%)
Dyslipidemia	15 (34,09%)	58 (30,85%)
Previous coronary heart disease	4 (9,09%)	47 (25%)
Heart failure	0 (0%)	15 (7,98%)
End-stage renal disease	2 (4,55%)	20 (10,64%)
Cerebrovascular disease	2 (4,55%)	3 (1,6%)
Peripheral arterial disease	1 (2,27%)	6 (3,19%)
Compromised coronary anatomy		
Anterior descending artery	43 (97,73%)	163 (86,7%)
Circumflex artery	38 (86,36%)	136 (73,34%)
Right coronary artery	42 (95,45%)	159 (84,57%)
Left coronary trunk	15 (34,09%)	9 (4,79%)
CABG n=44		
Euro score II	2,06% +/- 2,20%	
Number of vascular grafts	2	
With extracorporeal circulation	39 (88,64%)	
Infusion time	56,97 min +/- 10,57 min	
Clamping time	42,97 min +/- 9,89 min	
PCI n=188		
Arterial access	Radial (n=155) (82,45%)	
Number of stent implanted	3 or more (n=74) (39,36%)	

STEMI: ST-elevation myocardial infarction; NSTEMI: Non-ST segment elevation myocardial infarction; CABG: Coronary artery bypass graft; PCI: Percutaneous coronary intervention.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 69

Topic 1: Ischemic Heart Disease

Publishing Title: MYOCARDIAL INFARCTION WITH NON-OBSTRUCTIVE CORONARY ARTERY DISEASE IN SITUS INVERSUS DEXTROCARDIA AND RIGHT AORTIC ARCH: A CASE REPORT.

Author Block: Diego Ortega-Gomez, David Alberto Ocampo, Vargas Diego, LUIS BERNAL, Universidad Militar Nueva Granada, Bogotoa, Colombia, Universidad del Bosque, Colombia

Background: ST-elevation myocardial infarction (STEMI) in individuals with situs inversus dextrocardia is an exceptionally rare occurrence, presenting unique diagnostic and management challenges

Abstract Body: **Case:** A 32-year-old male with a medical history significant for schizophrenia, presented with an 8-hour history of sudden chest pain and dyspnea. He denied smoking, alcohol consumption, or use of psychoactive substances. Cardiovascular examination revealed heart sounds heard on the right side of the chest. An ECG with right-sided chest leads was performed showing ST elevation in leads V1-V4. Initial high-sensitivity troponin T was 44,013 ng/ml. Urgent coronary angiography revealed a right aortic arch and an anterior descending artery without significant lesions in proximal and middle segments, while the distal segment was hindered by its anomalous origin and low flow from subselective injection. The main trunk, right coronary artery, and circumflex artery appeared without significant lesions. A Coronary angiotomography was made showing normal coronary arteries without significant atherosclerotic disease, but situs inversus of the atria, bronchi, and abdomen was noted. Cardiac magnetic resonance imaging revealed late gadolinium enhancement with pattern of ischemic injury of the right and left

ventricles, acute myocardial infarction, microvascular obstruction, intramyocardial hemorrhage of the cardiac apex, and pericardial effusion

Decision-making: Early recognition of STEMI with right-sided chest leads, a physical examination and complementary diagnostic tools led to the diagnosis of dextrocardia. Microvascular occlusion is the most plausible cause of the myocardial infarction in this patient, however traditional diagnostic approaches may be inadequate in this context

Conclusion: Myocardial infarction in the presence of situs inversus dextrocardia and right aortic arch presents unique diagnostic and treatment challenges; there is a lack of evidence and recommendations of acute coronary syndromes presenting in patients with anatomical anomalies. This case underscores the importance of tailored diagnostic and therapeutic strategies in such rare clinical scenarios

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 70

Topic 1: Ischemic Heart Disease

Publishing Title: MYOCARDITIS AND ROSE COCAINE-INDUCED THYROTOXICOSIS: A CASE REPORT

Author Block: Jessica Liliana Ospino Guzman, ANDRES MAURICIO BERMUDEZ DAZA, CARLOS ALFONSO MADARIAGA CAROCCI, Diana Vargas Vergara, Jorge L. Fajardo Ruge, Hospital de san jose, Bogota, Colombia

Abstract Body:

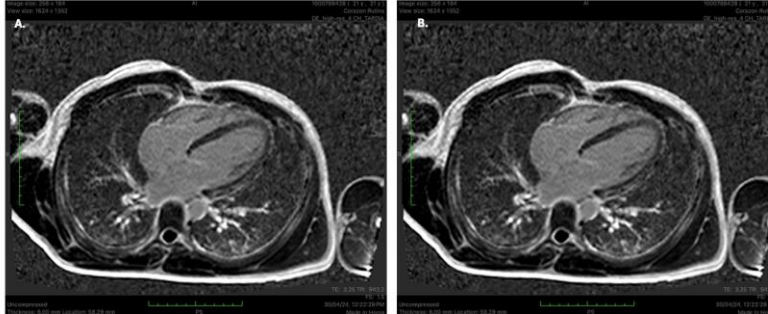
Background: Patient with myocarditis and drug-induced thyrotoxicosis from rdrugs

Case: A 21-year-old male, drug user 4 times a week, presenting with a week of daily diarrheal bowel movements accompanied by nausea and vomiting episodes, subjective fever, and intense retrosternal oppressive chest pain not radiating, initiated at rest, evolving over 4 hours. Physical examination reveals sinus tachycardia. Laboratory tests show elevated troponin I and free T4, suppressed TSH. Negative viral panel. Anti-thyroid receptor antibodies and anti-thyroid peroxidase antibodies negative. Thyroid ultrasound and echocardiogram are normal. Cardiac MRI shows abnormal subepicardial retention, patchy in the lateral wall segments, with edema.

Decision-making: Treatment for thyrotoxicosis with methimazole. The patient is admitted to a rehabilitation program, with laboratory tests showing a decrease in free T4 and an increase in TSH

Conclusion: Phenylethylamines act through biogenic monoamines such as serotonin, increasing their bioavailability and inhibiting reuptake. Thyroid hormones participate in the modulation of serotonin concentration. A decrease in intracerebral serotonin results in an increase in thyrotropin-releasing hormone (TRH) concentration, which translates to elevated thyroid

hormones (TH) and positive feedback, increasing serotonin concentrations. TH regulate the transcription of genes, in the modulation of ion channels, and promote myocardial cell hypertrophy and fibrosis.



A. Four-chamber slice with subepicardial gadolinium retention in the basal and mid-anterolateral wall segments of the LV. B. Axial 4C view showing LGE in the basal and mid-anterolateral wall segments of the LV.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 71

Topic 1: Ischemic Heart Disease

Publishing Title: COMPARATIVE EFFICACY AND SAFETY OF LOW/MODERATE-INTENSITY STATIN PLUS EZETIMIBE COMBINATION THERAPY AND HIGH-INTENSITY STATIN MONOTHERAPY IN PATIENTS WITH ATHEROSCLEROTIC CARDIOVASCULAR DISEASE-A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMISED CONTROLLED TRIALS

Author Block: Marium Khan, Aqsa Munir, Syeda Amna Shahab, Anosha Khan, Mariam Saqib, Syed Ahmed Ali Zia, Sheeza Nawaz, FNU Anum, Saamia Raza, Rameen Eijaz, Abdul Ahad Syed, Satish Kumar, Mahima Khatri, Jinnah Sindh Medical University, Karachi, Pakistan, Dow Medical College, Karachi, Pakistan

Background: Statins, though the most effective lipid-lowering drugs, are demonstrated to induce liver injury and increase the risk of statin-related myopathy/myalgia at high dose leading to non-compliance/tolerance. Further, increasing statin intensity doesn't have a linear reduction in blood lipid parameters.

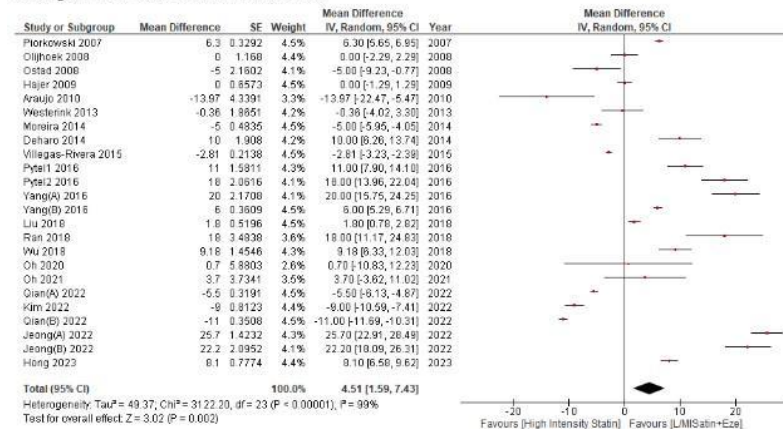
Abstract Body: **Methods:** A systematic search of MEDLINE, Cochrane, SCOPUS, Embase and CTG was conducted in April 2024. The outcomes [changes in levels of low-density lipoprotein (LDL-c), high-density lipoprotein (HDL-c), triglycerides (TGs), total cholesterol (TC), high-sensitivity C-reactive protein (hs-CRP), Apo-A1, Apo-B, alanine aminotransferase (ALT), aspartate aminotransferase (AST), creatine phosphokinase (CK)] were analysed using RevMan, to pool mean differences (MD) and 95% confidence intervals (CI).

Results: A total of 23 RCTs with 6,095 patients (70% males) are included in the analysis. Compared to high-intensity statin monotherapy, the combination therapy was more effective in reducing the levels of LDL-c (MD: 4.51; CI: 1.59-

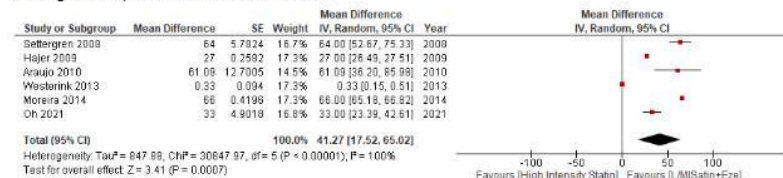
7.43; $P=0.002$), Apo-B (MD: 41.27; CI:17.52 to 65.02; $P<0.00001$) and ALT (MD: -0.71; CI:-1.15 to -0.28; $P=0.001$). There were no significant changes observed in the levels of HDL-c, TC, TG, hs-CRP, or Apo-A1, and other safety outcomes (AST and CK) between the two groups.

Conclusion: We conclude that low/moderate intensity statin plus ezetimibe combination therapy significantly changed LDL-C and Apo-B levels compared with high-intensity statin monotherapy.

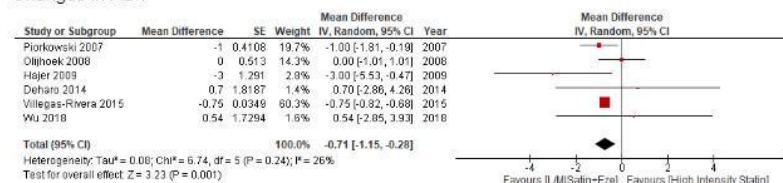
Change in LDL-c levels from baseline:



Changes in Apo-B levels from baseline:



Changes in ALT:



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 72

Topic 1: Ischemic Heart Disease

Publishing Title: FIRST USE OF UFR ANGIOPLUS CORE TECHNOLOGY IN THE DOMINICAN REPUBLIC

Author Block: Francisco José Mañan De La Cruz, Carlos M. Martinez, Ricardo Blanchery, Carlos Garcia Lithgow, SR, Centro Cardiovascular Santo Domingo, Santo Domingo De Guzmán, Dominican Republic

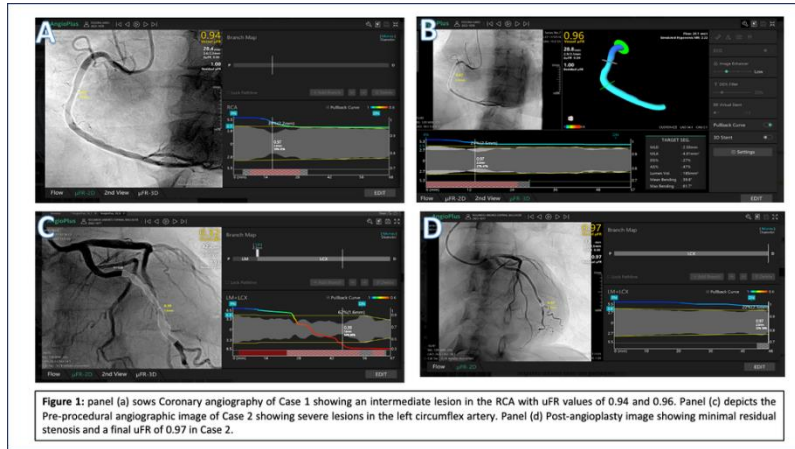
Background: The uFR AngioPlus Core technology offers precise coronary physiology analysis without invasive pressure guides. This report documents its first use in the Dominican Republic, assessing two patients with complex coronary artery disease.

Case: **Case 1:** A 68-year-old female with hypertension and diabetes, previously stented in the right coronary artery (RCA), presented with dyspnea. Coronary angiography revealed an intermediate RCA lesion. uFR measurements (0.94-0.96) indicated no significant flow compromise, avoiding an unnecessary procedure. **Case 2:** A 75-year-old male with hypertension presented with chest pain. Coronary angiography showed severe lesions in the left circumflex artery (LCx). The initial uFR value was 0.32, indicating significant ischemia. Angioplasty with a 2.7x25 mm ONX stent was performed. Post-PCI uFR value improved to 0.97, confirming successful revascularization.

Abstract Body: **Decision-making:** Case 1: uFR no significant flow compromise in the RCA, avoiding unnecessary intervention. Case 2: The technology guided successful revascularization in the LCx, evidenced by improved uFR values and symptoms.

Conclusion: The uFR facilitated precise assessment of coronary lesions, improving PCI decision-making. It avoided an unnecessary procedure in the

first case and guided successful revascularization in the second. Both patients showed significant clinical improvements without adverse events, demonstrating the potential benefits of this technology.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 73

Topic 1: Ischemic Heart Disease

Publishing Title: CROSSFIT UNMASKS CORONARY ARTERY DISEASE IN A YOUNG PATIENT WITH ANKYLOSING SPONDYLITIS

Author Block: Syifa R. Djunaedi, Omar Haider, Shaber Seraj, Khalid Sawalha, Lisa Ann Massie, University of Massachusetts Chan Medical School Baystate Medical Center, Springfield, MA, USA

Abstract Body:

Background: Ankylosing spondylitis (AS) is a highly inflammatory systemic disease. Cardiovascular manifestations in AS patients can include atherosclerosis and coronary artery disease (CAD) and is usually characterized by increased low-density lipoprotein (LDL) cholesterol. Those afflicted with AS face a 30-50% increased risk of cardiovascular events.

Case: A 36-year-old male with a past medical history of AS (BLA-27 positive) and dyslipidemia presented with chest pain and dyspnea following a CrossFit session. He did not have any family history of CAD. Electrocardiogram revealed ST segment elevations in V1-V4 with depressions seen in the inferior leads. Emergent catheterization identified 99% stenosis of a 12mm segment in the distal subsection of the proximal left anterior descending artery (LAD). A Synergy 3mm x 20mm drug-eluting stent was deployed in the LAD. Post-procedure, the patient experienced frequent episodes of chest pain and telemetry revealed frequent accelerated idioventricular rhythm (AIVR) and non-sustained ventricular tachycardia. Suspected pericarditis was then managed with colchicine 0.6mg daily.

Decision-making: Epidemiological studies have identified autoimmune inflammatory disease as significant risk factors for CAD and acute coronary events (ACS). The incidence of ACS in patients with AS is hypothesized to be

higher than the general population, likely due to subclinical atherosclerosis. In our case, an otherwise active and healthy individual was found to have 99% occlusion of the LAD. He had known dyslipidemia with an LDL of 180mg/dl in the months preceding his presentation but was not on statin therapy. This case further supports the notion that there should be screening and evaluation of patients for the presence of atherosclerotic plaques by carotid ultrasound and early intervention for elevated LDL in patients with inflammatory arthritis.

Conclusion: This case of a 36-year-old male with AS and CAD highlights the significant cardiovascular risks associated with AS and the need for vigilant monitoring for ACS and underlying CAD.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 74

Topic 1: Ischemic Heart Disease

Publishing Title: FIRST IMPLANTATION OF DYNAMX® STENTS IN THE DOMINICAN REPUBLIC

Author Block: Francisco José Mañan De La Cruz, Carlos M. Martinez, Ricardo Blanchery, Carlos Garcia Lithgow, SR, Centro Cardiovascular Santo Domingo, Santo Domingo De Guzmán, Dominican Republic

Background: When it seemed that stent technology had reached its maximum development, an innovation emerged that completely redefines its structure, thus dynamizing its functioning. DynamX® stents represent an unprecedented technological advance; unlike traditional drug-eluting stents, these allow dynamic vascular adaptation after implantation. We successfully performed the first implantation of this technology in the Dominican Republic, demonstrating its efficacy in a pioneering case.

Abstract Body: **Case:** This case describes a diagnostic catheterization and angioplasty procedure with the placement of three stents in a 59-year-old male patient. The patient presented with typical chest pain, and invasive tests identified significant lesions via coronary angiography.

Decision-making: The use of DynamX® stents facilitated the successful treatment of severe coronary lesions. Post-procedure angiography confirmed the correct positioning of the stents with a TIMI III flow. The patient showed significant clinical improvement with no adverse events reported during follow-up.

Conclusion: DynamX® stents represent a crucial innovation in the treatment of coronary artery disease, offering significant advantages in terms of vascular motion restoration, reduction of long-term adverse events, and improvements

in clinical practice. Their ability to adapt and remodel vessels naturally makes them a superior option to traditional stents, significantly improving outcomes for patients with coronary disease.

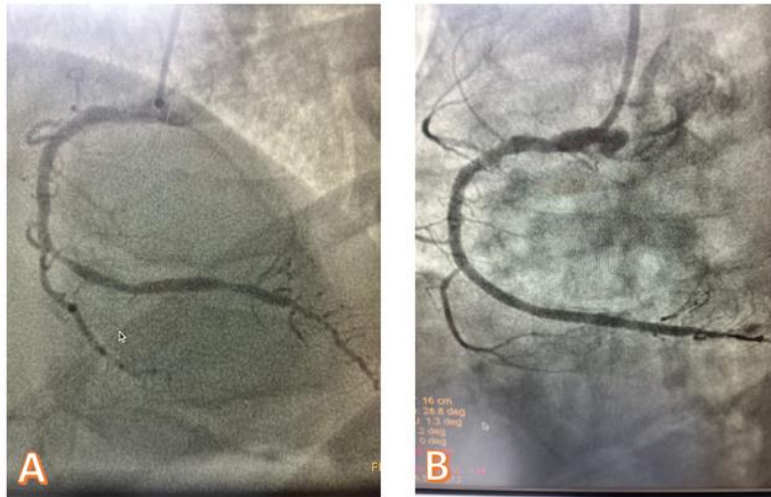


Figure 1: (A) Coronary angiogram showing the right coronary artery, with proximal non-obstructive irregularities, it presents a severe lesion in its middle segment and distally it presents a severe lesion, its secondary vessels present non-significant disease (yellow arrows). (B) Coronary angiogram after implantation of tree coronary artery DynamX® stents with TIMI-III flow.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 75

Topic 1: Ischemic Heart Disease

Publishing Title: INFERIOR ST-SEGMENT ELEVATION MYOCARDIAL INFARCTION ON A PATIENT WITH ABNORMAL RIGHT CORONARY ARTERY ORIGIN, AN UNEXPECTED CHALLENGE

Author Block: Jorge Alberto Meza Chacon, Eva Palacios, Kevin F. Vargas, Jorge L. Ochoa, Karen Lorena Castillo Soto, Gerardo Valenzuela Valenzuela, Juan Andres Rodriguez, Unidad Medica de Alta Especialidad No. 34. Instituto Mexicano Del Seguro Social, Monterrey, Mexico

Abstract Body:

Background: Coronary Artery Anomalies (CAAs) are a group of congenital abnormalities of the origin, course or termination of one or more epicardial arteries, with a wide range of clinical presentation. Most of symptoms have been associated with ischemic myocardium due to dynamic compression of coronary arterial course.

Case: A 70-year-old female, with history of diabetes, hypertension, end-stage chronic kidney disease, attended to the emergency room due to sudden severe chest pain at rest and syncope. Upon arrival, physical examination was normal. An electrocardiogram showed an inferior ST-segment Elevation Myocardial Infarction, and patient was taken to primary percutaneous coronary intervention (PCI). Angiography revealed a left main coronary artery, left anterior descending artery and left circumflex artery with no significant disease. A dominant right coronary artery (RCA) with an anomalous origin, emerging from the left Valsalva sinus had a critical proximal lesion.

Decision-making: Based on clinical context, primary PCI was performed using a Judkins left guide catheter, with implantation of a 2.75*38 mm and 2.5*30 mm Drug Eluting Stents. Patient remained clinically stable and was

successfully discharged.

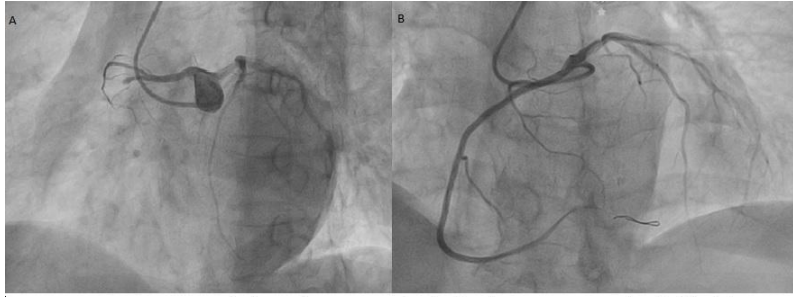


Figure 1. A. Invasive coronary angiography show a right coronary artery (RCA) with an aberrant origin emerging from the left Valsalva sinus, pre procedural total thrombotic occlusion at the proximal segment of the RCA. B. Post percutaneous coronary intervention (PCI) shows a successful result with two Drug Eluting Stents implanted

Conclusion: Coronary artery anomalies usually cause ischemia through vessel compression, but they can also result in acute coronary syndromes due to unstable plaques. Prompt revascularization is crucial during the acute phase, with further risk assessment for sudden cardiac death.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 76

Topic 1: Ischemic Heart Disease

Publishing Title: ACUTE CORONARY SYNDROME IN YOUNG ADULTS UNDER 40 YEARS OF AGE, MULTIVESSEL CORONARY ARTERY DISEASE AND ELEVATED LP(A). REPORT OF A CASE.

Author Block: Carlos Alberto Fuentes Perez, SR, Pedreros Guerra Juan Camilo, FERNAN DEL CRISTO MENDOZA, Juan David Rojas Perdomo, Edgar Hurtado, Fundación Clínica Shaio, Bogota, Colombia

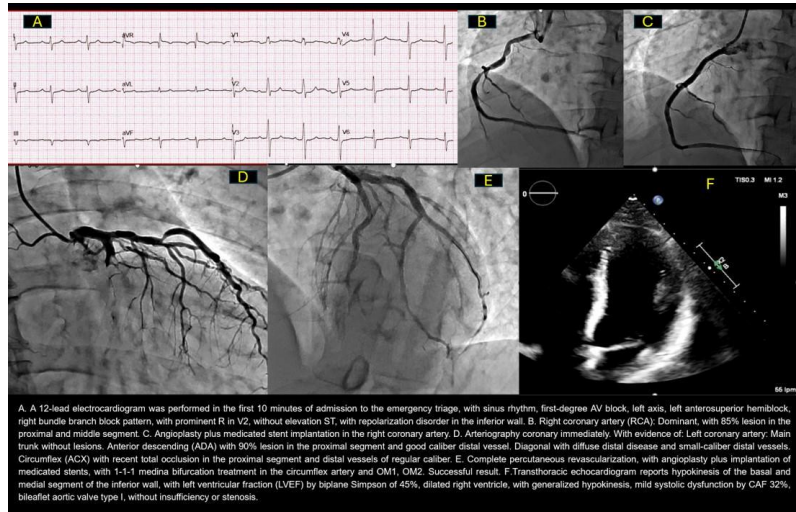
Background: ACS in young adults is increasingly common, with increased morbidity and mortality.

Case: 37 years old, smoker, overweight, with a family history of coronary disease in his father since he was 54 years old. He presented myocardial infarction without ST segment elevation, with evidence of multivessel coronary artery disease, acute total occlusion in the proximal segment of the circumflex artery with a distal vessel of regular caliber, complete percutaneous revascularization was performed. HbA1c 5.7%, LDL 196 mg/dl, triglycerides 301 mg/dl, Lp(a) 272 mg/dl, transthoracic echocardiogram with hypokinesia in the inferior wall, LVEF 45%. Discharge with optimal medical treatment

Abstract Body: **Decision-making:** In this case, the clinical practice guidelines were followed, achieving a successful result. Despite the patient's age, risk factors were identified such as male sex, overweight, smoking, dyslipidemia, prediabetes, family history of premature coronary heart disease, LDL > 190 mg/dl, with elevated Lp(a), associated with his severe coronary disease. Emphasis was placed on the control of cardiovascular risk factors, secondary prevention, cardiac rehabilitation, antithrombotic and lipid-lowering treatment with the aim of achieving LDL goals of less than 55 mg/dl with triple therapy (statin high

intensity, ezetimibe, iPSCK9).

Conclusion: Extreme premature coronary heart disease is related to traditional and non-traditional cardiovascular risk factors. It is a common cause of ACS in young adults.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 77

Topic 1: Ischemic Heart Disease

Publishing Title: CLINICAL CHARACTERISTICS OF PATIENTS WITH ST ELEVATION MYOCARDIAL INFARCTION WITH TREATED WITH PRIMARY ANGIOPLASTY IN A CARIBBEAN COUNTRY

Author Block: FULGENCIO MARCELO SEVERINO, SR, Joel Ramos, claudio almonte, Edward Otañez, Robert Garcia, Patricia Severino, Hospital Salvador B Gautier, Santo Domingo, Dominican Republic

Abstract Body:

Background: Ischemic heart disease is the leading cause of death in the world. In the Dominican Republic, in 2019, 21% of deaths occurred due to ischemic heart disease. Mortality in ST-segment elevation myocardial infarction (ST-MI) varies with access, type, and delay to reperfusion therapy.

Methods: This is a prospective observational study of a sample of 325 patients with ST- MI out of a total of 422 patients who underwent angioplasty in 5 coronary intervention centers in the Dominican Republic. Patients were recruited during hospitalization to collect information on the variables of interest in the study and were followed by their family physician or an external physician through calls and consultations to assess their condition and echocardiogram results at 30, 90, 180 and 365 days after the event. All included patients were informed about the objectives and methodology of the study and signed the informed consent. Quantitative variables are presented in mean and qualitative variables in proportions.

Results: 69.2% were male, 61.3% had primary education or less, hypertension was found in 69.5%, diabetes mellitus 32.9%, and active smoker 24.6%. Chest pain was the main symptom with 91.4%, dyspnea, and diaphoresis with 22%. The mean evolution time was 574.21±1459.70

minutes. The average door-balloon time was 614.27 ± 763 minutes and the average total ischemia time was 1062 ± 1459.70 minutes. The most affected culprit artery was the descending anterior artery (53.2%), followed by the right coronary artery (27.1%). Only 6.2% received thrombolytic therapy. A total of 43.4% had associated chronic coronary lesions. The mean ejection fraction during hospitalization was $48.28\% \pm 14$ and at 30 days $51\% \pm 15$. Mortality at 30 days is 4.9%

Conclusion: Patients with acute coronary syndrome treated with primary angioplasty are delayed more than 2 times that established by the guidelines. Despite these delays, 30-day mortality is low and there is improvement in left ventricular ejection fraction.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 78

Topic 1: Special Topics

Publishing Title: ANOMALOUS RIGHT CORONARY ARTERY ORIGIN, A NOT-SO BENIGN ENTITY

Author Block: Jorge Alberto Meza Chacon, Eva Palacios, Kevin F. Vargas, Jorge L. Ochoa, Karen Lorena Castillo Soto, Unidad Medica de Alta Especialidad No. 34. Instituto Mexicano Del Seguro Social, Monterrey, Mexico

Abstract Body:

Background: Coronary artery anomalies (CAA) are congenital abnormalities that pose risks of ischemia, arrhythmia, or sudden cardiac death (SCD), especially with interarterial or intramural courses.

Case: A 54-year-old male with hypertension and hemorrhoidal disease experienced a cardiac arrest due to an arrhythmia during an elective hemorrhoidectomy. Advanced cardiopulmonary resuscitation restored spontaneous circulation without any apparent sequelae. Physical examination was normal. Electrocardiogram revealed sinus rhythm with T-wave inversion in the inferior leads. Transthoracic echocardiography showed no significant abnormalities. Pharmacological myocardial perfusion imaging showed no evidence of ischemia. Coronary computed tomography angiography revealed an anomalous origin of the right coronary artery (RCA) arising from the left Valsalva sinus, with a 50% diameter reduction during diastole due to interarterial course. There were no significant atheroma plaques.

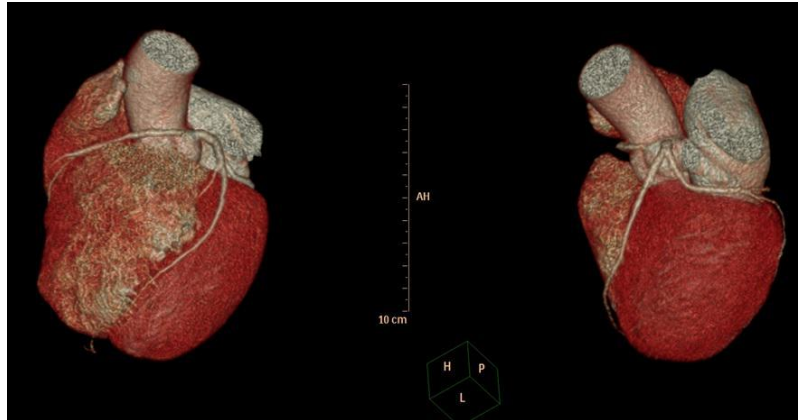


Figure 1. Coronary computed tomography angiography tridimensional reconstruction showing the right coronary artery emerging from the left Valsalva sinus. Notice the right ventricle outflow tract anteriorly to the right coronary artery (Pulmonary artery removed)

Decision-making: Due to the risk of SCD posed by the anomalous RCA and the history of cardiac arrest, surgical management was performed with bypass from the right internal mammary artery to the RCA. The patient had an uneventful recovery and was successfully discharged.

Conclusion: CAA is a clinical entity that poses a risk of SCD. Hence the relevance of sharing such cases within the medical community, to raise awareness about the severity of these anomalies and the importance of adequate and timely treatment.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 79

Topic 1: Special Topics

Publishing Title: TUMOR WITH UNUSUAL INTRACARDIAC EXTENSION: INTRAVASCULAR LEIOMYOMATOSIS

Author Block: Angel Daniel Puga Niño, Hector E. Flores Salinas, Guillermo Rodríguez Zavala, Gabriel Herrera Camacho, Aldo Antonio Alcaraz Wong, Edgardo Bobadilla López, Abel Salvador Becerra Flores, Rocío Anahí Silva Martínez, Samantha Toledo García, Centro Médico Nacional de Occidente, Guadalajara, Mexico

Abstract Body: **Background:** Intravascular leiomyomatosis (IVL) is a very rare leiomyoma variant with smooth muscle proliferation in pelvic veins. It can be asymptomatic until reaching the heart.
Case: A 43 year old woman, with history of hysterectomy due to uterine myomatosis, presented with dyspnea, chest pain, and dizziness. Examination revealed jugular vein distention and a tricuspid murmur, while echocardiography identified a tumor in the inferior vena cava occupying 80% of the right atrium and protruding into the right ventricle, accompanied by moderate tricuspid regurgitation. A thoracoabdominal computed tomography scan confirmed the presence of two masses in the inferior vena cava and the right atrium.

Decision-making: The patient initially had pelvic surgery and was later referred for cardiac surgery. A 10x5 cm solid tumor was discovered during the cardiac procedure, extending from the right atrium into the inferior vena cava. Nearly complete removal was achieved without complications. Following a satisfactory recovery, the patient was discharged after 7 days, with histopathological analysis confirming IVL.

Conclusion: IVL is a rare condition with unknown etiology, it predominantly

affects women in their fifth decade who have a history of uterine myomatosis or hysterectomy. Surgical resection is preferred due to a recurrence rate of up to 30% at 15 years, emphasizing the significance of close monitoring, multidisciplinary diagnosis, and excisional treatment for favorable long term outcomes.

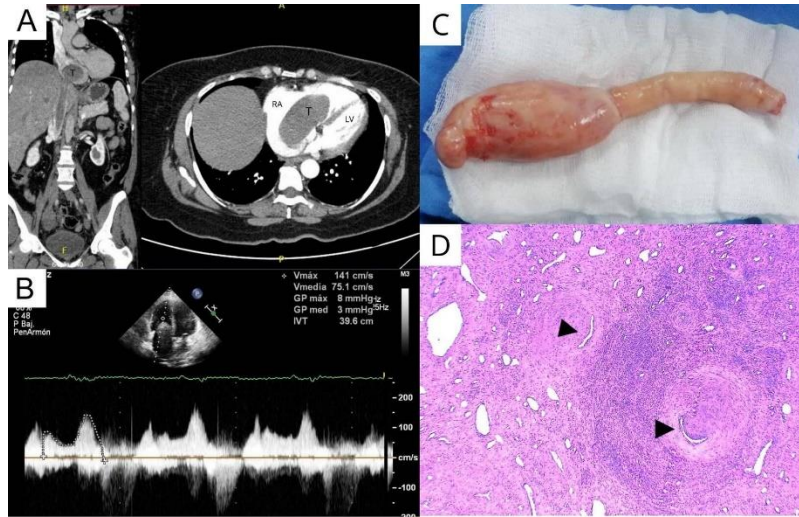


Fig.1 (A) Thoraco-abdominal computed tomography showing the extent of the inferior vein cava filling defect reaching the heart. (B) Transthoracic echocardiogram revealing cardiac involvement of the tumor. (C) Resected anatomical specimen. (D) Microphotograph with intravascular lumens collapsed due to fusiform and uniform proliferation of smooth muscle cells (Hematoxylin and Eosin, x40 magnification). T, tumor; RA, right atrium; LV, left ventricle.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 80

Topic 1: Special Topics

Publishing Title: A PURULENT PERICARDIAL EFFUSION BY STREPTOCOCCUS AGALACTIAE WITH PERIPHERAL VASCULAR PHENOMENA: A RARE CASE PRESENTATION

Author Block: Kimberly Pagan, Edgar Vazquez-Vargas, Mayaguez Medical Center, Mayaguez, PR

Abstract Body:

Background: Purulent pericarditis secondary to Streptococcus agalactiae is uncommon. Usually affecting the elderly and immunosuppressed. These infectious pericardial effusions may lack typical features making it challenging for management causing a limitation to life expectancy.

Case: This case involves a 75- year- old female with medical history of left breast cancer with metastases to bone who presented to the emergency department of our hospital after presenting with a non-ST elevated myocardial infarction in a local clinic. Chest pain was described as localized retrosternal, oppressive and worsened with deep breaths. Associated with shortness of breath, fatigue and generalized malaise. An electrocardiogram was significant for sinus tachycardia. A computerized tomography scan of the chest reported a large pericardial effusion. Bedside echocardiogram demonstrated a moderate pericardial effusion causing right atrial and ventricle collapse, suggesting tamponade physiology. A subxiphoid pericardial window was performed, draining 300 cc. Pericardial fluid and blood cultures were remarkable for growth of Streptococcus agalactiae. Despite hemodynamic stability and no evidence of peripheral vascular disease; clinical course was complicated with ischemic changes in the upper and lower extremities.

Decision-making: Multidisciplinary team evaluation was warranted.

Systemic signs suggesting severe sepsis required broad spectrum antibiotic coverage. Given tamponade physiology, prompt subxiphoid pericardial window was performed reestablishing hemodynamic stability. During the patients' clinical course, ischemic changes were observed at the distal phalanges of the right hand and bilateral feet, without the evidence of vaso occlusive disease upon arterial doppler ultrasound of the extremities. Despite all our efforts, our patient expired after her wishes were respected by advanced directives.

Conclusion: This uncommon presentation demonstrates the cardiovascular and peripheral vascular complications that may be presented in the setting of a severe and mortal bacterial infection in an immunocompromised patient.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 81

Topic 1: Special Topics

Publishing Title: IS IT FEASIBLE TO IMPLEMENT COMPREHENSIVE STROKE PROGRAMS IN RESOURCE-LIMITED SETTINGS?

Author Block: Stephanie Castro, Francisco Mendez, Pamela Piña, Melanie Moronta, Yaquiris Jose, Edwina Luna, Luis Suazo, Cesar J. Herrera, Centros de Diagnóstico, Medicina Avanzada y Telemedicina, Santo Domingo, Dominican Republic

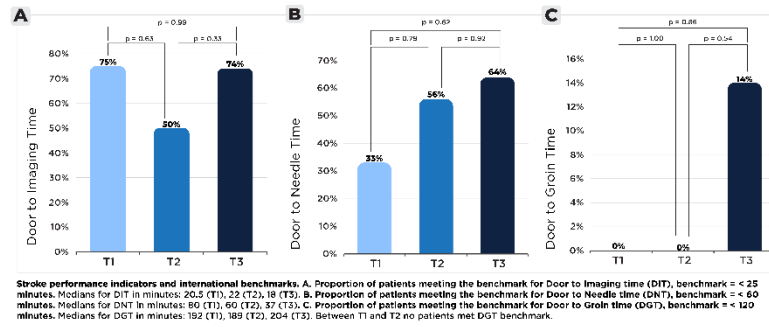
Abstract Body: **Background:** Stroke is the second cause of death and main cause of disability in the Dominican Republic where rapid access to guideline-directed therapies is limited. We sought to implement a comprehensive acute ischemic stroke (AIS) program at a referral center and evaluate subsequent outcomes.

Methods: A 24/7 call schedule was established with ER direct access to a multidisciplinary team, including in-hospital fellows expected to respond within 5 minutes, all trained for early AIS identification; ER bureaucratic delays were minimized. Systematic data collection and Quality Improvement multidisciplinary monthly meetings were implemented; statistical analysis employed pairwise comparisons with Tukey test of performance measures between chronological periods: August 2022-January 2023 (T1), February-August 2023 (T2), and September 2023-March 2024 (T3).

Results: A total of 254 consecutive pts were studied: 60% male; age 68±16 yrs.; hypertension in 76% and diabetes in 62%; 77% arrived via private transportation; 39 (15%) within the therapeutic window (4 in T1, 17 in T2, and 21 in T3). Among eligible pts, 67% underwent thrombolysis, 41% thrombectomy, and 8% both. Figure depicts performance indicators.

Conclusion: Based on this experience, implementation of advanced stroke programs in LMICs appears feasible as sustained critical time metrics in AIS

were achieved. A nationwide network ought to be developed so these data can be corroborated, and necessary measures developed.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 82

Topic 1: Special Topics

Publishing Title: ECONOMIC BURDEN OF HEART FAILURE HOSPITALIZATIONS IN A CARIBBEAN NATION

Author Block: Edisson Apolinar Feliz Perez, Pamela Pina Santana, Scarlet Margarin, Francisco José Mañan De La Cruz, Ramón Romano, Elizabeth Leon-Cuevas, Shanella Mercedes Percel Muñoz, Patricia Severino, Lia M. Joubert, Jesús Pichardo, Jenniffer Mateo, Cesar J. Herrera, CEDIMAT CV CENTER, Santo Domingo, Dominican Republic

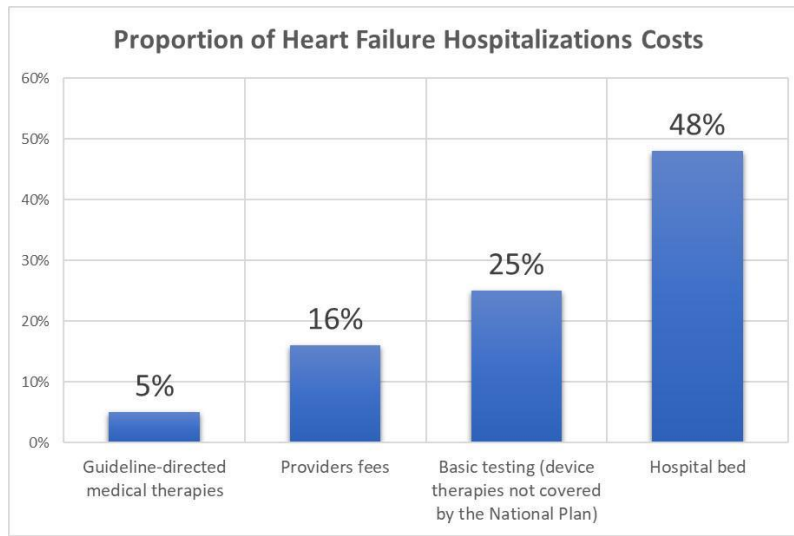
Abstract Body: **Background:** There is limited information on the economic burden imposed by HF in LMICs of Latin America (LATAM), a region with marked financial disparities and health care limitations. We aimed at analyzing HF hospitalizations costs at a tertiary care non-profit center in the Dominican Republic.

Methods: Records of consecutive pts admitted with HF between May 2015-September 2023 were reviewed; their care expenses were calculated as per the National Health Insurance Plan coverage (used by 52% of the country's population), including costs of basic tests (labs, X-rays, echocardiogram), hospital beds, guideline-directed drug therapies, and provider fees. Subjects were dichotomized by EF≤40 %/> 40% and sex; ANOVA statistics were employed for analysis.

Results: Between May 2015-September 2023, 1,001 ptes, 60% M, with new/known HF EF≤40% (738;73%) and EF>40% (263;27%) were studied; mean Hospital stay was 6 ± 4.8 days with a mean per pte. cost of US\$1,093 equivalent to 3.3 times the country's average minimum monthly wages (US\$330) (Figure). Men with >40% EF exhibited higher hospitalization

expenditures (US\$1,225 vs. US\$1,113 W, $p=0.0021$) including those in ICU (\$1,794 vs. \$1,602 W, $p=0.02$). Elevated creatinine, NT-proBNP, and Troponin were associated with increased total costs (all $p<0.001$).

Conclusion: In this cohort, HF hospitalizations were costly particularly in M with HF >40%, nearly 50% related to bed usage. Regional registries are needed to better understand the economic burden of HF in LMICs.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 83

Topic 1: Special Topics

Publishing Title: HOW BIG IS TOO BIG? AN UNUSUAL CASE OF THYROCERVICAL TRUNK PSEUDOANEURYSM

Author Block: Elmer Rafael De Camps Martinez, Elizabeth Leon-Cuevas, Nelson Encarnacion, Ruben H. Neris, Hospital General Plaza de la Salud, Santo Domingo, Dominican Republic, Trumbull Regional Medical Center, Warren, OH, USA

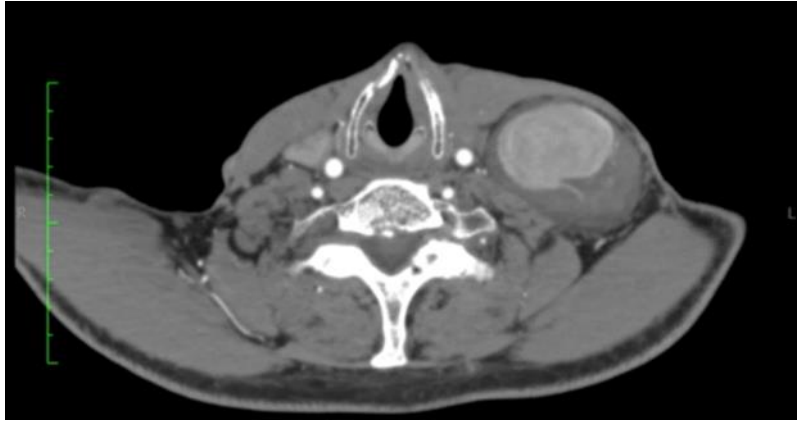
Background: Thyrocervical trunk pseudoaneurysm are rare and usually occurs after trauma.

Abstract Body: **Case:** A previously healthy 71 years old Hispanic patient presented to vascular surgery clinic with a chief complain of a left suprascapular pulsatile mass that he noticed over the past 12 years. There was no history of trauma. No family history of vascular disease. He was a former smoker. On physical exam there was a left supraclavicular non-tender pulsatile mass that was mobile. His blood tests were unremarkable. He got an ultrasound of the mass that suggestive of pseudoaneurysm. The patient subsequently got a carotid computer tomography (CT) angiogram that showed a saccular dilation of left thyrocervical trunk that measured 6.1x4.6x5 centimeter. Patient underwent an open, left thyrocervical trunk aneurysm resection with primary anastomosis. Two months after the surgery the patient was doing well.

Decision-making: The decision to perform a resection of the pseudoanerurysm was made due to the potential risk of embolization as well as the risk of rupture. Because the size of the pseudoaneurysm is directly proportional to the risk of rupture, it is reasonable to remove the pseudoaneurysm in a previously healthy patient with no comorbidities, thus

we presumptively lower surgical risk.

Conclusion: This case showcases the possibility of performing a successful resection of an asymptomatic thyrocervical trunk pseudoaneurysm.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 84

Topic 1: Special Topics

Publishing Title: AORTIC DISSECTION IN A PATIENT WITH ACTIVE GIANT CELL ARTERITIS, A THERAPEUTIC CHALLENGE

Author Block: Marco Antonio Rodríguez Pablo, Erika Yamali Ramirez Marcano, Raúl Emmanuel Fonseca Robles, Carlos Alan Castro García, Rafael Sanz, José De Jesús Nuño Pulido, Rodrigo Gopar-Nieto, Daniel Sierra, Diego Araiza, Alexandra Arias-Mendoza, Hector Gonzalez-Pacheco, INSTITUTO NACIONAL DE CARDIOLOGIA IGNACIO CHAVEZ, Mexico City, Mexico

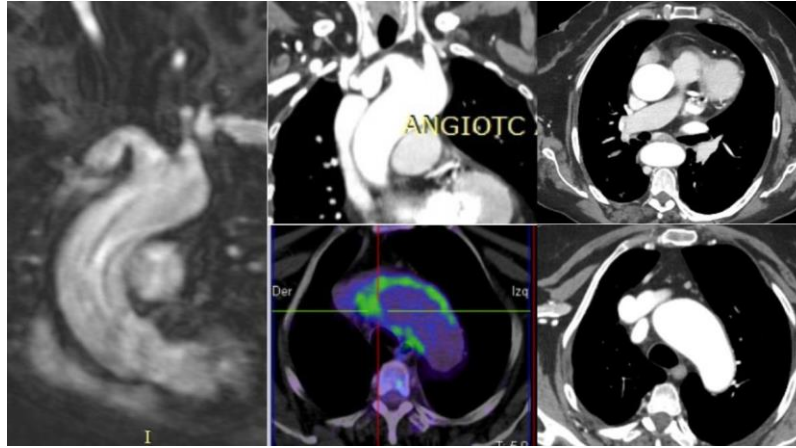
Background: Giant cell arteritis (GCA) affects large arteries, causing symptoms like headache, fever, and visual issues. Aortitis inflames different aortic segments, leading to high blood pressure and aortic valve problems. This report discusses a 73-year-old female with both GCA and aortitis, who had an incidental Stanford A aortic dissection.

Abstract Body: **Case:** The patient's history included hypertension and giant cell arteritis. She was found to have a Stanford A aortic dissection during a follow-up visit. She was asymptomatic. Initial tests showed no tissue hypoperfusion, and echocardiography indicated mild aortic insufficiency. Further evaluation revealed active inflammation. Due to high surgical risks, it was decided to increase her immunosuppressive treatment for 8 weeks before considering surgery. Follow-up imaging confirmed persistent inflammation but no progression of the dissection. Her treatment was adjusted and she continues to be monitored as an outpatient until the inflammation subsides.

Decision-making: Operating on patients with active autoimmune diseases is challenging. In this case, the patient's asymptomatic status and absence of malperfusion syndrome influenced the decision to prioritize

immunosuppressive treatment before scheduling surgery.

Conclusion: Autoimmune aortitis, a rare condition, may require surgery, necessitating a delicate balance between surgical risk and disease activity, demanding a multidisciplinary approach.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 85

Topic 1: Special Topics

Publishing Title: CLINICAL DIFFERENCES IN PATIENTS WITH FONTAN SYSTEM AND ITS VARIANTS: IS ONE TECHNIQUE BETTER THAN THE OTHER? EXPERIENCE IN A REFERENCE CENTER.

Author Block: Miriam Guadalupe Zuñiga Salcedo, Jorge Sanchez Nieto, Edgar Garcia, Isaac Espinosa, Ricardo Sánchez Moreno, NATIONAL INSTITUTE OF CARDIOLOGY "DR. IGNACIO CHAVEZ", MEXICO CITY, Mexico

Background: The Fontan procedure, crucial since 1971, allows children with single-ventricle physiology to survive into adulthood. It originally involved a valved conduit from the right atrium to the pulmonary artery, now often replaced by extracardiac tunnels. A recent modification includes a "fenestrated" pathway for controlled shunting.

Methods: The aim of the present study is to evaluate the clinical complications of the Fontan circulation (Fc) and to determine whether the surgical technique influences these complications. We conducted a retrospective search for patients who underwent any type of Fontan circulation and recruited those who are currently involved in our clinic, evaluating their functional status and complications.

Abstract Body:

Results: In our study of 32 patients, those with fenestrated conduits showed higher hypoxemia rates. Most were NYHA class I, but various complications occurred, including arrhythmias (37.5%), thromboembolic events (16%), hepatic dysfunction (15%), and kidney disease (6%). The oldest patient who underwent the Fontan circulation (Fc) procedure was 18 years old.

Conclusion: The present study demonstrated differences in clinical complications between Fontan circulations (Fc) with and without fenestrated

conduits, although these differences did not reach statistical significance. Despite advancements in the procedure, the Fontan circulation still represents a hemodynamic compromise with potential complications.

Variable	Total N= 32	Conduit Fenestrated n= 22	Conduit No Fenestrated n= 10	P*
Female, n (%)	17 (53.12%)	12 (54%)	5 (50%)	0.581
Age, median (min-max)	25 (21-48)	24.5 (21-38)	26.5 (21-48)	0.886
Age at surgery, median (min-max)	12 (2-18)	12.5 (2-18)	10.5 (4-17)	0.501
Years after surgery, mean (SD)	16 (3-34)	14.5 (3-30)	16.5 (8-34)	0.886
Fisiological classification (ACC)				
A	2 (6.25%)	2 (9%)	0	0.492
B	11 (34.38)	6 (27%)	5 (50%)	0.309
C	19 (59.38%)	14 (63%)	5 (50%)	0.482
D	0 (0.0%)	0	0	
SpO2 (%), median (min-max)	85% (65-95)	85% (65-90)	88.5% (83-95)	0.041
NYHA				
I	24 (75%)	16 (72%)	8 (80%)	0.869
II	5(16%)	4 (18%)	1 (10%)	0.528
III	3 (9%)	2 (10%)	1 (10%)	0.691
IV	0	0	0	
Univentricular ejection fraction, n(%)				
>50	23 (72%)	15 (68%)	8 (80%)	0.783
40-49	9 (28%)	7 (32%)	2 (20%)	0.470
<40	0	0	0	
Arrhythmias, n (%)	12 (37.5%)	7 (32%)	5 (50%)	0.379
Thromboemboli n(%)	5 (16%)	3 (14%)	2 (20%)	0.530
Hepatic Dysfunction n (%)	8 (25%)	4 (18%)	4 (40%)	0.273
Chronic Kidney Disease n(%)	2 (6%)	1 (4.5%)	1 (10%)	0.549

* Pearson's chi-square test or Fisher's exact test was used to calculate differences between categorical variables, and the Mann-Whitney U test was used for numerical variables between both groups. A value of P < 0.05 was considered statistically significant.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 86

Topic 1: Special Topics

Publishing Title: GLOBAL VENTRICULAR PERFORMANCE INDEX AS A PROGNOSTIC FACTOR IN CARDIAC SURGERY

Author Block: Araceli Gonzalez Ortiz, Daniel Manzur Sandoval, Lisbeth G. Hernández González, National Institute of Cardiology Ignacio Chávez, Mexico city, Mexico

Abstract Body:

Background: Surgical risk in cardiovascular surgery is a major concern due to perioperative complications. The Tei index, an echocardiographic measure assessing global ventricular function, combines systolic and diastolic aspects. Its potential as a predictor of perioperative outcomes is significant. This study explores its role in predicting postoperative complications across cardiovascular diseases, underscoring its promise for enhancing surgical risk stratification and patient care.

Methods: In this single-center study at the National Institute of Cardiology Ignacio Chávez, 195 adult patients undergoing cardiac surgery with cardiopulmonary bypass between 2022 and 2023 were retrospectively evaluated. The right Tei index was measured using transthoracic tissue Doppler, with a cutoff point of 0.53 for abnormality. Of the sample, 149 patients had a normal Tei index and 46 had an abnormal Tei index. The frequency of post-surgical complications and clinical outcomes was compared between groups.

Results: An abnormal Tei index was significantly associated with diabetes mellitus (OR = 1.76, 95% CI = 1.05-2.95, p = 0.03), older age (OR = 1.56, 95% CI = 1.07-2.27, p = 0.03), and vasoplegic syndrome, evidenced by lower mixed venous oxygen saturation (OR = 0.86, 95% CI = 0.78-0.95, p = 0.00) and higher

serum lactate (OR = 1.27, 95% CI = 1.07-1.51, $p = 0.01$). Additionally, patients with an abnormal Tei index had higher in-hospital mortality (OR = 6.22, 95% CI = 1.92-20.14, $p = 0.002$) and more complications, including the need for renal replacement therapy (OR = 5.3, 95% CI = 1.59-17.64, $p = 0.007$), in-hospital pneumonia (OR = 3.58, 95% CI = 1.40-9.11, $p = 0.007$), delirium (OR = 2.98, 95% CI = 1.21-7.38, $p = 0.018$), and increased transfusion requirement (OR = 2.88, 95% CI = 1.43-5.81, $p = 0.003$).

Conclusion: Tei index shows promise in stratifying surgical risk for cardiovascular surgery patients. This study emphasizes the strong link between abnormal Tei index values and unfavorable postoperative results, including increased in-hospital mortality and severe complications.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 87

Topic 1: Special Topics

Publishing Title: A PROLONGED WEANING: CASE REPORT OF A PULMONARY ARTERIOVENOUS FISTULA

Author Block: Edgardo Bobadilla, Claudia D. Frías, Guillermo Rodriguez Zavala, Hector Flores Salinas, Guillermo Rodriguez Zavala, Hector Flores Salinas, Juan A. Delgado, Abiud E. Gómez, Javier E. Cervantes, Jonathan Veloz, Evelin G. Gómez, Francisco Lara, Natalia Jaime, Abel Salvador Becerra Flores, Centro Médico Nacional de Occidente, Guadalajara, Jalisco, Mexico, Hospital Civil Fray Antonio Alcalde, Guadalajara, Jalisco, Mexico

Abstract Body:

Background: A 59 year old woman with a history of arterial hypertension and deterioration of functional class.

Case: The patient presented with a systolic aortic murmur and a systolic mitral murmur. An echocardiogram was performed and revealed a mitral valve area of 0.9cm², aortic valve with an area of 0.9cm², maximum velocity of 3.5m/s, mean gradient of 24mmHg. Cardiac catheterization showed coronary arteries without lesions, pulmonary capillary pressure of 18mmHg, mean pulmonary artery pressure of 25mmHg. A mitral valve and aortic valve replacement with mechanical valves were performed. During postoperative period, she maintained oxygen saturation of 60% on invasive mechanical ventilation (IMV) with FIO₂ of 100%.

Decision-making: An echocardiogram with agitated saline solution showed right-to-left shunt. Cardiopulmonary angiotomography revealed an arteriovenous fistula in the lower lobar branch of the left pulmonary artery to the left lower pulmonary vein, so left lower lobectomy was executed, observing a 5x4cm pulmonary arteriovenous fistula. During second postoperative period,

she maintained a saturation of 97% with IMV.

Conclusion: In patients with pulmonary arteriovenous fistulas, the main treatment approaches are angiographic interventional embolization and surgical resection. Surgical resection is the optimal treatment for patients with large and central pulmonary arteriovenous fistulas. As in this case, the fistula's characteristics lead to the performance of a lobectomy.



Figure 1. Computed tomography pulmonary angiogram with arteriovenous fistula between the inferior lobar branch of the left pulmonary artery to the left lower pulmonary vein (A). Agitated Saline Bubble Echocardiography shows evidence of left to right ventricular shunt (B). Left lower lobe with arteriovenous fistula (C).

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 88

Topic 1: Special Topics

Publishing Title: PULMONARY ARTERIOVENOUS FISTULA AS A CAUSE OF CHRONIC HYPOXEMIA IN A WOMAN WITH PRESERVED MYOCARDIAL FUNCTION

Author Block: Estanislao Antonio calixto, Aldo Emir Martínez Sarabia, Oscar de Jesús Gamboa Hernández, Ricardo Arturo Villamarin Velásquez, José Pablo Velásquez Padilla, José De Jesús Nuño Pulido, Rodrigo Gopar Nieto, María Alexandra Arias Mendoza, Regina De la Mora Cervantes, National Institute of Cardiology "Ignacio Chávez", Mexico City, Mexico

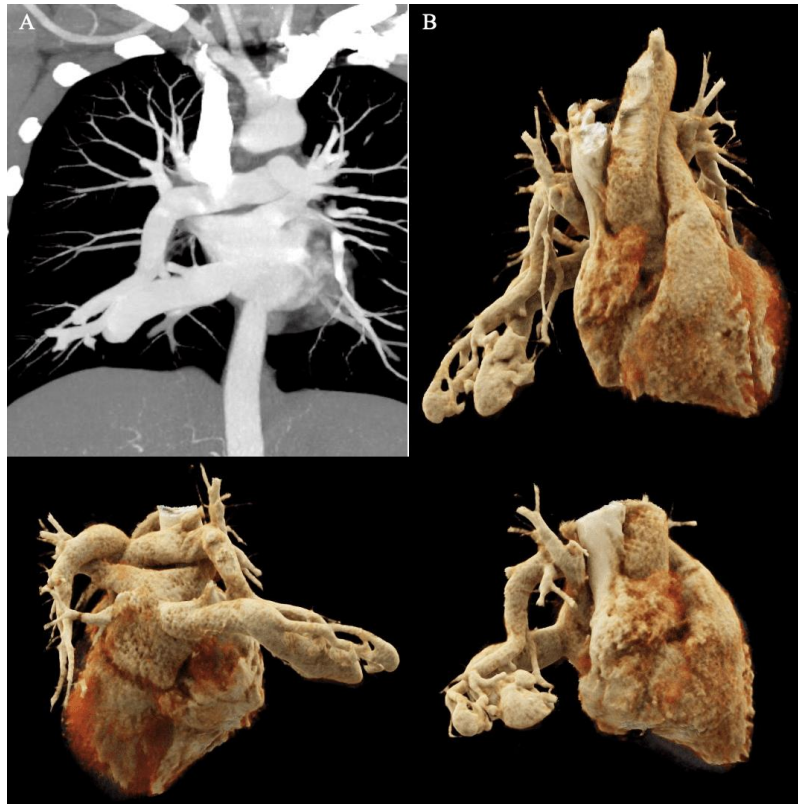
Background: Pulmonary arteriovenous fistulas are rare within the spectrum of vascular malformations. Dyspnea and fatigue are the most common symptoms.

Abstract Body: **Case:** This is a 50-year-old woman who presented progressive dyspnea, dizziness and lipothymia with oxygen saturation of 82% for 6 months, attending a private hospital where pulmonary angiotomography was performed with a report of dilation of the right pulmonary trunk with apparent fistula. Referred to our cardiology center where a sinus electrocardiogram was reported, normal heart rate, with no signs of hypertrophy. Pulmonary angiotomography was confirmed, ruling out pulmonary thromboembolism; however, a fistula from the right basal pulmonary artery from the middle lobe to the ipsilateral pulmonary vein was evident, which causes a short circuit of deoxygenated blood to systemic circulation, causing desaturation in the patient (right-left); in echocardiographic tracking without hemodynamic alterations in cardiac cavities.

Decision-making: However, the choice of treatment option depends on the clinical presentation, the severity of the symptoms and the patient's wishes,

which is why the patient was admitted to the outpatient clinic for close follow-up and to be evaluated for definitive treatment by cardiothoracic surgery.

Conclusion: The diagnosis of this entity represents a challenge for the doctor since a multidisciplinary team is required to address dyspnea without cardiovascular instability.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 89

Topic 1: Special Topics

Publishing Title: PROGNOSIS OF PREGNANT WOMEN WITH CARDIAC DISEASES ASSISTED IN A REFERRAL CENTER IN BAHIA, BRAZIL

Author Block: Larissa Novais, Rachel Peixoto, Flavia Valladares, Itana Ferreira, Jamile Aiupe, Leonardo Dourado, N G Kin Key, Vanessa Corral, Mario S. Rocha, Sabrina Rios Freitas, Maternidade Professor Jose Maria de Magalhães Neto, Salvador, Brazil, Escola Bahiana de Medicina e Saúde Pública, Salvador, Brazil

Background: In the last decades the world has seen an increasing maternal age at first and subsequent pregnancies, what makes these women more susceptible to get pregnant with comorbidities as hypertension, obesity and diabetes. Despite some falling that has been seen in maternal mortality, it is still above what is preconized by the World Health Organization.

Objective: Describe clinical and obstetric prognosis of pregnant women assisted from 2018 to 2022 on the referral center for high-risk pregnancies in Salvador, Brazil.

Abstract Body: **Methods:** The study is a retrospective cohort, performed with 513 pregnant and postpartum women assisted at the clinic of Cardiopathy in Pregnancy of the Referral Center in Salvador, Brazil, between 2018 and 2022. Continuous variables were described as averages \pm standard deviation, and dichotomous variables were developed as contingents. The association between prognostic factor and outcome was determined using logistic regression analysis.

Results: The mean age of participants was 31,3 years, most of them black (93,6%), single (63,2%) and from the capital (58,2%). The most prevalent cardiac diseases were native valve diseases (33%), most of rheumatic origin (52,5%), followed by arrhythmias (13,8%), congenital diseases (7,4%) and

Heart Failure with reduced ejection fraction (4,5%); other cardiopathies computed 3,5% of cases and disfunction of prosthetic valves, 3,1%. Hypertensive Disorder of Pregnancy (HDP) was found in 26,3% of patients. The combined outcome of death, preterm delivery, ICU stay or mechanical ventilation occurred in 59,8% of patients, having as predictors the presence of native valvular disease and the occurrence of HDP ($p<0,001$).

Conclusion: It is still observed high morbidity in pregnant women with cardiac diseases, with high proportion of rheumatic etiology in this population, mostly of black women, assisted in a referral center of a middle-income country. These data endorse the prominent need of public health policies to improve the prognosis of this population.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 90

Topic 1: Special Topics

Publishing Title: UNBLOCK ME MAYBE:AN ATYPICAL PRESENTATION OF DESCENDING THORACIC MURAL AORTIC THROMBUS

Author Block: Omar Haider, [Julia Fischer](#), Javier Apodaca, Nicholas Karr, Shaber Seraj, Baystate Medical Center, Springfield, MA, USA

Abstract Body:

Background: Thoracic mural aortic thrombus (TMAT) is a rare cause of less than 1% of patients presenting with abdominal, chest or flank pain. We describe a unique case of TMAT without distal embolization.

Case: An 80-year-old female with a medical history including papillary thyroid cancer and hypertension presented to the emergency department with shortness of breath. Presenting with systolic blood pressures (BP) greater than 240 mmHg, flash pulmonary edema in the context of a hypertensive emergency was suspected. Following initiation of antihypertensive therapy, cardiac evaluation with an echocardiogram revealed preserved ejection fraction and absence of regional wall motion abnormalities. At this time, the patient remained clinically stable, however had worsening biochemical evidence of renal failure. She then developed atypical symptoms including right shoulder pain and vomiting and was found to have asymmetric blood pressure readings in her upper and lower extremities prompting further evaluation. Computed tomography angiography of the chest revealed near-complete occlusion of a segment of the descending thoracic aorta by thrombus.

Decision-making: TMAT in the aorta is a rare entity, typically presenting with distal emboli in more than 80% of patients. While most TMAT cases involve distal emboli, our patient exhibited abdominal, chest, and flank pain without

evidence of embolization. Endothelial dysfunction or plaque rupture from hypertension have been implicated in the formation of TMAT. Imaging showed delayed organ enhancement, suggesting compromised arterial flow which was likely the reason the rapidly progressive renal failure our patient was seen to have. Early recognition is important as TMAT has the potential for significant morbidity and mortality from complications including mesenteric ischemia, acute limb ischemia and myocardial infarction.

Conclusion: Our case highlights an atypical presentation of TMAT that highlights the need for a high degree of suspicion for those with unusual symptoms who are at risk for vascular abnormalities.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 91

Topic 1: Special Topics

Publishing Title: ACUTE HEART FAILURE SECONDARY TO PROLAPSE OF ATRIAL MYXOMA INTO THE LEFT VENTRICLE IN A 41 YEARS OLD MALE

Author Block: José Adolfo Peña Peña, Karen Loren Castillo Soto, Viridiana Villanueva, Eva Palacios, Amalia Castro, UNIDAD MEDICA DE ALTA ESPECIALIDAD HOSPITAL DE CARDIOLOGÍA NO 34 IMSS, Monterrey, Mexico

Background: A 41 year old male with out cronic diseases, diagnosed with heart failure secondary to prolapse of atrial myxoma into the left ventricle

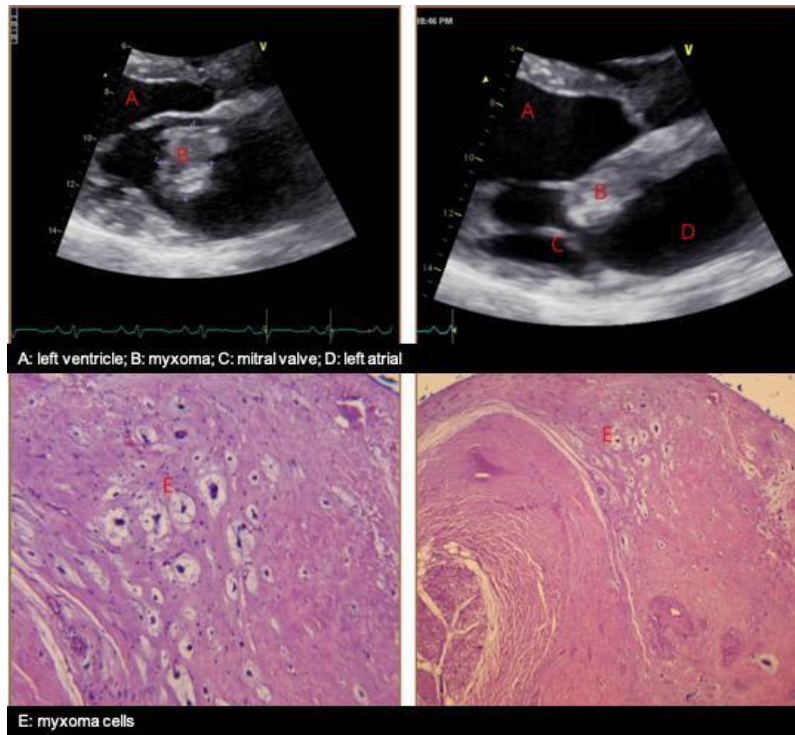
Case: A 41 year old male suddenly experienced a deterioration in functional class, along with rest dyspnea, lower limb edema, and orthopnea.

Transthoracic echocardiogram revealed an irregular, filiform, friable, highly mobile intra-atrial left-sided tumor with irregular borders, multilobulated appearance, and areas of calcification. This tumor protruded into the left ventricle during protodiastole, causing severe mitral insufficiency

Abstract Body: **Decision-making:** Surgical intervention by the cardiac surgery service confirmed a calcified 7x3 cm filiform mass at the interatrial septum base, along with dysplastic and edematous mitral valve leaflets. Complete resection of the tumor and mitral valve plasty were performed without complications. Pathology service confirmed the diagnosis of cardiac myxoma. The patient had a favorable recovery and was discharged from our unit without further events.

Conclusion: Symptoms and signs associated with cardiac myxomas vary, ranging from embolic manifestations to heart failure, or even asymptomatic presentations where the diagnosis is incidental. It is noteworthy that the association of valvular pathologies caused by giant myxomas or rare

morphologies can lead to the initial presentation, as seen in our patient.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

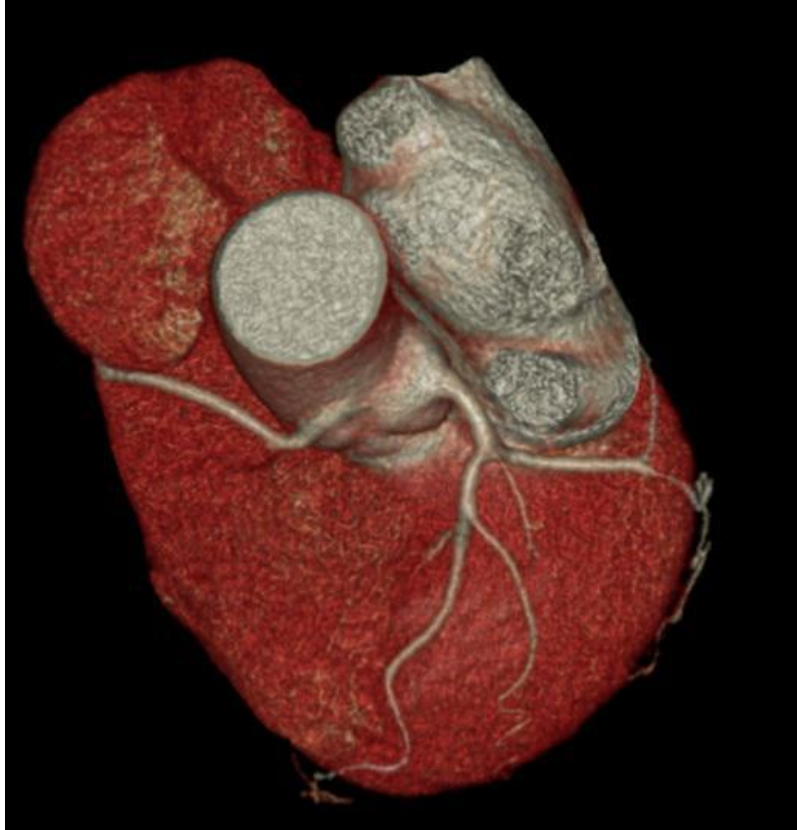
Poster Board Number: 92

Topic 1: Special Topics

Publishing Title: ANOMALOUS ORIGIN OF THE RIGHT CORONARY ARTERY WITH HIGH-RISK FEATURES: A CASE REPORT

Author Block: Jorge Alberto Meza Chacon, Eva Palacios, Kevin F. Vargas, Juan Andres Rodriguez, Gerardo Valenzuela Valenzuela, Jorge Luis Ochoa Gutierrez, Karen Lorena Castillo Soto, Unidad Medica de Alta Especialidad No. 34. Instituto Mexicano Del Seguro Social, Monterrey, Mexico

Abstract Body: **Background:** Anomalous Aortic Origin of the Coronary Artery is a congenital deviation in the origin of the coronary arteries. It can present clinically with arrhythmia, myocardial ischemia, or sudden cardiac death. Detection via imaging and tailored management are crucial for patient care. **Case:** A 52-year-old female with no relevant medical history attends the outpatient clinic due to stable typical angina and two episodes of syncope with no prior diagnostic approach. Physical examination did not reveal any significant findings. Resting electrocardiogram, 24-hour Holter monitoring, and transthoracic echocardiogram were normal. Pharmacological myocardial perfusion stress test showed normal perfusion. Coronary computed tomography angiography was performed, revealing a right coronary artery with an anomalous origin 2 mm superior to the left Valsalva sinus and an interarterial course with dynamic compression in diastole.



Coronary computed tomography angiography tridimensional reconstruction showing the right coronary artery emerging above the left Valsalva sinus

Decision-making: Considering the clinical situation, coronary compression, previous history of syncope, and the risk of sudden cardiac death, surgical treatment was decided. The procedure involved detaching the right coronary artery from the anomalous ostium and re-implanting it at the anterior intercommissural level. The patient had an uneventful recovery and was successfully discharged.

Conclusion: Understanding coronary artery origin anomalies is pivotal for timely detection and management, safeguarding against potentially deadly cardiac complications.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 93

Topic 1: Special Topics

Publishing Title: A CONTEMPORARY COHORT OF ADULTS WITH AORTIC DISEASE IN A DEVELOPING NATION

Author Block: Joel David Guzmán Castro, Alberto Bermejo, Yocy Nova, Jimmi Santana, Katherine Delgado, Michelle Diaz, Pamela Piña Santana, Julia Rodriguez, José R. Iribarren, Cesar J. Herrera, CEDIMAT, CENTRO CARDIOVASCULAR, Santo Domingo, Dominican Republic

Abstract Body: **Background:** Aortopathies in adults relate to conditions that significantly raise risk of death and morbidity, especially acute aortic syndrome (AAS). Published data on these conditions is scarce in Latin America.

Methods: We studied patients diagnosed with any type of aortopathy in a tertiary care center in the Dominican Republic. Clinical information including imaging reports and surgical history were retrospectively collected from EMR.

Results: Between 2016 and 2024, 300 consecutive pts were analyzed: 76% male; mean age 54 (18-106) yrs. Most, 158 (52.6%) had aortic aneurysms (AA), 86 (29%) AAS and 56 (19%) coarctation. In the AA subgroup, initial mean diameter for thoracic aneurysms (71%) was 4.9 (3.6-9.7 cm), and abdominal (39%) 5.7 (3.0- 10) cm. Diagnosis was made through CT (52%) and echo (48%); 86 (54.4%) received surgical intervention, 9 (5.7%) endovascular repair, 35 (22%) treated conservatively, and 28 (18%) had no follow-up data available. Details on AAS shown.

Conclusion: In this cohort of aortic disease, there was a predominance of younger pts highlighting the need for adequate diagnosis and follow-up. Hypertension was the main risk factor associated with AAS, therefore a

greater effort is required to achieve appropriate blood pressure control.

Demographics, clinical profiles, presenting symptoms, initial diagnostic imaging modality, management, and outcomes of acute aortic syndromes.				
	All (N=86)	Distal* (N=21)	Proximal** (N=65)	P-Value
Age	58 (45-69)	67 (53-79)	56 (44-67)	0.022
Sex				0.66
Female	15 (17%)	3 (14%)	12 (18%)	
Male	71 (83%)	18 (86%)	53 (82%)	
Referred From External Center	52 (61%)	11 (52%)	41 (64%)	0.34
Past Medical History				
HTN	70 (81%)	15 (71%)	55 (85%)	0.18
Dyslipidemia	33 (38%)	4 (19%)	29 (45%)	0.036
Smoking History	30 (35%)	8 (38%)	22 (34%)	0.72
Known Aortic Aneurysm	23 (27%)	8 (38%)	15 (23%)	0.18
Bicuspid Aortic Valve	2 (2%)	0 (0%)	2 (3%)	0.42
Prior Aortic Dissection	8 (9%)	5 (24%)	3 (5%)	0.008
Prior Catheterization	2 (2.3%)	0 (0%)	2 (3%)	0.006
Symptoms at presentation				
Anterior Chest Pain	50 (58%)	9 (43%)	41 (63%)	0.10
Posterior Chest Pain	26 (30%)	7 (33%)	19 (29%)	0.72
Dyspnea	23 (27%)	2 (10%)	21 (32%)	0.040
Abdominal Pain	20 (25%)	9 (43%)	11 (18%)	0.015
Initial Diagnostic Modality				<0.001
Aortography	2 (2%)	0 (0%)	2 (3%)	
TEE	5 (6%)	1 (5%)	4 (6%)	
TTE	44 (51%)	2 (10%)	42 (65%)	
Chest CT	35 (41%)	18 (86%)	17 (26%)	
Definitive treatment				<0.001
Endovascular Repair	7 (8.1%)	7 (33.3%)	0 (0.0%)	
Surgical Repair	65 (75.6%)	5 (23.8%)	60 (90.8%)	
Conservative management	8 (10.5%)	8 (38.1%)	0 (0%)	
Death before treatment	6 (5.8%)	1 (4.8%)	5 (9.2%)	0.24
Outcomes				0.49
Mortality (6 months)	22 (25.6%)	2 (9.5%)	20 (30.8%)	
Total recovery	44 (51.1%)	12 (57.1%)	32 (49.2%)	
Unknown	20 (23.3%)	7 (33.4%)	13 (20%)	

** Includes 16 patients with Type B dissection and 5 intramural hematomas.

**Includes 64 patients with Type A dissection and 1 penetrating ulcer.

HTN: Hypertension; TEE: Transesophageal Echocardiography; TTE: Transthoracic echocardiography; CT: Computed tomography.

Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 94

Topic 1: Special Topics

Publishing Title: RIGHT ON THE WRONG SIDE: A CASE REPORT OF CARDIAC DISPLACEMENT AND HEART FAILURE INDUCED BY TUBERCULOSIS-ASSOCIATED LUNG FIBROSIS

Author Block: Priscila Mohammed, Eliany Mejia Lopez, Josephine Mohammed, Johanna Sanchez Duran, Clinica Brugal Mejia Lopez, Puerto Plata, Dominican Republic

Background: Cardiovascular involvement in Tuberculosis is uncommon. This report discusses a rare case of tuberculosis with an unusual clinical and radiological presentation, emphasizing the importance of early diagnosis and treatment.

Abstract Body: **Case:** A 69-year-old man with a history of Hypertension and Tuberculosis presented to the emergency department complaining of progressive dyspnea and fatigue. A CT scan revealed a complete rightward displacement of the heart and right pulmonary anatomical disarray, replaced by numerous air-filled cyst suggestive of pulmonary fibrosis secondary to Tuberculosis, with compensatory left pulmonary hyperinflation. The echocardiogram showed Nonischemic Dilated Cardiomyopathy with Reduced Ejection Fraction (20-25%). Cardiac involvement was suspected due to Dilated Heart Failure and ECG changes with nonsustained Ventricular Tachycardias and occasional PVCs. Financial limitations prevented conducting a cardiac MRI. The patient failed to comply with medication. He had multiple admissions due to congestive HF and COVID-19, requiring home oxygen therapy. Unfortunately, he died due to a cardiorespiratory arrest.

Decision-making: Given the patient's advanced disease stage, a conservative approach was adopted to preserve his quality of life.

Conclusion: Tuberculosis continues to be a major global health problem, primarily in underdeveloped countries. An untreated or undiagnosed infection can lead to life-threatening conditions.



Session Title: Saturday Poster Session

Session Time: Saturday, September 21, 2024, 8:30 am - 4:15 pm

Poster Board Number: 96

Topic 1: Special Topics

Publishing Title: PRIMARY HYPERALDOSTERONISM AT AN UNUSUAL AGE

Author Block: Juan David Marin Escobar, Carlos E. Vesga-Reyes, Indira C. Lambertinez-Alvarez, Camilo A. Calderon-Miranda, Guillermo E. Guzman-Gomez, Fundación Valle del Lili, cra 98 No. 18-49, Cali, Colombia, Universidad ICESI, Facultad de Ciencias de la salud, Cali, Colombia

Abstract Body: **Background:** A 74-year-old male patient with longstanding hypertension that became resistant over the past year was examined.

Case: The patient exhibited no symptoms, clinical signs, or potassium abnormalities. Laboratory tests revealed decreased plasma renin concentration (PRC), an elevated aldosterone-to-renin ratio, and a non-suppressible aldosterone suppression test. Imaging studies showed bilateral adrenal adenomas on MRI and increased uptake in the left adrenal gland on gallium positron emission tomography. Despite being started on titratable eplerenone up to the maximum doses, the patient continued to have elevated blood pressure, predominantly nocturnal, and a plasma renin activity (PRA) of 0.14 ng/mL/min. Consequently, the patient was referred for left adrenalectomy.

Decision-making: Primary hyperaldosteronism (PHA) is a prevalent but underdiagnosed cause of secondary hypertension and is commonly diagnosed in middle-aged adults between 30 and 50 years old. This case represents an atypical instance of PHA in a 74-year-old man. Additionally, the onset at this age suggests a malignant etiology, which occurs in less than 1% of cases. The hypertension seen in PHA is associated with potential target

organ damage due to the effects of high aldosterone concentrations. This increased risk is primarily seen in patients who have PRA less than 1 ng/mL/h or suppressed PRC despite pharmacological treatment. Hence, measuring renin levels is suggested to titrate the dose of treatment. In this patient, despite the maximal dose of medical management, PRA remained suppressed, and blood pressure was not at target levels. Therefore, the treatment of choice is unilateral laparoscopic adrenalectomy, which corrects PRA in 94% of patients.

Conclusion: This case underscores the importance of considering PHA in patients with resistant hypertension, including at very advanced ages that fall outside the usual spectrum of presentation, and the role of renin measurement in guiding treatment.

