A NEW SCORE TO IDENTIFY THE CULPRIT ARTERY IN INFERIOR WALL MYOCARDIAL INFARCTIONS

Emna Allouche, Ghassen Lachter, Mohamed Selmen Aissa, Hakim Ben Jemaa, Feten Boudiche, Habib Ben Ahmed, Wejden Ouechtati, Leila Bezdah

Cardiology Department, Charles Nicolle Hospital, Tunis.

Introduction: Inferior wall myocardial infarction (IWMI) represents 40% of all infarcts. It is usually due to acute occlusion of the right coronary artery (RCA), less often the circumflex coronary artery. Identification of the culprit artery may be helpful in the management of IWMI. In this study, we aim to determine the diagnostic precision of some criteria and algorithms pre-described in the literature and to propose an electrocardiographic score that will be used for the identification of the RCA in case of IWMI.

Method: We performed a retrospective study including patients treated for IWMI. We analyzed their electrocardiograms and records. ST-segment deviation was measured in each lead. We evaluated some of the criteria described by calculating their sensitivities, specificities, negative and positive predictive values. A predictive score for RCA occlusion was developed through the results of the multivariate study.

Results: We included 71 patients. The previously described criteria and algorithms had good sensitivities but diminished specificities. The multivariate analysis concluded that the best score should include ST segment deviations in aVR, V1 and V6 ($p<0.05$), and this from a well-defined threshold for each derivation. The resulting score was as follows:

$$score=5,12(ST\ AvR)+3,32(ST\ v1)+1.55(ST\ v6)$$

A score ≥ 9 was in favor of the RCA occlusion. Its sensitivity, specificity, negative and positive predictive values were 83%, 60%, 82% and 70% respectively. The area under the ROC curve was 0.632. The Cronbach's alpha coefficient showed a good internal consistency of the selected items.

Conclusion: The new determined score showed good statistical performance. However, external validation remains essential.

ARRHYTHMIAS AND HYPERTROPHIC CARDIOMYOPATHY

Hanen Brahmi, Fares Ammar, Houda Belkhiria, Alaeddine Dali, Chayma Daassa, Ahmed Jamel, Nejeh Ben Halima

Cardiology Department, Kairouan Hospital, Tunisia.

Introduction: Hypertrophic cardiomyopathy (HCM) is characterized by a typically asymmetric hypertrophy of the intraventricular septum, of genetic origin. Its clinical symptoms can be very rich. The evolution is most often favorable, but the feared complications are sudden death by major arrhythmia and congestive heart failure.

Methods: Retrospective study which focused on 32 cases of HCM hospitalized in the department of CHU Ibn EL Jazzar in the periode between 2018 and 2022

Results: The average age was 36.8 years with a gender ratio of 1,3. Twenty-seven patients were symptomatic: dyspnea (53.1%), chest pain (40.6%), faintness and syncope (34%) and palpitations (15%). The ECG showed LVH in 22 patients, a Q wave of pseudo necrosis in 4 patients, repolarization disorders were observed in 19 patients. A 24-hour holter EKG performed in 15 patients was normal in 3 cases. It revealed supraventricular arrhythmias in 8 patients, NSVT in 4 patients and ventricular extrasystoles in 5 patients.

Conclusion: Arrhythmias are common during HCM. Management is based on the assessment of the risk of sudden death and treatment with beta-blocker and DAI for patients with very high risk of sudden death.

CARDIOVASCULAR RISK STRATIFICATION USING THE GLOBORISK SCALE FOR TUNISIAN HYPERTENSIVE PATIENTS

Sabrine Bousnina, Saoussen antit, Badreddine Ben Kaab, Elhem Boussabah, Lilia Zakhama

Cardiology departement. Internal Security Forces Hospital. La Marsa. Tunisia.

Introduction: Cardiovascular diseases (CVDs) are the leading cause of premature mortality and morbidity worldwide. Globorisk is a well-validated risk prediction model that predicts CVD for the national population of all countries.

Our work aimed to determine the level of cardiovascular risk (CVR) in our country using the Office-Based Globorisk prediction model adapted to the Tunisian population.

Methods: We analyzed data from 25,890 participants of the 2019 National Hypertension Registry (NaTuRe HTN) and we calculated the average risk for the 10-year fatal plus non-fatal CVD according to the Globorisk scale for 13,902 individuals. The CVD risk scores were consensually classified into four categories: low risk (<10% risk for CVD, moderate risk (≥10), high-risk (≥20%), and very high-risk (≥30%).

Results: The mean age was 60.2 ±8.40 years with a female predominance. Most patients were treated in the public sector (68%) and had national health insurance coverage (73.1%). The most associated risk factors were obesity at 31.9%, diabetes at 37.7%, and smoking at 13.6%.

The average risk was 21.2% (SD=11.1). The moderate-risk category was the most prevalent (34.9%), followed by the high-risk (26.6%).

Conclusion: We conclude that the Tunisian population is classified in the high CVR category. Thus, we should study the factors that influence the risk to guide CVD control and prevention strategies.

CORRELATION BETWEEN HOME AND AMBULATORY BLOOD PRESSURE MEASUREMENT: DIAGNOSIS AND MONITORING OF HYPERTENSION

A Hamdani, Z Ajra, Mf Bayar, R Gheni, L Rashikou, R Ben Hmida, T Ounissi, Ibn Elhadj Zied.

Cardiology Department, Mohamed Taher Maamouri University hospital in Nabeul, Tunisia.

Introduction: Home Blood Pressure Measurement (HBPM) and Ambulatory Blood Pressure Measurement (ABPM) are 2 valid approaches to measure out of office blood pressure to confirm and monitor hypertension. The objective of our study was to compare the results of HBPM and ABPM considered as the reference and to determine its contribution in the management of hypertension.

Method: This was an analytical cross-sectional study including 100 patients, followed at the outpatient cardiology clinic of the Mohamed Taher Maamouri university hospital in Nabeul. The correlation was analyzed using Pearson correlation coefficient (r).

Results: Our population was composed of 47 women and 53 men, the average age was 59.14±13.12 years. HBPM and ABPM were realized in 84% of cases for monitoring hypertensive patients and in 16% of cases to confirm newly diagnosed. The diagnosis of hypertension was confirmed in 75% by HBPM and in 62.5% by ABPM. White coat uncontrolled hypertension was noted in 31% of cases by HBPM and in 25% by ABPM and masked uncontrolled hypertension was noted in 6% of cases by HBPM and in 8.3% by ABPM. Strong correlation was found between home SBP and ambulatory SBP (P <0.001; r= 0.728) as well as between home DBP and ambulatory DBP (P <0.001; r= 0.773) (Figure 1).

Conclusion: HBPM has a value very close to ABPM. So, it's important to increase its availability in clinics, outpatient clinics and even in private practice given its lower cost and better availability compared to ABPM for the diagnosis of hypertension and its monitoring.

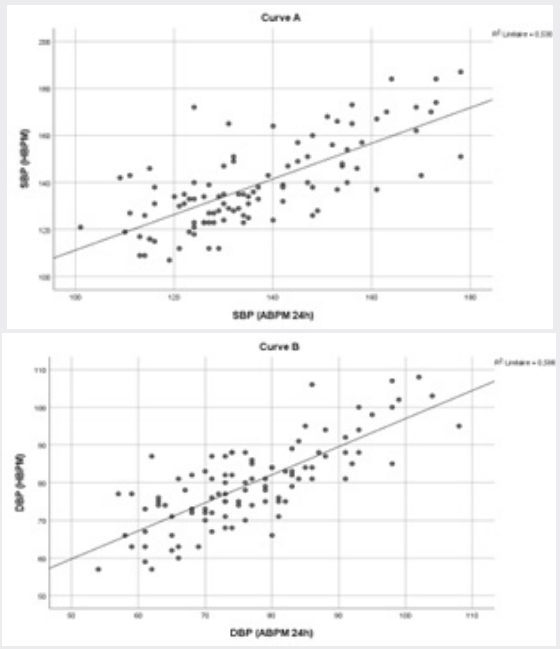

Figure 1. Correlation between self-measurement of blood pressure and ambulatory blood pressure measurement of systolic blood pressure (curve A: r=0.728) and diastolic blood pressure (curve B: r=0.773).

ECHOCARDIOGRAPHIC ASSESSMENT OF EPICARDIAL. ADIPOSE TISSUE - A MARKER OF CORONARY ATHEROSCLEROSIS BURDEN

Saoussen Antit, Hazem Chelbi, Fekih Ridha, Marwa Abdelhédi, Boufares Amine, Badreddine Kaab, Elhem Boussebah, Moez Thameur, Lilia Zakhama

Cardiology Department, Security Forces Hospital. La Marsa. Tunisia.

Background: Recent studies have shown that epicardial adipose tissue (EAT) can be used as a cardiovascular risk evaluation tool. Coronary artery disease (CAD) assessment still to be a challenge with non-invasive explorations. Thus, we searched for a correlation between EAT and coronary atherosclerosis burden.

Methods: This is a prospective descriptive study that included 100 consecutive patients admitted to the cardiology department of the hospital of the internal security forces of Marsa and having consulted between November 2020 and Avril 2021 for symptoms that required coronary angiography.

Results: The mean age was 58±12 years, with a masculine predominance (sex ratio= 6.14). Dyslipidemia and hypertension were the most common cardiovascular risk factors (86% and 57%, respectively). The median Gensini score was 8.5 [1-37] while the mean values of mean end-diastolic EAT (MEDE) and mean end-systolic EAT (MESE) were 3.3±8 mm and 5.1±1.3 mm, respectively. Thirty patients had a normal angiogram (Gensini score = 0, 30%), 29 patients had mild CAD (Gensini score = 1–19, 29%), and 41 patients had obstructive/severe CAD (Gensini score >19, 41%). In univariate analysis, MEDE and MESE were significatively different between the tertiles of Gensini score (combined p< 0.001 for both). In bivariate analysis, there was a positive and moderate to strong significant correlation between EAT and Gensini score (MEDE: p<0.001; r=0.590, MESE: p<0.001; r=0.557). The analysis of receiver operating characteristic curve showed that a MEDE>3.4 (sensibility= 80%, specificity= 72%) and a MESE> 5 (sensibility= 78%, specificity= 73%) can predict high Gensini score (OR=11; 95% CI: 4.23-29; p<0,001 and OR=8; 95% CI: 3.21-20.4; p<0,001, respectively).

Conclusion: Echocardiographic measurement of the EAT is a useful non-invasive tool that can be used to predict obstructive CAD.

EPICARDIAL ADIPOSE TISSUE AND CORONARY ARTERY DISEASE: DO THEY SHARE THE SAME RISK FACTORS?

Saoussen Antit, Hazem Chelbi, Ridha Fekih, Marwa Abdelhedi, Boufares A, Badreddine Kaab, Ilhem Boussebah, Moez Thameur, Lilia Zakhama

Cardiology Department, Internal Security Forces Hospital. La Marsa. Tunisia.

Background: Many cardiovascular risk factors proved their involvement in coronary atherosclerosis development. Some

authors have shown that epicardial adipose tissue (EAT) can predict obstructive coronary artery disease (CAD). We aimed to find a correlation between common cardiovascular risk factors and EAT.

Methods: This is a prospective descriptive study that included 100 consecutive patients admitted to the cardiology department of the hospital of the internal security forces of Marsa and having consulted between November 2020 and Avril 2021 for symptoms that required coronary angiography.

Results: The mean age was 58±12 years, with a masculine predominance (sex ratio= 6.14). The mean values of mean end-diastolic EAT (MEDE) and mean end-systolic EAT (MESE) were 3.3±8 mm and 5.1±1.3 mm, respectively. MEDE and MESE were positively correlated with age (r=0.485, p<0.001; r=0.397, p<0.001, respectively). Smoking patients had higher MEDE (3.5±0.9 vs 3.1±0.8, p=0.016) while both, MEDE, and MESE, were significantly higher in diabetic patients (3.1±0.8 vs 3.6±0.8, p=0.008 and 4.8±1.1 vs 5.5±1.4 p=0.011, respectively), in dyslipidemic patients (2.8±0.7 vs 3.5±0.8, p=0.008 and 4.4±1.1 vs 5.3±1.3, p=0.025, respectively) and in patients with overweight/obesity (2.9±0.8 vs 3.5±0.8, p=0.018 and 4.6±1.3 vs 5.3±1.3, p=0.049, respectively). For the biological parameters, MESE was negatively correlated with high-density lipoprotein cholesterol (r= -0.227, p=0.029) while a positive correlation was found between MEDE and hemoglobin A1c (r=0.201, p=0.048). On the other hand, MEDE and MESE had a positive correlation with fasting blood glucose (r=0.227, p=0.041).

Conclusion: EAT and CAD share most of the cardiovascular risk factors, the fact that can improve the role of EAT in the cardiovascular risk assessment.

EVALUATION OF THE ATTITUDES OF PRIMARY CARE PHYSICIANS IN POORLY CONTROLLED ARTERIAL HYPERTENSION.

Saoussen Antit, Nour Cherif, Badreddine Ben kaab, Ridha Fekih, Elhem Boussabeh, Moez Thameur, Lilia Zakhama.

Department of Cardiology, Security Forces Hospital, La Marsa, Tunisia.

Introduction: High blood pressure (HBP) is the most current cardiovascular risk factor. Strict control of blood pressure (BP) is necessary. Front-line doctors are one of the pillars of this challenge. The objective of our work was to evaluate their attitudes in front of uncontrolled BP in hypertensive patients

Methods: This was a cross-sectional prospective study for which we used a multiple-choice online questionnaire over the period from November 2021 to January 2022 targeting primary care physicians practicing in Tunisia.

Results: A total of 148 physicians answered the questionnaire.Faced with a poorly controlled hypertensive patients,the attitudes were a verification of therapeutic compliance with treatment and lifestyle and dietary rules in 98%,a request for self-measurement to confirm the non-control of BP in 37.2%, a request for an ambulatory blood pressure monitoring in 45.9%, a modification of the current antihypertensive treatment 35.1%,an increase in the dose of the molecule already prescribed in 32.4%, an association of another therapeutic class in 55.4% and taking advice from a cardiologist in17.6%. As a cause of non-modification of the current treatment, the responses were: the patient refuses the change of treatment in 64%, the patient is followed by a cardiologist in43.2%, the patient is elderly in 38.5%, the presence of comorbidities in36.5%, poly medication in30.4% and the patient presented with grade I hypertension in 16.2% of cases.

Conclusion: The attitudes of first-line physicians concerning the management of uncontrolled hypertensive patients are variable, continuous training with collaboration with specialists will be of crucial help for the management of those patients.

FACTORS ASSOCIATED WITH RETURN TO WORK AFTER ACUTE MYOCARDIAL INFARCTION IN TUNISIA

Emna Allouche, S. Neji, Hakim Ben Jemaa, Faten Boudiche, Aahmed Chetoui, Wejdene Ouechtati, Habib Ben Ahmed, Leila Bezdah

Cardiology Department, Charles Nicolle Hospital, Tunis, Tunisie

Introduction: Return to work is an important indicator of recovery after acute myocardial infarction. Little is known, however, about the rate of returning to work within the year after an acute myocardial infarction in Tunisia, as well as the factors associated with returning to work after an acute myocardial infarction. Objective To determine the rate of return to work within 12 months after acute myocardial infarction and identify patient factors associated with returning to work.

Method: This cross-sectional study, conducted in the cardiology department of Charles Nicolle Hospital (Tunisia) identified 193 patients under 65 years of age who were employed at the time of the index acute myocardial infarction hospitalization during the period between January 2019 and December 2021.

Results: Of 193 patients (mean age of 51.62 years, with a maximum of 65 years and a minimum of 28 years), 155 patients (80.3%) returned to work after a median of 39.3 days off work. Among them, 132 patients (68.4%) returned to the same job, 8 patients had their jobs adapted and 4 patients changed their occupation. The factors that favored return to work were: age under 55 years (p=0.004), a low to medium socio-economic background (p=0.0001 and p=0.005 respectively), a hospital stay of less than 7 days (p=0.002), a primary level of education (p=0.013), job satisfaction (p=0.03) and the cardiologist's opinion of disability (p=0.0001). On the other hand, recurrence of angina, dyspnea and fatigue were factors of work cessation (p=0.0001), as well as jobs with a high physical workload (p=0.001).

Conclusion: The identification of factors influencing work resumption time after acute coronary syndromes may allow a better social and occupational reintegration. Therefore, a cooperation between cardiologist and occupational health physician is essential since the acute period of the myocardial infarction.

HYBRID CLOSURE OF CONGENITAL VENTRICULAR SEPTAL DEFECTS: ABOUT A UNICENTER EXPERIENCE

Nouha Mekki, Mehdi Slim, Sami Ouannes, Houda Ghardallou, Elies Neffati

Cardiology department, Sahloul University Hospital, Sousse, Tunisia

Objective: The hybrid closure of ventricular septal defect (VSD) is a promising approach according to various recent studies proving its feasibility and efficacity with satisfying outcomes. This work describes our initial experience with perventricular closure of muscular VSDs in 4 consecutive patients.

Methods: Surgical exposure through a mini subxiphoid sternotomy was performed allowing direct access to the anterior wall of the right ventricle. Under TEE guidance and after identification of the puncture site, the interventional cardiologist performs the puncture with a needle and then advanced a J-taped guidewire from the right ventricle (RV) into the left ventricle (LV) and through the defect. The introducer and the delivery system on which the concentric prosthesis is previously loaded are fed over the wire. The prosthesis was properly positioned by retracting the sheath and then deployed after performing the device stability test under continuous TEE guidance.

Results: Cardiopulmonary bypass was not needed in any patient for placement of the device and immediate success closure rate was 100%. Intermediate results were deceptive due to the occurrence of cardiocirculatory failure leading to death in two patients, and a case of device embolization requiring urgent open-heart surgery. Long-term encouraging results were found in one patient during the course of a 24-month follow-up.

Conclusion: The perventricular approach is feasible in low-weight well-selected patients who are not suitable for either surgical or percutaneous approaches. Through this work, we aim to improve the outcomes of this technique in our center to ensure better survival and long-term result rates by better selection of candidates as well as progress in terms of postoperative resuscitation.

IMPACT OF COVID 19 ON THE LEFT HEART

Taha Lassoued, Ikram Chamtouri, Walid Jomaa, Khaldoun Ben Hamda, Faouzi Maatouk

Cardiology Department, Monastir University Hospital, Tunisia.

Introduction: The coronavirus is a major emerging public health problem. The evolution of the cardiac damage caused by Covid 19 is still unknown and poorly studied. Our objective in this study is to study the repercussions of the Covid 19 virus by transthoracic echocardiography (TTE) on left ventricular.

Methods: We conducted a cross-sectional study of patients diagnosed with Covid 19 pneumopathy, admitted at Fattouma Bourguiba Hospital in Monastir during the period from January 2021 to June 2021.TTE was performed after discharge from the hospital, in the echocardiography laboratory of the Cardiology Department B of the Fattouma Bourguiba University Hospital of Monastir.

Results : In our study, we included 61 patients. TTE was performed in a mean of 61.3 days after Covid infection. For left ventricular (LV) study, the mean LV ejection fraction (LVEF) was 63.2 ±6.7%. The LV was dilated in 03 (4.9%) cases. LV end-diastolic diameter averaged 44.5 ±5.7 mm. Global longitudinal LV Strain averaged -17±3.6% and was impaired in 27 (44.3%) patients. For the analytical study, the alteration of the LV Strain was correlated with male gender (p=0.007), ventral decubitus (VD) positioning (p=0.019) and hospitalization in intensive care unit (p=0.045) (protective effect in the latter two cases).

Conclusion: In post-Covid 19 patients, LV Strain function was altered on average, and this alteration was correlated with male gender, VD and need for intensive care.

ELECTROCARDIOGRAPHIC MANIFESTATIONS OF OBSTRUCTIVE SLEEP APNEA SYNDROME: DIAGNOSIS AND EVOLUTION AFTER CPAP

Fateh Kadardar, Mouna Hachani, Skander Iddir, Yassine Marzouki, Syrine Dardour, Wassim Mejber, Hédi Ben Slima

Cardiology Department, Menzel Bourguiba Hospital, Tunisia.

Background: Obstructive sleep apnea syndrome (OSAS) is an underdiagnosed public health problem. The reference treatment is CPAP. OSAS seems to be associated with electrocardiographic disorders.

Aim: The aim of our study was to evaluate the impact of mechanical treatment in the evolution of electrocardiographic manifestations.

Methods: It was a descriptive study including 110 patients with severe OSAS. We studied in the different patient profiles according to the quality of CPAP compliance (good CPAP compliance, poor-compliance, not-equipped) the electrocardiographic disorders objectified at diagnosis and during follow-up.

Results: Atrial fibrillation (AF) was noted in 51 cases and cardioversion was attempted in 40 cases. Successful reduction was demonstrated in 35 patients. We reported in 20 patients a recurrence of AF after cardioversion. Among these patients, 12 patients were not equipped, 7 patients were poorly observant of CPAP and only one patient was well observant. Ventricular

hyperexcitability was noted and followed in 9 well-observant patients. A clear reduction of PVC burden was observed in them. QT-analysis interval showed an elongated average corrected QT-value in non-equipped patients. In addition, a significant decrease in the mean value of corrected QT was noted in patients with CPAP good-compliance, unlike those with poor-compliance where this decrease in corrected QT after equipment was unsignificant. Minor conductive disorders analysis showed a significant decrease in the median PR space regardless of the quality of CPAP compliance.

Conclusion: CPAP treatment shows a remarkable effect on improvement of electrocardiographic disorders in patients with severe OSAS.

IMPLANTABLE CARDIOVERTER DEFIBRILLATOR IN THE ELDERLY: EPIDEMIOLOGICAL CHARACTERISTICS AND SURVIVAL

Asma Ben Gandoura, Afef Ben Halima, Imen Taktak, Yasmine Draoui

1- Caisse Nationale d'assurance maladie

2- Service de cardiologie, Hôpital Abderrahmen Mami - Ariana

Introduction: The Implantable Cardioverter Defibrillator (ICD) is a medical device whose primary function is to identify and treat malignant ventricular arrhythmias. Its effectiveness in preventing sudden death of rhythmic origin is demonstrated in international recommendations. However, its interest in the subject over 70 years old remains debated.

Objectives: to study the epidemiological characteristics of subjects>70 years who had an ICD implanted and to assess the mortality rate of these subjects.

Methods: descriptive retrospective study including patients >70 years of age, who had a request for an ICD implantation, between 2017 and 2020.

Results: 42 patients were included. Mean age 75 years, gender-ratio (8:1). High blood pressure was the most common risk factor (61.9%). The main comorbidities were dysthyroidism (21%), chronic renal failure (19%) and respiratory failure (14%). Underlying heart disease was ischaemic in 45.2% of cases and dilated cardiomyopathy in 31% of cases. Mortality at 1, 2 and 5 years was 8.5%, 13% and 40.4% respectively. Causes of death were non-cardiac in 35% of cases and cardiac in 29% of cases. Mean survival after implantation was 14.9 months. Predictive factors of mortality were age (50% mortality for subjects >75 years), type of heart disease (64.3% in case of dilated cardiomyopathy), LVEF (48% for LVEF levels<35%) and comorbidities (50% mortality in renal failure). The mortality rate was 85.7% for patients >75 years with dilated cardiomyopathy.

Conclusion: Age >75 years may be a factor limiting implantation. Nevertheless, other factors predicting mortality must be considered to re-evaluate ICD award criteria.

INCIDENCE AND MANAGEMENT OF ATRIAL ARRHYTHMIA AFTER LONG-TERM FONTAN CIRCULATION

Nouha Mekki, Hakim Kaouther, Rihab Ben Othmen, Hela Msaad, Fatma Ouarda.

Pediatric cardiology Department, La Rabta Hospital, Tunis, Tunisia.

Objective: Total cavopulmonary derivation (TCD) operations with atrio-pulmonary connections and intra-atrial tunnel technique, commonly performed until the late 90s, are now abandoned due to the increased incidence of arrhythmia.

The purpose of this work was to evaluate the incidence and management of tachycardia in our population.

Methods: Relevant study data was extracted from the medical files of our department.

Results: On a total of 33 patients, we studied 8 patients who underwent TCD with atrio-pulmonary or intra-atrial tunnel connections, 62.5% presented with tachyarrhythmias during the course of follow-up.

The mean follow-up duration was of 27.5 years. The mean age at the time of diagnosis of the first paroxysmal tachyarrhythmia was of 16.5 years.

Among patients with atrio-pulmonary connections, one patient presented 13 years after the procedure with recurrent paroxysmal atrial arrhythmias, he is on permanent flutter since 2007. The second patient presented with paroxysmal AF 17 years after Fontan procedure. She was on permanent AF since 2014. Her prognosis rapidly deteriorated leading to death in 2020 after various hospitalizations for congestive heart failure due to Failing Fontan. Among the 5 patients with intra-atrial tunnel, 40% developed arrhythmias. Both patients presented with atrial re-entrant tachycardias. One patient underwent successful electrophysiologic ablation therapy, the other remained under medical treatment but developed severe mitral regurgitation requiring valve replacement.

Conclusion: With a longer duration of follow-up, most Fontan patients will develop arrhythmias leading to significant hemodynamic consequences. Although underdiagnosed, patients who underwent Fontan procedure with extracardiac conduits have better outcomes in terms of developing arrhythmias.

LEFT ATRIAL STRAIN AS A PREDICTOR OF SEVERITY OF CORONARY ARTERY DISEASE IN PATIENTS WITH ACUTE CORONARY SYNDROME

Saoussen Antit, Marwa Abdelhedi, Ridha Fekih, Nour Cherif, Badreddine Ben Kaab, Elhem Boussabeh, Moez Thameur, Lilia Zakhama

Cardiology Department, Security Forces Hospital. La Marsa. Tunisia.

Introduction: Left atrial function during acute coronary syndrome (ACS) is affected by acute ischemia of atrial myocardium. Left atrial strain is emerging as a significant index of LA dysfunction. The objective was to study the

relation between 2D left atrial deformation and the severity of coronary artery stenosis in patients with ACS.

Method: Forty-two patients treated at the Internal Security Forces Hospital from June 2021 to December 2021 for ACS having a LVEF >=50%. Left atrial strain parameters were obtained. Syntax score I (SSI) was calculated for all patient following coronary angiography.

Results: The mean age was 60±10 years, with a sex ratio of 7.1. Smoking and diabetes mellitus were the most common cardiovascular risk factors (63% and 54% respectively). Patients were categorized into 3 groups: low SSI < 23 (group I), moderate SSI 23-32 (group II) and high SSI of ≥33 (group III). The median value of SSI was 9.5 [2.25-23] and the mean value of PALS was 26.2±7.4. An intermediate to high SSI was found in 25% of patients. In univariate analysis, PALS was significatively different between SSI groups (combined p= 0.001). In bivariate analysis, PALS was significatively and negatively correlated with SSI (p= 0.006, r= -0.358). The analysis of the Receiver operating characteristic curve showed that a value of PALS < 24.5 can be used as a cut off to predict an intermediate to high SSI (sensibility= 68%, specificity= 50%).

Conclusion: Left atrial strain may predict the severity of coronary artery disease in ACS.

LEFT ATRIAL STRAIN IN HEART FAILURE WITH PRESERVED EJECTION FRACTION: CAN PREDICT FILLING PRESSURES?

Ridha Fekih, Saoussen Antit, Amine Boufares, Marwa Abdelhedi, Bareddine Ben Kaab, Ilhem Boussebah, Moez Thameur, Lilia Zakhama

Cardiology Department, Security Forces Hospital. La Marsa. Tunisia.

Background: Despite the different ultrasound and Doppler parameters, left ventricular filling pressure (LVFP) assessment remains difficult in some cases. Thus, we aimed to evaluate the additive value of peak atrial longitudinal strain (PALS) to estimate LVFP in patients suspected of having heart failure with preserved ejection fraction.

Methods: This is a prospective descriptive study that included 69 patients with exertional symptoms, explored in the cardiology department of the hospital of the internal security forces of Marsa and having consulted between November 2021 and Mars 2022. After LA strain measurement, LVFP were assessed at rest and during exercise with ultrasound.

Results: The mean age was 60±12 years with a female predominance (56%). Arterial hypertension was the most frequent cardiovascular risk factor (80%). The median value of PALS was 30.1% [22.3-32.4]. The mean ejection fraction was 65%±6.3. Thirty percent (n=21) of patients had elevated LVFP, of which 10% (n=7) had elevated LVFP during exercise. Patients with high LVFP, at rest or during exercise, had significantly lower PALS, larger left atrium, and higher NT-Pro BNP levels. PALS had negative correlations with mitral flow parameters, E/e' ratio, Peak tricuspid regurgitation velocity, LA volume and NT-Pro BNP. PALS < 28% increased the likelihood of having high LVFP by 3 (Se=90%, Sp=80).

Conclusion: PALS is a simple and sensitive ultrasound parameter for the diagnosis of heart failure with preserved ejection fraction.

LOW GRADIENT - SEVERE MITRAL STENOSIS: ABOUT A MONOCENTRIC STUDY OF A MILITARY POPULATION

Wael Yaakoubi, Karima Tamallah, Chedia Chourabi, Mejri Oussema, Abdeyem Haggui, Nadhem Hajlaoui, Wafa Fehri.

Cardiology Department, Military Hospital of Tunis.

Background: In developing countries mitral stenosis (MS) still being until now a real problem of public health which causes high rate of Morbi-mortality. The physiopathology of this valvopathy is well known however low-gradient mitral stenosis (LGMS) represents a particular entity which remains enigmatic

Aim: Characterize patients with LGMS compared with high gradient mitral stenosis (HGMS) and describe their prognosis

Methodology: It is a longitudinal and retrospective study of 7 years from January 2015 until December 2022 in which all military hospital patients of Tunis with severe mitral (MS) (mitral valve area (MVA) <1,5 cm2) stenosis in whom mitral valvuloplasty (MVP) was performed were included. Patients were divided into two groups according to their trans-mitral gradient [low (<10 mmHg)" low-gradient mitral stenosis, LGMS" or high (>10mmHg) gradient "high-gradient mitral stenosis, HGMS"] and followed on at least 5 years

Results: Ninety-three patients were included. Sixty-six percent (66%, 2/3) of them had low trans-mitral gradient. Sex ratio was about 1 in the two groups. We noted more hypertension (20% vs 5%; p=0,02) and smoking patients (18% vs 2%; p=0,001) in LGMS group. Signe and symptoms were the same in the two groups. LGMS patients were older (50 ±10 vs 39±10; p=0,001) had less severe MS (1,2 cm2±0,2 vs 1cm2±0,2; p=0,002) lower pulmonary pressions (39mmHg±10 vs 45mmHg±18; p=0,01) and bigger left atrium (38cm2±12 vs 30cm2±7; p=0,04). Severe aortic stenosis (22% of study population) was more associated to HGMS (40% vs 25%; p=0,03). LGMS patients had more prevalence of atrial fibrillation (55% vs 45%; p=0,04). MVP was less successful in LGMS group (62% vs 50%; p=0,003). A second MVP was more realised in these patients (16% vs 8%; p=0,02) with more recourse to valvular heart surgery (15% of patient) (23% vs 8%; p=0,001). LGMS patients on follow-up had more stoke (16% vs 4%; p=0,001) more acute limb ischemia (1% vs O) and more mortality (10% vs 7%)

Parameters	LGMS	HGMS	p
Hypertension (%)	20	5	0,02
Age (years)	50 ±10	39±10	0,001
Mitral area (cm²)	1,2±0,2	1 ±0,2	0,002
Pulmonary pressions (mmHg)	39 ±10	45±18	0,01
Left atrium area (cm²)	38±12	30±7	0,04
Atrial Fibrillation Prevalence (%)	55%	45%	0,04
Mitral valvuloplasty Success (%)	62%	50%	0,003
Stroke (%)	16	4	0,001

Conclusion: LGMS patients were older, had more comorbidities, were mostly in AF, were more suitable for heart valvular surgery and had poor long-term prognosis.

PERCUTANEOUS REINTERVENTIONS FOLLOWING THE FONTAN PROCEDURE

Nouha Mekki, Hakim Kaouther, Rihab Ben Othmen, Hela Msaad, Fatma Ouarda.

Pediatric cardiology Department, La Rabta Hospital, Tunis, Tunisia.

Objective: As advances in cardiac surgery and postoperative care are continuously improving, patients surviving Fontan operations are in need of additional reinterventions.

Through this work, we sought to determine percutaneous reintervention rates in our population.

Methods: A retrospective review of patients who underwent cardiac catheterization from January 2016 to December 2021 was performed.

Results: In this population of 28 patients surviving the Fontan procedure, 39% required at least one additional cardiac intervention at a median time of 12.3 years.

Among these patients, four patients underwent percutaneous reintervention. All patients underwent Fontan procedure with an extracardiac conduit. Two of these patients had angioplasty of the Fontan conduit following thromboembolic events with covered stents, 14 and 19 years following their Fontan procedure.

The remaining two patients had early percutaneous reintervention. A few months after Fontan procedure associated with pulmonary bifurcation plasty, one patient underwent angioplasty of both the Fontan conduit and the right pulmonary branch following symptoms of right heart failure.

The second patient developed severe RV dysfunction 20 days postoperative. Right heart catheterization revealed significant stenosis of the left pulmonary branch. An angioplasty was then performed.

No case presented with complications related to interventional catheterization.

Of the remaining population, one patient requires percutaneous closure of a large persisting left SVC causing gradually increasing cyanosis. Another patient is proposed for fenestration after 'Failing Fontan'.

Conclusion: Fontan surgery is a palliative procedure with high incidence of complications requiring careful follow-up. Interventional catheterization plays an essential role in the early diagnosis and treatment of complications.

PREDICTIVE FACTORS OF IN-STENT RESTENOSIS IN PERCUTANEOUS CORONARY INTERVENTIONS FOR BIFURCATION LESIONS

Taha Lassoued, Walid Jomaa, Ikram Chamtouri, Khaldoun Ben Hamda, Faouzi Maatouk

Cardiology Department, Fattouma Bourguiba University Hospital, Tunisia.

Introduction: Percutaneous coronary intervention (PCI) for coronary bifurcation lesions (CBL) is among complex procedures and is associated with a high risk of procedural failure and in-stent restenosis (ISR). The aim of our study was to investigate clinical and procedural risk factors for ISR after PCI for CBL.

Methods: We conducted a retrospective observational study including 166 patients hospitalized in the cardiology B department, Fattouma Bourguiba Hospital for CBL PCI between January 2001 and December 2019. Early and long-term follow-up were obtained and predictive factors for ISR determined.

Results: In all PCI procedures, we opted for the provisional stenting PCI technique. In 162 (97.5%) of the procedures, a one-stent strategy was adopted while in four procedures we proceeded to a second stent implantation in the SB. Procedural success rate was 75,3%. Twelve patients (7.2%) had presented a MACE after a mean follow up of 18 months [1 – 84 months]. Five (3%) patients had ISR during long-term follow-up. Factors associated with the incidence of ISR included history of ISR (p=0.002), Medina 1,1,0 CBL type (p<0.001) and angiographic success on the main branch (p=0.005) (protective factor).

Conclusion: According to the present study, factors associated to ISR in patients undergoing PCI for CBL are history of ISR, Medina 1,1,0 CBL type and the absence of angiographic success on the main branch in the index procedure.

PREDICTORS OF THE EFFECTIVENESS OF ACUPUNCTURE IN SMOKING CESSATION IN CORONARY PATIENTS.

Rim Ben Romdhane, RamiTlili, Fares Azaiez, Kaouther Bachraoui, Meriem Drissa, Youssef Ben Ameur

Cardiology Department, Mongi Slim Hospital, La Marsa, Tunsia

Background: Smoking cessation should be a priority for smokers, especially coronary patients.

Aim: To study the place and effectiveness of acupuncture in smoking cessation in coronary patients.

Methods: We conducted a prospective open-label study of 25 coronary smokers treated by acupuncture over a 10-month period. A 2-session protocol acupuncture weekly for three to five weeks, with a positive response. To evaluate the effectiveness of acupuncture, a questionnaire was completed by the doctor during the treatment, at three and six months after the end of the sessions. Positive response was defined by total cessation of smoking.

Results: The average age of our patients was 55.5 years (33 to 77 years). The sex ratio of our population was 1.5 with a male predominance. All our patients had a coronary history. The average cigarette consumption was 22.7 pack-years on average. The results of our study showed that acupuncture allows the withdrawal of 5 smokers (20%) from the first session. After the fifth session, 60% of our patients stopped smoking. At the end of the treatment, 17 smokers (70%) stopped smoking completely. At 3 and 6 months of treatment, we observed a stabilization of smoking cessation and decrease rates.

Conclusion: Smoking cessation is difficult to obtain whatever the therapeutic method used, which encourages us to strengthen preventive measures.

PREVALENCE OF MASKED UNCONTROLLED HYPERTENSION IN TREATED HYPERTENSIVE PATIENTS

A Hamdani, Z Ajra, Mf Bayar, R Gheni, L Rashikou, R Ben Hmida, T Ounissi, Z Ibn Elhadj

Mohamed Taher Maamouri, University hospital in Nabeul

Introduction: There are limited data in Tunisia on the quality of treated blood pressure (BP) control, and in particular, masked uncontrolled hypertension (MUCH) in treated hypertensive patients defined as controlled office BP but uncontrolled out-of-clinic BP. The objective of the study is to define the prevalence of MUCH in treated hypertensive patients.

Method: we conducted an analytical cross-sectional study including 84 treated hypertensive patients, followed at the outpatient cardiology clinic of the Mohamed Taher Maamouri University hospital in Nabeul. They had office BP monitoring, home BP monitoring (HBPM) and ambulatory BP monitoring (ABPM).

Results: The average age of our population was 59.37±13.10 years (range 21-92 years), composed of 43 women and 41 men. The prevalence of MUCH was 6% in HBPM and 8.3% in ABPM. The difference between these two methods was not statistically significant for the detection of masked uncontrolled hypertension (p=0.320). The prevalence of MUCH was higher in women detected by HBPM (11.6% versus 0%; p=0.05) and by ABPM (14% versus 2.4%; p=0.110), the difference according to gender was not statistically significant. ABPM detected also masked uncontrolled nocturnal hypertension in 14.3% of cases.

Conclusion: Office BP monitoring alone is thus inadequate to ascertain optimal BP control because of BP variation. HBPM and mainly ABPM which can detect elevated nocturnal BP were needed to confirm proper BP control especially in patients with high cardiovascular risk in whom the prevalence of MUCH is higher.

REINTERVENTIONS IN ADULT PATIENTS SURVIVING COMPLEX CONGENITAL HEART DISEASE

Nouha Mekki, Kaouther Hakim, Chaima Ben Ghorbel, Sabrine Soudani, Hela Msaad, Fatma Ouarda.

Pediatric cardiology Department, La Rabta Hospital, Tunis, Tunisia.

Background: Grown-ups with complex congenital heart disease constitute an increasing population. Many require reintervention for various reasons.

The purpose of this work is to evaluate the outcomes in terms of late complications and reinterventions in our population.

Methods: Relevant study data was extracted from the medical files of our department.

Results: Our series included a total of 59 patients. We included 24 patients who underwent arterial switch operation for transposition of the great arteries, 25 patients who underwent the Fontan procedure, and 10 patients who underwent surgical correction of a truncus arteriosus.

90% of patients surviving surgical correction of a truncus arteriosus underwent at least one reintervention with a median age of 11.6 years. At least one RV-PA conduit reintervention was performed in 80% of patients. 50% underwent aortic valve replacement following severe aortic regurgitation.

In the Fontan population, 36% required at least one additional cardiac intervention within a mean follow-up duration was 16.9 years. Among these patients, 2 patients had angioplasty of the Fontan conduit with covered stents, one patient requires percutaneous closure of a large left SVC causing increasing cyanosis, and another patient underwent successful electrophysiologic ablation therapy for a recurrent paroxysmal atrial arrhythmia.

In the arterial switch group, only one patient underwent coronary artery bypass surgery following significant stenosis of the left main coronary artery.

Conclusion: As advances in cardiac surgery and percutaneous techniques are continuously improving, the survival of patients with complex congenital heart disease is increasing but at the expense of a variety of complications requiring close follow-up.

DEPISTAGE DE LA CARDIOTOXICITE MYOCARDIQUE INDUITE PAR LA CHIMIOTHÉRAPIE ANTI-CANCÉREUSE: ÉTUDE PROSPECTIVE LONGITUDINALE MULTICENTRIQUE À DAKAR

Aw Fatou[1], Khadra H[1], Diouf MT[4], Ba S[1], Diouf D[1], Sarr MN, Mingou JS[1], Sarr SA[1], Dioum M[2], Ngaide AA[3], Beye SM[7], Manga S[5], Affangla DA, Diouf Y[1], DIOP KH[1], Bodian M, Leye MMCBO[6], Ndiaye MB[1], Mbaye A[3], Kane Ad[7], Diao M[1], Kane A[4].

1. CHU Aristide le Dantec,
2. CHNU Fann,
3. General Hospital Idrissa Pouye,
4. Hospital Dalal Jamm,
5. Ufr de Ziguinchor,
6. UFR de Thies,
7. UFR de Saint Louis

Introduction : L'amélioration de la survie des patients en oncologie et l'augmentation de l'arsenal thérapeutique a crée un nouveau profil de cardiotoxicité, celui des antimitotiques. Les objectifs de notre étude étaient d'évaluer la toxicité myocardique de la chimiothérapie et de déterminer l'incidence de la cardiomyopathie toxique.

Méthodes : Il s'agit d'une étude de cohorte longitudinale prospective menée de Janvier 2019 à Juillet 2022. Elle avait concerné tout patient reçu dans des services de cardiologie de Dakar pour un bilan pré-chimiothérapie. Les patients inclus étaient indemnes de toute cardiopathie préexistante.

Résultats : L'étude a porté sur 37 patients au total, on notait une prédominance féminine avec un sex ratio à 0,09. L'âge moyen de la population était de 49,7±13,69. La plupart (70%) était des cancers du sein. Lors de l'échocardiographie initiale, le ventricule gauche (VG) était de taille et de fonction systolique normales respectivement (diastole VG moyenne = 44,46 mm ; fraction d'éjection ventriculaire gauche (FEVG) moyenne à 63,11%±5,8 et déformation longitudinale globale

moyenne = 20,4%±2,58. En post-chimio, 3 patients (8,1%) ont présenté une insuffisance cardiaque gauche. Nous avons noté une baisse significative de la FEVG moyenne à 3 mois (p=0,000), à 6 mois (p=0,000) dans notre cohorte, ainsi comme une diminution significative de la déformation longitudinale globale, à 3 mois (p=0,000) et à 6 mois (p=0,000) par rapport à la valeur initiale. Cinq patients ont présenté un dysfonctionnement du VG à l'échographie. Il a également été noté que 60% des patients traités aux anthracyclines avaient altéré leur strain (p=0,003) par rapport aux autres protocoles.

Conclusion : Cette étude met en évidence une incidence élevée de la cardiotoxicité myocardique liée à la chimiothérapie qui est mieux détectée par le strain longitudinale globale.

SHORT- AND MEDIUM-TERM RESULTS OF PERCUTANEOUS CLOSURE OF VENTRICULAR SEPTAL DEFECTS: A UNICENTER EXPERIENCE

Nouha Mekki, Mehdi Slim, Sami Ouannes, Rim Gribaa, Elies Neffati

Cardiology department, Sahloul University Hospital, Sousse, Tunisia

Introduction: Nowadays, percutaneous closure of congenital ventricular septal defects (VSDs) represents a promising alternative to surgery with a lower rate of complications and shorter hospital stay. Its main limitation, however, is the choice of the appropriate device for each type of defect.

The aim of our study is to report our experience in the percutaneous closure of congenital VSDs.

Methods: This is a retrospective, monocentric study, conducted from January 2013 to Mars 2022, including patients treated by percutaneous closure of congenital VSDs.

Results: 29 patients (12 boys and 17 girls) included in the study underwent 32 procedures for percutaneous closure of a VSD. The mean age of patients was 63.5±41,4 months and the mean weight was 20.68±10,33 kg. There were 23 perimembranous and 6 muscular VSDs. The average size of defects was 6.72 mm [4-10 mm]. VSDs were restrictive in all cases. 26 prostheses were successfully implanted: 15 ADO II, 10 Lifetech, and one MFO. After immediate closure of the defect, a residual minimal shunt was found in 14 patients. Only one patient presented with a significant residual shunt. Complete occlusion was noted in the remaining procedures. Moderate tricuspid regurgitation was noted in one patient with a muscular VSD. Five unsuccessful procedures were complicated by the migration of the device into the pulmonary artery in three patients. Two other patients with perimembranous defects developed a transient atrioventricular block. No deaths occurred.

Conclusion: Our early experience shows that percutaneous closure of both perimembranous and trabecular VSDs is safe and effective.

ETUDE DU NEURO-DEVELOPPEMENT CHEZ LES ENFANTS ATTEINTS DE CARDIOPATHIES CONGENITALES NON OPEREES AU SENEGAL

Leye M, Ismael Ibouroi M.H, Ba E.H.M, Affangla D.A, Ba D.M, Diagne Diallo A, Fall A.L.

Introduction : Les cardiopathies congénitales (CC) sont les malformations les plus fréquentes de l'enfant. Les progrès médico-chirurgicaux ont permis d'améliorer considérablement leur pronostic. Les troubles du neurodéveloppement sont néanmoins des comorbidités souvent oubliées. L'objectif de notre étude était d'évaluer le neurodéveloppement chez les enfants atteints de cardiopathies congénitales non opérés.

Méthodes : Lors d'une étude descriptive, transversale et analytique sur 3 mois et demi, nous avions évalué le neuro-développement chez les enfants âgés entre 2 et 66 mois grâce au questionnaire ASQ-3.

Résultats : Soixante enfants (60) ont été inclus. On notait une prédominance des CC non-cyanogènes (56,7%, N=34) Selon la classification de BETHESDA on retrouvait: 15% de cardiopathies simples; 53,3% de cardiopathies modérées et 31,7% de cardiopathies complexes. Pour les cardiopathies cyanogènes : Un risque de troubles du neurodéveloppement (-1 DS) était noté dans 69,2% des cas et 42,3% des enfants présentaient des troubles avérées du neurodéveloppement (-2 DS). Dans le groupe des cardiopathies cyanogènes, on notait une fréquence plus élevée de troubles de la motricité fine (p=0,025) et de la résolution des problèmes (p<0,001). Les enfants avec une saturation >85% avait un meilleur neurodéveloppement (p=0,008). La présence d'une cardiopathie complexe multipliait par 9 fois le risque d'avoir un trouble du neurodéveloppement.

Conclusion : La problématique principale chez les enfants atteints de cardiopathies congénitales est de leur assurer la meilleure qualité de vie possible, leur permettant de s'intégrer à leur environnement et de s'épanouir.

THE IMPACT OF OBESITY ON THE CONTROL OF TREATED HYPERTENSIVE PATIENTS

A Hamdani, MF Bayar, Z Ajra, R Gheni, L Rashikou, R Ben Hmida, T Ounissi, Z Ibn Elhadj

Cardiology Department, Mohamed Taher Maamouri University hospital in Nabeul, Tunisia

Introduction: Obesity is as a risk factor for hypertension, but there are few studies evaluating its impact on the response to antihypertensive drug and on the control of hypertensive patients. The aim of our study was to determine the effect of obesity on the control of treated hypertension.

Method: We analyzed recordings of ambulatory blood pressure measurement (ABPM) in 84 treated hypertensive patients, in the cardiology department of Mohamed Taher Maamouri University hospital in Nabeul, stratified into two groups: obese (Body Mass Index (BMI) >30 kg/m2) and non-obese. Hypertension control is defined by 24-hour ambulatory blood pressure (BP) ≤130/80 mmHg, daytime ≤135/85 mmHg and nighttime ≤120/70 mmHg.

Results: Our Population was composed of 33 obese and 51 non-obese patients. The average age of our population was

59.37±13.1 years. BMI in obese was significantly higher than in non-obese (34.47±5.4 versus 25.36±2.5; p<0.001). The prevalence of uncontrolled patients was significantly higher in obese patients detected in 24-hour ABPM (75.8% versus 51%; p=0.039), in daytime ABPM (69.7% versus 41.2%; p=0.014) and in night-time ABPM (90.9% versus 68.6%; p=0.018) than in normal weight patients.

Conclusion: Prevalence of uncontrolled hypertension was higher with higher BMI values. The level of blood pressure control in our sample remains relatively insufficient. To achieve a better control of hypertension, we must insist on therapeutic compliance and on the correction of risk factors, particularly obesity, which is significantly associated with an increase in BP.

THROMBOLYSIS IN HIGH-RISK AND HIGH-INTERMEDIATE-RISK PULMONARY EMBOLISM: EXPERIENCE OF THE CARDIOLOGY DEPARTMENT OF UHC IBN-JAZZAR KAIROUAN

Ahmed Jamel, Anwar Guesmi, Houda Belkhiria, Hanene Brahmi, Brahim Mestiri, Chayma Dassa, Fares Ammar, Ala Eddine Dali, Najeh Ben Hlima.

Cardiology Department, Kairouan Hospital, Tunisia.

Introduction: The management of high-intermediate risk pulmonary embolism (PE) is not well enough codified and remains a subject of controversy given that the idea of early thrombolytic treatment has been defended by several large studies and criticized by others.

Methods: Our study is monocentric descriptive retrospective. We selected all patients hospitalized for a PE in the cardiology department or in the ICCU between 2014 and 2020 at the UHC Ibn Jazzar Kairouan

Results: We selected a total of 69 patients: 39 high-intermediate risk PEs and 30 high-risk PEs. 56.5% were women, the average age was 66.04±16 years. 50 patients received thrombolysis. Of the 30 patients with high-risk PE, 28 underwent thrombolysis according to ESC recommendations; the other 2 presented a contraindication to this treatment. 10 patients died during hospitalization in this group. Major bleeding was noted in this group of thrombolysis patients.

Among the 39 patients who presented a high intermediate risk PE, 22 received thrombolysis. Among these 39 patients, 5 died during hospitalization 2 patients who did not receive thrombolysis, only 1 thrombolysis patient died. Only 1 major bleeding was noted in this group.

Conclusion: The recent recommendations of the ESC make it possible to consider thrombolysis in patients at intermediate-high risk. The morbidity and mortality data from our study seem to confirm the decision of practitioners to choose thrombolysis in certain patients who do not present with a state of shock but with systolic hypotension < 100mmHg, or pejorative ultrasound signs such as intracavitary thrombi.

WHEN STRESS UNVEILS THE TACIT: RESULTS OF STRESS ECHOCARDIOGRAPHY IN A TUNISIAN CARDIOLOGY CENTER

Saidane Syrine, Mzoughi Khadija, Bouzidi Hela, Khannouch Ahlem, Ben Mrad Intinene, Kamoun Sofiene, Zairi Ihsen, Kraiem Sondos.

Cardiology Department, Habib Thameur Hospital, Tunis.

Introduction: Stress echocardiography (SE) is an essential examination in the diagnostic and prognostic evaluation of several heart diseases. It allows assessment of the myocardial response to physical or pharmacological stress.

Objective: The aim of our study was to describe the results of SE.

Methods: We conducted a retrospective descriptive study of 302 consecutive patients explored by SE between 2008 and 2019 at Habib Thameur Hospital.

Results: Patients mean age was 61±10 years with a male/female sex ratio of 1.1. The main indications for dobutamine SE were ischemia (65%), viability (21%), ischemia and viability (8%) and aortic stenosis evaluation (4%). The maximum dose of dobutamine infused for the search for myocardial ischemia was 27.5±7 gamma/Kg/min. The examination was conclusive in 98% of cases, and Target Heart Rate (THR) was achieved in 90% of cases. Myocardial ischemia was found in 31% of cases. In the viability study, the examination was positive in 67% of cases. Rhythm disorders occurred in 11% of cases.

Regarding exercise echocardiography, the main indications were ischemia (37%), evaluation of mitral stenosis (29%) and evaluation of hypertrophic cardiomyopathy (14%). The examination was negative in 62% and inconclusive in 13%. Myocardial ischemia was found in 25% of cases. No adverse effects were reported.

Conclusion: Stress echocardiography has indications both in the search for ischemia and in valvulopathy. It is a reliable and non-irradiating examination. Its main limitations are a poor echogenicity and its operator-dependent character.