Speakers Session

March 01, 2022

HEART CONGRESS 2022 | WEBINAR

36th World Congress on

Heart Diseases

## Cardiac complications of Beta-thallesemia

Shahtaj Khan

Head of the Department of Pathology at Hayatabad Medical Complex, Pakistan

Beta-thalassemias are a group of inherited, autosomal recessive diseases, characterized by reduced or absent synthesis of betaglobin chains of the hemoglobin tetramer, resulting in variable phenotypes, ranging from clinically asymptomatic individuals to severe anemia. Cardiac complications represent a leading cause of mortality in β-TM patients, although an important and progressive increase of life expectancy has been demonstrated after the introduction of chelating therapies. Iron overload is the primary factor of cardiac damage resulting in thalassemic cardiomyopathy, in which diastolic dysfunction usually happens before systolic impairment and overt heart failure (HF). Although iron-induced cardiomyopathy is slowly progressive and it usually takes several decades for clinical and laboratory features of cardiac dysfunction to manifest, arrhythmias or sudden death may be present without signs of cardiac disease and only if myocardial siderosis is present. Careful analysis of electrocardiograms and other diagnostic tools may help in early identification of high-risk β-TM patients for arrhythmias and sudden cardiac death.

Despite the advances in the management of β-TM, heart disease remains the leading cause of mortality in these patients. Cardiac arrhythmias are frequent in β-TM patients, particularly in the advanced stage of the disease, when a significant cardiac iron loading is present.)e cardiovascular evaluation of β-TM patients should be performed by cardiologists, with experience in clinical arrhythmology and echocardiography, who have knowledge of thalassemia and

iron-related cardiotoxicity.)e ECG analysis should include the measuremtent of P wave and QT interval dispersion; the echocardiogram should include the evaluation of the atrial electromechanical delay or left atrial function analysis.

2022
March, 01
Webinar
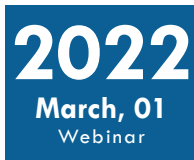
36ᵗʰ World Congress on

Heart Diseases

Upper Limb Ischemia after Transradial Access for Coronary Angiography: a Rare Case Report

M. Ibrahim

University of Padjadjaran, Hasan Sadikin General Hospital, Indonesia

Acute Upper Limb Ischemia (AULI) is a less common entity of limb ischemia. Although most of the causes of AULI was embolism, it can be caused from complication after transradial access (TRA) coronary angiography. The incidence of AULI following transradial access is unknown and uncommon and not much reported. A 61 years old active smoker man was diagnoses as Acute Upper Limb Ischaemia Rutherford II-A one week after underwent elective percutaneous coronary angiography procedure using right radial artery as access. Revascularization was initially planned along with anticoagulation using unfractionated heparin. Unfortunately, the ischaemia worsened to Rutherford III after the patient decided to refuse to any procedure. Eventhough the probable mechanism is not clear about ischemia after TRA, one possible mechanism is the presence of a thrombus on the tip of the sheath or at the tip of the microcatheter or base catheter, dislodged upon sheath or catheter removal and following the path of least resistance artery during radial artery compression. In order to prevent those complication, radial artery puncture must be conducted in proper sites and accompanied by collateral flow checkup, carefully conducted procedures, follow up and contionus monitoring of distal blood flow. Critical hand ischemic is an extremely rare and serious complication of transradial coronary angiography. Until now there wasn't any clear underlying possible mechanism that might be correlate and explained these cases. Appropriate testing and management for prevention of complication following radial access in coronary angiography is crucial.

Keywords: Upper limb ischemia, transradial access, coronary angiography

36ᵗʰ World Congress on

Heart Diseases

Antiarrhythmic drugs – an updated classification after 50 years

Ming Lei and Christopher L-H Huang

University of Oxford, United Kingdom

In the late 1960s, Vaughan Williams introduced a novel classification of antiarrhythmic drugs. This scheme has been widely used around the world and has prompted the development of new drugs with major clinical impacts. Yet fifty years later, arrhythmic diseases still remain a major public health issue. Both scientific investigation and clinical practice directed at these fall behind advances in other cardiac and medical areas. These problems together have resulted in a lack of a comprehensive yet clear conceptual classification of identified targets and their relationship to each of the wide range of known arrhythmic mechanisms. Repeated attempts, including that by a working group of the European Society of Cardiology in 1991 at such a clarification met only limited success.

Our recent focus article published in Circulation (2018; 138:1879–1896) now bridges these conceptual gaps and culminates in a modernized drug classification collating findings made over the subsequent five decades. These compiled and organized studies of different molecular drug targets, their action mechanisms, and consequent clinical effects, areas in which the authors have themselves contributed, whether as experimentalists or clinicians. It augments Vaughan Williams's original framework covering the actions of sodium, potassium and calcium ions and autonomic nervous effects on these (Class I-IV). The novel categories introduced now bear on altered heart rates (Class 0), mechanical stretch (Class V); intercellular electrical communication (Class IV) and longer term structural change (Class VII). The scheme also proceeds to draw attention to multiple drug targets and actions and possible adverse, even pro- arrhythmic, effects.

This revised Oxford classification will therefore clarify a rational clinical use of existing available anti-arrhythmic drugs in relation to their particular mechanisms of action. It will aid the identification and development of novel drugs relating their future clinical applications to their molecular mechanisms of action.

36ᵗʰ World Congress on

Heart Diseases

Tropical Coronary artery disease

Ramachandran Muthiah

Morning Star Hospital, Marthandam, India

The rising incidence of CAD is a new phenomenon in developing countries. The increasing burden of coronary artery disease (CAD) in tropical and subtropical belts of the Equator since it remains blurred and carries a grim prognosis. The worldwide burden is set to reach 47 million disabilities by the year 2020 as projected by World Health Organization. Several Western studies have demonstrated a significant role of various nutrients like fat, saturated fat and cholesterol in the causation of CAD. In contrast, the traditional Indian diet is low in fat content and, therefore cannot be the sole cause for the high prevalence of CAD in Indians. Plaque buildup in endocardium and coronary arteries, causing ischemic injury and arrhythmic episodes, is a vanishing mystery in its pathogenesis and emphasizing alternative routes for understanding and treatment of this enigmatic disease. Recently, an increase in the incidence of CAD was reported from southern states of India and other etiologies, the infectious or inflammatory conditions such as Endomyocardial fibrosis may provide an insight in its analysis. Recently, evidence of myocardial injury, as defined as an elevated troponin level, is common among patients hospitalized with COVID-19, caused by cardiac microvascular damage and systemic inflammatory response syndrome (cytokine storm) with increased risk of a poor prognosis..The important steps to prevent and decrease the risk of CAD is to reduce the chance of getting this disorder by epidemiological measures with an advice of blood thinning medications such as small daily dose aspirin, statins, nitrates and antibiotic in susceptible individuals.

2022
March, 01
Webinar

36ᵗʰ World Congress on

Heart Diseases

Left main disease PCI- Appraisal of different techniques and use of imaging and physiology

Rohit Mody

Max Super Speciality Hospital, India

For many years, CABG has been the gold standard treatment for unprotected Left Main (LM) coronary artery lesions. Because of its high artery size and anatomical accessibility, the LM lesion makes a good PCI candidate. Subset PCI has been broadened by the development of Drug-Eluting Stent (DES) as well as fast advances in procedures, devices and adjunct pharmacotherapies. PCI and CABG had equivalent results in patients with low or moderate coronary complexity for up to five years, according to current research. Most LM bifurcation lesions may be treated successfully with a single provisional stent rather than the more complex two-stent treatment. The unusual instance of a bifurcation lesion, which requires the use of not one, but two stents from the start, is an exception to the norm. Controlling this unusual species and improving treatment outcomes need an integrated strategy involving specialised procedures, additional physiological and morphologic assessment and hemodynamic devices. It is estimated that 5–7 percent of individuals who undergo CAG have significant unprotected (LMCAD), with more than 80 percent of these patients suffering from bifurcation[1-3]. LM is a common candidate for percutaneous coronary intervention (PCI) because of its anatomic accessibility and relatively big artery size.[4] Interventional cardiologists have been inspired to pursue PCI because of major technological advancements in PCI, as well as more recent drug-eluting stents (DESs).

36th World Congress on

Heart Diseases

Validation of the Lebanese Medication Adherence Scale among Lebanese diabetic patients

Liliane Ibrahim

Lebanese University, Fanar, Lebanon

Statement of the Problem: Adherence to oral antidiabetics plays a pivotal role in controlling diabetes. Healthcare workers evaluate this adherence when visited by patients. Objectives The primary objective of this study was to validate the existing LMAS-14 (Lebanese Medication Adherence Scale) in Lebanese diabetic adults. The secondary objective was to evaluate factors affecting adherence among this population. Methodology & Theoretical Orientation: This study was conducted between May and September 2019, in the main five Lebanese governorates, and community dwelling adult participants were enrolled using a proportionate random sample. The scale was validated using factor analysis and reliability testing, while bivariate and multivariable analyses assessed correlates of adherence. Main outcomes measures Validity of LMAS-14. Findings: All LMAS-14 items converged over a solution of four factors, explaining a total of 64.39% of the variance ($\alpha = 0.859$). The cutoff point between controlled and uncontrolled patients was set at 11. The sensitivity and specificity were good at this cutoff (71.1% and 94.74%, respectively). Results showed that 167 (57.2%) patients had good medication adherence. Advanced age (Beta = 0.046; p = 0.001) and having medical coverage (Beta = 1.452; p = 0.005) were significantly associated with higher adherence. Furthermore, adherence to oral antidiabetic drugs (Beta = 1.197; p = 0.018), female gender (Beta = 2.695; p = 0.011), and taking dyslipidemia medication (Beta = 3.527; p = 0.005) predicted higher diabetes control. Conclusion & Significance: Conclusion This study validated the LMAS among Lebanese adult diabetic patients taking oral antidiabetic drug. Advanced age and having medical coverage were associated with higher medication adherence. Further national studies are warranted to corroborate our findings.

2022
March, 01
Webinar

36th World Congress on

Heart Diseases

Sleep Apnea as Cardiovascular Risk: An Unrecognized Medical Problem

Syed Raza

Consultant Cardiologist, Awali Hospital Bahrain

Sleep Apnea is a common medical problem, yet underrecognized and often goes undiagnosed or misdiagnosed. There are mainly three types of Sleep Apnea – Obstructive, Central and Mixed. The diagnosis is mainly clinical but requires simple test called polysomnography or Sleep Study. Sleep Apnea if left undiagnosed and untreated can lead to several health related complications. Most importantly it poses risk for cardiovascular complications which can sometimes be potentially serious and even life threatening. The cardiovascular complications once recognized as secondary to Sleep Apnea are readily manageable and definitely saves further disease burden, healthcare resources as well as life. The core of management is by providing oxygen under pressure using a device called CPAP (continuous positive airway pressure). Sleep Apnea is preventable and once identified can be a life changing experience as well as lifesaving.

2022
March, 01
Webinar

36ᵗʰ World Congress on

Heart Diseases

Sgarbossa Criteria in Left Bundle Branch Block in a Hypertensive Emergency; A case report

Yasser Mohammed Hassanain Elsayed

Critical Care Unit, Egyptian Ministry of Health (MOH), Egypt

Rationale: Left bundle branch block and hypertensive emergency are very common conditions in clinical cardiovascular and emergency practice. Hypertensive emergency encompasses a spectrum of clinical presentations in which uncontrolled blood pressure leads to progressive end-organ dysfunction. Suspected acute myocardial infarction in the setting of a left bundle branch block presents a unique diagnostic and therapeutic challenge to the clinician. The diagnosis is especially difficult due to electrocardiographic changes caused by altered ventricular depolarization. However, reports on the use of Sgarbossa's criteria in the management of hypertensive emergency is rare.

Patient concerns: A middle-aged married heavy-smoker Egyptian male worker presented to the emergency department with a hypertensive emergency patient with acute chest pain and left bundle branch block. Sgarbossa's criteria were initially very weak and, over time, became highly suggestive of acute ST-segment elevation myocardial infarction. Interestingly, chest pain increased as Sgarbossa's diagnostic criteria were met. Thrombolytic therapy was strongly indicated because of a higher development of Sgarbossa criteria scoring. Intervention; Electrocardiography, oxygenation, streptokinase IVI, and echocardiography Diagnosis: Developing acute ST-segment elevation myocardial infarction in the presence of left bundle branch block post- hypertensive emergency.

Outcomes: The dramatic response to developing acute myocardial infarction in left bundle branch block with hypertensive emergency to streptokinase.

Lessons: The higher Sgarbossa criteria scoring in the case was the only indication for thrombolytic. Therefore, how did Sgarbossa criteria develop during case management to indicate the need for thrombolytic therapy?

Keywords: Bundle-branch block, Coronary occlusion, Sgarbossa criteria, Electrocardiography, thrombolytic, ST Elevation myocardial infarction

Abbreviations:

ECG: Electrocardiogram

LBBB: Left bundle branch block

STEMI: ST-segment elevation myocardial infarction

VR: Ventricular rate