Wednesday 11/06/2014
9.30 – 10.00
Case: Right atrial mass
Presenter: Fatma El Zahraa

11.30 – 12.00
Case: A tale of two tachycardias
Presenter: Ahmed Ragab

1.30 – 2.00
Case: EP studies are nor ECG cosmetic procedures
Presenter: Mohammad Shafiq Awad

3.30 – 4.00
Case: CRT-D: “Why Did He Die?”
Presenter: Sherif Mohamed Saad El Din Habiba

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Percutaneous coronary intervention of chronic total occlusion (CTO) is characterized by technical and procedural complexities with relatively low rates of success compared to PCI in other non-CTO lesions. On the other hand, there is clear evidence that the successful revascularization of CTO is associated with improvement of left ventricular function, increase in myocardial perfusion, reduction of left ventricular remodeling and increase in electrical stability. Since its first report in 1990, retrograde approach in CTO lesions has remained one of the greatest challenges for interventional cardiologists. However, thanks to the development of new techniques and dedicated devices, procedural success rates for CTO recanalization through retrograde micromannels, have significantly improved during recent years leading to the revascularization of complex cases unable to be approached by antegrade techniques. We report a didactic case of retrograde approach through epicardial contralateral collaterals for a right coronary artery CTO lesion in a 85-year-old patient with stable angina (Canadian Cardiovascular Society classification 3).
Mitral Valvotomy – What do we know?

Mitral valvotomy has been around since 1923, when it was described as a closed digital procedure by Cutler and Levine, but it failed to yield reliable results until after World War 2. During the 1950’s it became a surgical procedure employed as frequently as a closed mitral valvotomy (CMV), using mechanical dilators like those described by Tubbs or Dubost. After the development of the heart lung machine, open mitral valvotomy became possible. In 1984, Inoue described the balloon mitral valvotomy (BMV), which has since become the standard valvotomy procedure in many centres across the world.

The risk factors, associated with less favourable outcomes after BMV or CMV, are well described and include increasing age, severely symptomatic patients, the presence of pre-procedure atrial fibrillation (AF), Wilkins Scores above 8, calcified valves and the presence of pulmonary hypertension and in a number of studies BMV results in the larger mitral valve area (MVA). The expected outcome is an MVA of more than 2.0 cm². In the Bloemfontein series, however, we achieved an average post BMV valve area of only 1.6 cm².

Open valvotomy on the other hand, is really a mitral valvoplasty which includes either incisions in the papillary muscles, fenestration or excision of chordae and debride ment of calcific areas in more than 50% of cases, as described by Antunes. Open valvotomy also yielded an average increase in valvular area of more than 1 cm² achieving an average valve area of 2.89 cm² post operatively.

As rheumatic valvular disease is pre-dominately a disease of the developing world, selection for the different procedures is largely determined by the available resources. In well selected patients, CMV or BMV procedures will probably yield similar results. In patients with higher Wilkens scores, an open procedure is required, either as mitral valvoplasty, systematically addressing valvular and sub valvular structures or valve replacement with or without additional surgical procedures, like tricuspid annuloplasty.

Clinical Evaluation of Vascular Disease by Cardiologists

It is imperative for cardiologists when evaluating patients with heart disease to think of head to toe heart and vascular disease. Patients may not realize that they may be suffering from vascular disease but as cardiovascular specialist we should educate them and assess them for vascular disease. Explaining the difference between arteries and veins, as many patients don’t know if they are different. Atherosclerosis and its effects on arteries can then be explained. Educating patients about carotid artery disease and what symptoms to look for cerebral ischemia. Educating patients about TIA and sudden loss of transient vision. Moving on to the heart and explaining the symptoms of coronary ischemia including the atypical symptoms that may be seen in women. Upper extremity discomfort with activities may suggest subclavian artery disease. Educating the patient about blood pressure and if it becomes hard to control, kidney function starts to deteriorate or sudden onset of heart failure may indicate renal artery disease. Asking the patient how is their walking and if they have any leg pain or fatigue. Differentiating arterial versus venous insufficiency, which may times can be done from history of the patient. Physical examination facilitates in confirming the suspicion that a good history may provide. Carotid or subclavian bruit may indicate atherosclerosis of the neck or arm vessels. Abdominal bruit may indicate renal artery disease. Abdominal palpation may suggest abdominal aortic aneurysm. Pulses in the extremities may be helpful. However skin changes with pigmentation or lower extremity edema may suggest chronic venous insufficiency. To confirm the clinical diagnosis appropriate testing should be requested. In the diagnosis of vascular disease the use of vascular ultrasound is very helpful. Cardiologists should feel comfortable in understanding carotid duplex, ankle brachial index, arterial duplex and venous Doppler ultrasound studies. Once the diagnosis is made then appropriate therapy may be offered to the patients. By this comprehensive approach by the cardiologist the patient would not have to see multiple specialists and the patient will become knowledgeable of these conditions.

Prevalence and Annual Incidence of Venous Insufficiency

Venous reflux disease is 2x more prevalent than coronary heart disease (CHD) and 5x more prevalent than peripheral arterial disease (PAD).

![Diagram showing prevalence and annual incidence of venous insufficiency](image)
Wednesday 11 June 2014

Live Transmission
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International Live Transmission
Sankt Katharinens hospital
Sankt Katharinens hospital, frankfurt, Germany
Operator: Horst Sievert
Case: Structural Heart Disease
Wednesday, 11th of June
Time: 9:45 - 10:45

National Live Transmission
National Live 3
ICC Hospital - Alexandria - Egypt
Operator: Ziyad Ghazzal - Sherif Wagdy Ayad
Wednesday, 11th of June
Time: 10:45 - 11:45

National Live 4
ICC Hospital- Alexandria - Egypt
Operator: Bernard Chevalier - Mohamed Loutfi
Wednesday, 11th of June
Time: 13:00 - 14:00

National Live 5
ICC Hospital - Alexandria - Egypt
Operator: Josefa Mauri - Amr Zaki
Wednesday, 11th of June
Time: 15:00 - 16:00
Registration instructions

Registration Desk for chairpersons and speakers
Registration Desk for chairpersons and speakers will be located in Mezzanine Floor in “Hall C”.

Opening Hours in Registration Desk
Tuesday form 09:00 am til 05:00 pm.

Registration Desk for delegates
Registration desk for delegates will be located in a separate conditioned tent located in “THE PLAZA OF CIVILIZATION” out of the convention center boundaries and facing the entrance of the convention center.

With compliments of MSD

Registration Materials
Each delegate will receive at the registration desk:
Badge, Conference Kits and Bag.

Closure of the Left Atrial Appendage
Bernhard Meier, MD, Bern University Hospital, Bern, Switzerland

Autopsy, surgical reports, and transesophageal echocardiography (TEE) showed that 90% of clots in non-rheumatic atrial fibrillation (AF) are found in the left atrial appendage (LAA) and only 10% in the remainder of the left atrium (LA). After elimination of the LAA oral anticoagulation is no longer warranted as the risk is greater than the projected benefit. Michael Lesh, an American electrophysiologist, introduced the first percutaneous device to close the LAA (PLAATO) and the first case was performed by Horst Sievert in Frankfurt, Germany, on August 30, 2010. The technique has since been abandoned. The first case with a simpler technique and without general anesthesia and echocardiographic guidance was performed at our center on June 15, 2002 introducing the AMPLATZER technique. Later the same year, the WATCHMAN device was introduced. The AMPLATZER and WATCHMAN techniques are currently the market leaders but 2 additional techniques are approved in most European countries, i.e., the Greek LAA Transcatheter Patch and the American WAVECREST device. With the WATCHMAN device 2 randomized trials have shown overall superiority over vitamin K antagonists, including a survival benefit beyond 4 years. The AMPLATZER technique has also been used in several thousands of patients and the results were similar to that of the WATCHMAN device and superior to the hypothetical results expected with oral anticoagulation, calculated according to the risk score of the patients.

The main complications of LAA closure are device embolizations (1-3%) and pericardial effusions (3-5%). The rare need of urgent cardiac surgery does, per se, not impose a surgical stand-by although it has to be kept in mind. Late thrombi on the devices are observed in a few percent and may need a period of oral anticoagulation in patients amenable to it. Surgical correction of such a problem is exceedingly rare. The data on catheter-based LAA closure accumulated over the past 12 years justify to offer this technique to all patients with atrial fibrillation as a valid alternative to oral anticoagulation with a proved mortality benefit over vitamin K antagonists and indirectly demonstrated competitiveness with the non-vitamin K oral anticoagulants. The procedure can be combined with ablation for atrial fibrillation, coronary intervention, transcatheter aortic valve implantation, MITRALCLIP valve repair, alcohol ablation of hypertrophic obstructive cardiomyopathy, not to mention closure of an atrial septal defect or a patent foramen ovale used for access to LA.

Which of the following is major cause of non-ischemic dilated cardiomyopathy?

- a-Viral infection
- b-Alcohol
- c-Cocaine abuse
- d-Anthracycline toxicity

Which of the following is not a component of adjunctive therapy for ischemic cardiomyopathy?

- a-Anticoagulation
- b-Amiodarone
- c-Maintenance of potassium level to high normal range.
- d-AICDA

Valvular cardiomyopathy is never seen with:

- a-Mitral regurgitation
- b-Aortic regurgitation
- c-Aortic stenosis
- d-Pure mitral stenosis

Submit YOUR Answers

@the Information Desk
Saudi Registries with Biodegradable Polymer Coated SMT Drug Eluting Stents started in July 2004 with 1st generation Infinnium Stent (316L SS stent) with active Paclitaxel Drug and 3 layers of fully Bioabsorbable Polymer Coating within 6 weeks. It was CE marked early 3,2005 years before any other Biodegradable Polymer Coated stent (Biomatrix in 2008). Our initial Experience was with 276 stents, data of which was presented in several meetings, proofing safety and efficacy in daily practice in all comers, and up to 7 year Follow-up was published. (International Journal of Clinical Medicine 224-2014,5,216)

The second step was utilizing 295 newer generation of Supralimus Sirolimus DES with Bioabsorbable polymer from SMT with SS Stents. The comparative Data with Infinnium stent was presented and published in the the BIOPRESS registry with 6 year follow-up (Journal of Cardiology and Therapeutics 20-2014,2,12)

Our recent data on the third generation Supralimus Core Sirolimus Eluting SMT Bioabsorbable polymer DES from SMT on Cobalt Chromium stent with 60 Micron thickness, and CE Marked with initial FIM data published (MAXIMUM Study Indian Heart J. 2012 Nov-Dec;52-547:(6)64 ), and OCT data published showing results not inferior to any available Biodegradable Polymer data in the literature.

Our data on Supralimus Core was recently presented in EURO PCR 2014 in SCORES Registry including 993 stents deployed in 482 all comers with up-to 4 years follow up. It will be presented in Cardio Alex 2014 meeting

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Dr. Radwa A. Mehanna
Lecturer of Medical Physiology , Faculty of Medicine, Alexandria University

Signaling pathways and smooth muscle cell motility

Current therapeutic approaches to restore blood flow in stenotic blood vessels involve the use of percutaneous devices and coronary bypass surgery. In all procedures that disrupt the normal integrity of the blood vessels, there is an increased incidence of vessel luminal narrowing, termed restenosis. Restenosis, arbitrarily defined as greater than %50 narrowing of vessel diameter compared with the reference vessel. Restenosis after percutaneous intervention is characterized by platelet aggregation, release of growth factors, inflammatory cell infiltration, medial smooth muscle cell proliferation and migration, and extracellular matrix remodeling.

Vascular smooth muscle cell proliferation & migration, especially after stent implantation; play a critical role in neointimal hyperplasia. Elucidating the molecular mechanisms responsible for smooth muscle cell proliferation has led to the development of novel therapeutic approaches, including rapamycin- and paclitaxel eluting stents that have significantly improved the care of patients with coronary artery disease. But, the potential increase in the incidence of stent thrombosis in patients treated with drug-eluting stents leads to the development of newer stents and coronary devices such as drug-eluting stents with biodegradable polymers, drug-eluting stents that are polymer-free, stents with novel coatings, completely biodegradable stents, bifurcation stents, and drug-eluting balloons.

In Vascular Injury

Vascular smooth muscle cell migration begins with

1. Remodeling of cytoskeleton
2. Changes in adhesiveness of smooth muscle cell to the matrix
3. Activation of motor proteins

= Cell Migration

Mohamed Abdel Latif
Nasser Institute
13:40-13:50
A new Era in Premium Ultrasound

Frank Kemme
Belgium
Discussion
13:50-14:00
Strain and speckle tracking in daily clinical practise

Strain and speckle tracking represent a new emerging technique in cardiac imaging. It does overcome most of the shortfalls in conventional echo so far, with strain and speckle tracking it is now feasible to assess longitudinal function of the myocardium, that represent 70% of its performance and is the missing holy grail in imaging it has a variety of applications ranging from simple LV function assessment, non-invasive assessment of reversible ischemia, diagnosis of structural heart disease, early detection of myocardial dysfunction during chemotherapy, amylloid heart disease, HCM up to cardiac resynchronisation therapy optimisation.

Multicentre trials suggested a positive correlation of longitudinal global strain and all cause mortality with ejection fraction estimated with conventional measures it was found more superior in predicting outcome when compared with conventional EF or RWMA. Other studies have shown strain to be a powerful predictor of outcome in-patients with acute heart failure and (Heart failure with normal ejection fraction (HFNEF). In the era of fast growing cardiac MRI the challenge is for new echocardiography techniques particularly strain and speckle tracking is to have a reliable and practical clinical application in day to day practise.

Conclusion: Coronary sinus cannula tion is not always feasible using fluoroscopy, therefore a new technique has been developed called Echocardiography guided coronary sinus catheterisation. The introduction of this technique allows for an improvement in the success rate of cannulating the coronary sinus in a safe and reliable manner. This technique is particularly useful in patients with difficult anatomy and those with multiple prior catheterisation attempts. It provides a rapid and reliable method for accessing the coronary sinus and can be combined with other imaging modalities for optimal results.

Hani M. Mahmoud, MBBCh, MSc
Prince Sultan Cardiac Center, Al-Hassa, KSA

Real-time three dimensional trans-esophageal echocardiography guided coronary sinus cannulation during CARILLON mitral annuloplasty for patient with chronic severe mitral regurgitation

Introduction: The coronary sinus has become a clinically important structure especially through its role in providing access for different cardiac procedures such as arrhythmia ablation, biventricular pacing & recently, percutaneous valvular interventions. Fluoroscopy with or without two dimensional trans-esophageal echocardiography is the widely used method for guidance.

Case presentation: A 78-year-old female patient undergoing percutaneous CARILLON mitral annuloplasty device therapy for chronic severe symptomatic mitral regurgitation. Aorto surgical coronary sinus catheter through the right internal jugular vein, multiple trials for coronary sinus cannulation guided by fluoroscopy and two-dimensional trans-esophageal echocardiography were unsuccessful. So, real-time three-dimensional zoom mode was used. Then, the volume was rotated to have the anatomically oriented enface view of the inter-atrial septum from the right atrial perspective. The coronary sinus ostium was identified adjacent to the Eustachian valve. Then the catheter was reintroduced through the SVC into the right atrium then easily navigated to cannulate the coronary sinus ostium. The position was confirmed by the fluoroscopically known course of the coronary sinus plus the pattern of the invasive pressure wave form.

Conclusion: Coronary sinus cannulation is not always feasible using fluoroscopy and/or two-dimensional Echocardiography guidance. Real-time three-dimensional trans-esophageal echocardiography can be used to guide coronary sinus cannulation as it provides an anatomically oriented & informative enface view of the coronary sinus ostium. It can help reducing fluoroscopic radiation time.

Hossam El Gendy
MD, FRCP (London), lead consultant cardiologist at Princess Alexandra Hospital in London and consultant cardiologist at the Essex cardiothoracic Centre.

Petar M Seferović
Department of cardiology, Clinical center of Serbia Belgrade University School of Medicine

Therapeutic possibilities in acute heart failure 2014: is there a light at the end of the tunnel?

Acute heart failure (AHF) is a complex clinical syndrome, in whom acute pump failure is associated with multiorgan dysfunction, causing critical clinical condition. Due to the inherent features of this disease, evidence based treatment is scarce and multidisciplinary groups of professionals are often making treatment decisions without appropriate evidence. Therefore, treatment strategies are mostly based on the consensus of experts opinion, and the recommendations rarely have a level of evidence A, but level of evidence B or frequently C.

Etiologically, AHF is most frequently caused by acute decompensation of chronic heart failure (CHF), associated with high blood pressure, acute coronary syndrome, myocardial inflammation, and with decomensation of valvular or congenital heart disease. Diagnostically, the most important are the rapid onset of symptoms and signs of heart failure and elevated natriuretic peptides. It is important to stress that most patients have symptoms or signs of congestion rather than signs of low cardiac output, with normal or high blood pressure.

It is advisable to transfer patient to hospital with cardiology department, CCU or ICU. After admission, dyspnea severity, the level of hemodynamics compromise and clinical significance of life threatening arrhythmias should be assessed. Signs and symptoms of AHF should be precisely recorded such as peripheral edema, rales, S3 gallop, elevated jugular venous pressure and mental status. ECG is mandatory but rarely provides the AHF diagnostic keys. Chest x-ray is useful, but in nearly 20% of patients may be normal, limiting overall sensitivity. Echocardiography is relatively indicated if available, and in most tertiary cardiology institutions done within first hours.

According to the level of blood pressure and congestion status, medical therapy should be immediately started. Most patients should have routine oxygen therapy and in those with severe dyspnea and respiratory distress, non-invasive ventilation should be administered. In the majority of institutions, intravenous 40 mg furosemide is initially used, and further dosage should be recorded according to the type of AHF. If the values of blood pressure are sustained, intravenous vasodilator therapy (nitrates are used frequently) should be considered. The role of the new type vasodilators (ularitide, serelaxine) will be better known after the results of ongoing studies. Strategic approach for the use of catecholamines and vasopressors in AHF include exclusively hypoperfused patients. Opioides are not used on the routine bases. It was recently stressed that the early vasodilator therapy may be crucial to avoid increased long-term mortality and, similarly to acute coronary syndrome, the early vasodilator treatment the better the late result.