

recovery from functional ischemic MR with isolated CABG is unlikely; in these patients, concomitant mitral valve repair should be considered.

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Serum Osteoprotegerin level and the extent of cardiovascular calcification in haemodialysis patients

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Background: Cardiovascular disease is the leading cause of death in chronic kidney disease and hemodialysis population. The mechanisms of vascular damage in this population are not fully explained by traditional cardiovascular risk factor. Osteoprotegerin (OPG) has been shown as an independent predictor of mortality in CKD patients and proposed as a potential biomarker for vascular calcification.

Methods: A total of 80 subjects (60 hemodialysis patients and 20-age and sex matched healthy control) were studied. Vascular and valvular calcification was measured using plain X-ray and transthoracic echocardiography. Circulating OPG was measured in addition to standard clinical biochemical analysis.

Results: Osteoprotegerin level showed significant difference between hemodialysis (5.4 ± 2.8 pmol/l) and controls (0.96 ± 0.41 pmol/l) $P < 0.001$. Vascular calcification detected by X-Ray and valvular calcification by echocardiography was statistically significant correlated with serum OPG level in hemodialysis patients with significant X-ray calcification score $p = 0.003$ and overall valvular calcification with p value < 0.001 .

Conclusion: There is strong positive relationship between osteoprotegerin and both vascular and valvular calcification in hemodialysis patients. This positive correlation may open the gate for routine estimation of this agent as a surrogate marker of cardiovascular calcification in hemodialysis patients.

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Should Jehovah's Witness patients be listed for heart transplantation?

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Abstract: This best evidence topic in Cardiac Surgery was written according to a structured protocol. The question addressed was: for [Jehovah's Witness patients with end-stage heart failure] can these patients undergo a [heart transplantation] without an increased rate of mortality. Altogether, 133 papers were found using the reported search strategy. Of those, 29 papers represented the best evidence to answer the clinical question. Five papers focusing on patients of the Jehovah's Witness (JW) faith who had end-stage heart failure were

published. Successful heart transplantation was performed in a total of seven patients without mortality, re-exploration or blood transfusion. One patient had left ventricular reduction surgery twice and another patient had bypass surgery several years after transplantation. Other successful organ transplantations were also reported, including lung, liver, kidney and pancreas in both adult and paediatric patients of the JW faith, with comparable mortality and morbidity to non-JW patients. A publication bias is likely; nevertheless, we conclude that although there are no large studies directly focused on heart transplantation in JW patients, a multidisciplinary team approach to such surgery can make it technically feasible and without an increased mortality risk in suitable candidates. Therefore, such patients may be considered for heart transplantation under selected and favourable circumstances.

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Single center experience of PDA stent In Saudi Arabia

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Background: Transcatheter PDA stenting is considered now as a modality to improve the pulmonary blood flow, as an alternative to surgical aortopulmonary shunt in selected patients who are suitable for the procedure.

Method: Between Jan 2005 to May 2011, 87 patients underwent PDA stenting in PSCC after full assessment by echocardiogram and angiogram 41 patients (47%) patient have PA & VSD 25 of them with 2 ventricles and the remaining 16 with single ventricle morphology, 22 (25%) patients have TOF, 24 patients (28%) have PA & IVS, 11 patients have Laser wire /RF perforation of the pulmonary valve same time. Median age is 8 days, median weight is 3.2 kg, and procedure is prograde or retrograde.

Result: Mean ventilatory support is 2 days, median hospital stay is 4 days, median saturation is 79%, median follow up is 45 mo, median fluoroscopy time is 17.6 min (7.7–43 min), 6 (6.8%) of them has NEC first few days post stenting, 3 (3.4%) has stent migration, 4 (4.6%) lost follow up, 2 (2.2%) deaths, comparing to matching patients underwent MBT, the result is better.

Conclusion: We conclude that PDA stenting is a safe and alternative procedure surgical aortopulmonary shunt.

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Smoking is a more dangerous risk factor than metabolic syndrome in Egyptian patients with acute myocardial infarction

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The effect of metabolic syndrome (MS) and other risk factors of myocardial infarction (MI) are not consistent in all studies. Aim: To

Comparison with Egyptian prevalence.

| Total 50 pts | Our study | Prevalence in Egypt in age > 15 yr | Chi (P) |
|--------------|-----------|------------------------------------|------------------|
| Diabetes | 30 (60%) | 10% | 0.0000 |
| HT | 24 (48%) | 26% | 7.2 (0.0071) |
| Smoking | 38 (76%) | 40% in males 4% in females | 17.3 (0.0000) |
| Metabolic S. | 27 (54%) | 24% | 13.3 0.0003 |

assess the incidence of each risk factor in our community as a predictor of acute myocardial infarction. Methods: Fifty patients (Pts) admitted to the main university hospital with acute myocardial infarction were studied. All risk factors were recorded as well as echocardiographic measurements. Metabolic syndrome components were defined as detailed in the ATP III report: (1) waist circumference > 102 cm in men and > 88 cm in women, (2) fasting triglycerides \geq 150 mg/dl, (3) HDL cholesterol < 40 mg/dl in men and < 50 mg/dl in women, (4) blood pressure \geq 130/85 mmHg, and (5) fasting – glucose \geq 110 mg/dl. Participants with at least three of these components were determined to have the MS.

Results: MS was present in 27 pts (54%). The incidence of different risk factors in the 50 pts: Family history of any point as before age 60 as coronary disease, sudden death, diabetes, Ht was present in 36 pts (72%), smoking (current or stopped less than 6 months 38 pts (76%)).

Comparison of those with MS vs. those without: Male to female ratio: Not significant (NS), Diabetes present/absent: 21/6 vs. 9/14, $p = 0.005$; HT : 18/9 vs. 6/17, $p = 0.004$; Smoking 18/9 vs. 20/3, $p = 0.09$; family history of any major risk factor including sudden death or premature coronary disease: 21/6 vs. 16/7, $p = \text{NS}$; BMI > 30 : 14/13 vs. 5/18, $p = 0.02$; waist > 102, 88 in m and f respectively: 18/9 vs. 7/14, $p = 0.01$.

Comparison with Egyptian prevalence: data in our study vs. prevalence in Egypt above age 15 yr respectively: Diabetes: 30 (60%) vs. 10%, $p = 0.000$; HT 24 (48%) vs. 26%, $p = 0.007$; smoking 76% vs. 40 in males, $p = 0.000$; Ms 27 (54%) vs. 24%, $p = 0.0003$.

Conclusions: Smoking was the highest risk factor among pts with acute MI (76%) followed by positive family history (72%) then diabetes (60%), metabolic s. (54%), HT (48%). We highlight the danger of smoking beside other factors as predictors of MI in Egyptian population.

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ST-segment depression in aVR as a predictor of culprit artery in acute inferior wall ST-segment elevation myocardial infarction

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Purpose: To investigate whether the ST changes in the aVR lead on 12-lead ECG can be used to identify infarct-related artery (IRA) in patients with acute inferior ST-segment elevation myocardial infarction.

Methods: The ECG features were studied in 56 patients with acute inferior myocardial infarction where IRA was confirmed by coronary angiography.

Results: Right coronary artery (RCA) and the left circumflex coronary artery (LCX) were identified as IRA in 41 and 15 patients, respectively. ST depression in aVR \geq 0.1 mV was found in 9 (60%) patients who had LCX as the IRA, and in 5 (12.2%) ($2p < 0.001$) patients with

RCA as IRA. Using ST segment depression \geq 0.1 mV in aVR as a criterion, the sensitivity and specificity in differentiating LCX as IRA was 60% and 87.80%, respectively.

Conclusions: ST depression in aVR is common in patients with LCX-related acute inferior myocardial infarction. The ST changes in this lead are associated with an excellent specificity and a good sensitivity in differentiating LCX from RCA as the IRA.

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Successful transcatheter closure of perimembranous ventricular septal defect with inlet extension using ADOI

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Introduction: Transcatheter closure of perimembranous ventricular septal defect (PM VSD) is abandoned in many center and in some became restricted to certain age and criteria because of the risk of complete heart block (CHB). The risk of damaging the tricuspid valve (TV) in the presence of inlet extension is another risk. I am presenting successful closure of such defect using Amplatzer occlude device for PDA with reasonable follow up period in Prince Sultan Cardiac Center PSCC.

Method: Through 2011 4 patients underwent transcatheter closure of PM VSD with inlet extension, all patients were consented and procedure were done under general anesthesia, Transesophageal echocardiography was done in all, one has 3D assessment Hemodynamics were assessed pre procedural, A-V loop was applied in 2 patients, ADOI were used in all, heparin and antibiotics were giving during and 24 hr post procedure, 3 patients were extubated same day and one the following day, all patients were kept on aspirin for 6 months.

Result: Median age 17 kg, 3 female and 1 male, median age 7 year, Median ventilatory duration is one day, Median hospital stay is 2 days, Median Follow up is 10 months, No immediate or early complication or deaths, normal ECG immediately and during follow up period, normal Echocardiography with no residual leak during follow up period.

Conclusion: In selected patients with PM VSD and inlet extension ADOI device can be used safely and effectively to close the defect with no immediate or early complications.

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The new era of vascular interventions: The venous side

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Background: In spite of the huge advances in endovascular management of arterial diseases, surgery remained for a long time the only available option for treating veins. The situation has changed dramatically since the introduction of minimally invasive interventions for treating superficial as well as deep venous diseases.

Objectives: To review the recent advances in venous imaging and interventions for treatment of varicose veins, venous outflow obstruction and deep vein thrombosis.