

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.

Methods: Reviewing available literature providing evidence for the new technologies available for treating:

- 1- Chronic Venous Disease (including superficial varicose veins and deep venous obstructions).
- 2- Deep Vein thrombosis (DVT).

Results: RCTs showed that ultrasound-guided endovenous thermal or chemical ablation of superficial varicose veins are as effective as surgical ligation and stripping with the additional advantages of being minimally invasive, with less complications and more patient satisfaction, potential treatment in out-patient setup and early return to work. Stenting of chronic deep venous obstruction is safe, effective in improving symptoms and treating venous leg ulcers. Catheter-directed thrombolysis and pharmaco-mechanical thrombolysis are both effective in treating acute DVT and reducing post-thrombotic manifestations.

Conclusion: Current evidence shows that management of venous diseases is now shifting towards minimally invasive interventions with very promising results. Given the lots of research work done in the field nowadays and evolving technologies provided by manufacturers, it will soon be the standard of practice offered for patients with chronic venous disease.

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The relation between silent ischemia and coronary artery disease severity in diabetics

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Purpose: The aim of this work was to examine the relation between the severity of silent ischemic episodes detected by ambulatory ECG recording and the angiographic severity of coronary artery disease (CAD).

Methods: Fifty patients with chronic stable angina pectoris and type 2 diabetes mellitus were enrolled in the study. Among the study group, there were 33 males and 17 females; and their mean age was 61 ± 6.5 years. All patients were submitted to 24-hours ambulatory ECG recording and coronary angiography with estimation of Gensini score. According to the frequency of silent ST-segment depression episodes, patients were classified into two groups.

Group I: 24 patients with ST-segment depression frequency < 8 .

Group II: 26 patients with ST-segment depression frequency ≥ 8 .

Results: In patients with ST-segment depression frequency ≥ 8 , there were significantly higher number of left main coronary artery (LMCA) disease, and significantly higher Gensini score (Table 1). Sensitivity of ST-segment depression frequency ≥ 8 in predicting Gensini score ≥ 20 was 60%, specificity was 56%, positive predictive value was 58%, negative predictive value was 58%, and overall accuracy was 58% (Kappa = 0.412, $p = 0.014$). Gensini score showed significant positive correlation with ST-segment depression frequency ($r = 0.391, p = 0.005$), with maximum ST-segment depression ($r = 0.346, p = 0.014$), and with total ST-segment depression duration ($r = 0.495, p = 0.0003$).

Conclusion: Patients with type 2 diabetes mellitus who had more frequent silent myocardial ischemia by ambulatory ECG recording were found to have angiographically more extensive CAD as assessed by

Gensini score. Gensini score was found to be significantly correlated to the frequency of silent ST-depression, maximum ST-depression, and total ST-depression duration.

See Table 1.

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The trace elements in congenital cyanotic heart disease

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Background: The trace elements are essential micronutrients that have important physiological, metabolic, and homeostatic roles in the human being. Up till now the actually role and effect of the trace elements on myocardial metabolism specifically on congenital cyanotic heart disease is not entirely clear.

Objective: This study aimed to detect the serum level of selected trace elements (zinc, copper and selenium), and evaluate its effect and relation in congenital cyanotic heart disease.

Methodology: This study had enrolled upon 50 children, included 30 patients with congenital cyanotic heart disease and 20 age matched normal healthy children as control group. All groups were subjected to thorough clinical history, examination and specific cardiac investigation as well as detection of serum levels of zinc, copper and selenium. All results were statistical analyzed.

Results: The current study revealed that a highly significant decrease in the serum level of both zinc and selenium ($p < 0.001$ and $p < 0.01$), however serum copper level has non significant increase in congenial cyanotic heart disease, were ($p > 0.95$). There was non significant correlation between the mean serum levels of trace elements and the hemodynamic parameters,. Also there were non significant correlations between the age and sex of the studied group and the mean serum levels of these trace elements ($p > 0.05$).

Conclusion: Congenital cyanotic heart disease were associated with a highly significant decrease in the mean serum selenium and zinc levels, when compared with control group and non significant increase the mean serum copper levels. Changes in these trace elements suggested to play an important role in the pathogenesis of myocardial damage in congenital cyanotic heart disease.

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Three-dimensional speckle tracking echocardiography for left atrial and left ventricular function in hypertrophic cardiomyopathy mutation carriers

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