Poster Session C

Prevalence of Pulmonary Hypertension in Asymptomatic Subjects with Schistosomal Infection in Nile Delta

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Background: Various reports had been estimated that millions of people in the developing world may suffer from pulmonary hypertension (PHTN) because of pre-existing infectious conditions. Schistosomiasis is the third leading endemic parasitic disease in the world. It can cause both acute and chronic pulmonary lesions that eventually lead to PHTN. In Egypt, the presence of Aswan Dam and the mass treatment with praziquantel led to elimination of schistosomiasis from Nile Delta. The aim of this study was to assess the prevalence of PHTN in asymptomatic population previously infected with Schistosomiasis.
Methods: Four hundred asymptomatic subjects (mean age 34±12) from endemic area in Nile Delta were screened for the presence of antibodies against schistosomiasis. All screened subjects were scheduled for transthoracic echocardiographic study to assess pulmonary artery systolic (PASP) and diastolic (PADP) pressures, right ventricular ejection fraction (RVEF) and tricuspid annular plane systolic excursion (TAPSE). Fifteen patients were excluded because they were found to have unrelated cardiac disorders and 5 subjects refused to complete the study. PASP >40 mmHg was considered elevated.
Results: Male gender was more predominant in seropositive group (SP) (72.4% vs. 61.9%, p= 0.034). Both groups had comparable age and body mass index. PASP >40 mmHg was present in 18 subjects (8.6%) (Range 42-72 mmHg) in SP group and in no subject in seronegative (SN) group (p= 0.000). Echocardiographic measurements of both groups are shown in table.

	SP (n= 210)	SN (n= 160)	p value
PASP (mmHg)	30±10	24±7	0.000
PADP (mmHg)	12±4	9±3	0.000
RVEF (%)	58±8	61±8	0.001
TAPSE (mm)	26±4	27±4	0.013

[Echocardiographic data]

Conclusion: Prevalence of PHTN in asymptomatic subjects with schistosomiasis in Nile Delta is low with mild affection of right ventricular function.

THE 23rd SCIENTIFIC MEETING OF THE
INTERNATIONAL SOCIETY OF HYPERTENSION
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Poster Session D

Prevalence, Clinical and Angiographic Characteristics of Coronary Artery Ectasia in Low Risk Patients Undergoing Computed Tomography Coronary Angiography

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Background: Coronary artery ectasia (CAE) has been observed by pathologists and cardiologists for more than two centuries. However, not all patients with ectasia are symptomatic or receive investigations to delineate coronary artery anatomy, so, the real incidence is unknown. The objective of this study was to evaluate the prevalence of CAE, its clinical and angiographic characteristics in low risk patients.
Methods: We prospectively enrolled 2600 patients (age 55 ± 10 years) who underwent computed tomography coronary angiography (CTCA). Patients were referred for CTCA because of either typical or atypical chest pain, unexplained shortness of breath or for pre-operative assessment of non cardiac surgery. CTCA was performed using 64-multidetector computed tomography (MDCT) scanner with dedicated software for calcium measurement. CAE was defined as an arterial segment with a diameter of >1.5 times the diameter of the adjacent normal coronary artery. The presence of ≥50% diameter stenosis of any major epicardial vessel was considered an obstructive plaque (OP).
Results: CAE was found in 192 (7.4%) patients with male gender predominance (88%). Comparing CAE patients with patients without, the former were more hypertensive (70.8% vs. 61.6%, p= 0.011) but less diabetic (19.8% vs. 29.9%, p=0.005). Both groups had comparable age, however, CAE patients had higher coronary calcium score (135 ± 408 vs. 68 ± 191, p= 0.002). Prevalence of OP was comparable in both groups. Left anterior descending, left circumflex and right coronary artery had non-OP in 56.3%, 47.9% and 55.2% of patients with CAE vs. 36.3%, 27.2% and 27% of non ectactic group respectively, p= 0.001.
Conclusion: CTCA detected CAE in low risk patients. CAE may represent an advanced form of atherosclerosis with hypertension appears to be the main risk factor involved.

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Poster Session D

Impact of Obesity on Perioperative Morbidity and Mortality in Egyptian Patients Undergoing Coronary Artery Bypass Grafting

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Background: Obesity is a known risk factor for coronary artery disease. Recently, Egypt is enlisted as one of the top 10 fattest countries in the world, based on national health survey of world health organization (WHO) compiled between years 2000 and 2008. The term "obesity paradox" showed superior short-term outcome after coronary artery revascularization in overweight patients. The objective of this study was to evaluate the impact of obesity on perioperative morbidity and mortality in Egyptian patients undergoing coronary artery bypass grafting (CABG).
Methods: Data were prospectively collected from 354 patients scheduled for CABG in 2 tertiary centers within a period of 3 months. We compared the clinical characteristics and short-term outcome of obese (body mass index [BMI] ≥ 30, n= 128) and non-obese patients (BMI < 30, n= 226).
Results: Obese patients were more likely to be diabetic (66.4% vs. 53.1%, p= 0.018), hypertensive (75% vs. 61.1%, p= 0.01), dyslipidemic (81.3% vs. 66.8%, p= 0.004), had history of cerebrovascular stroke (CVS) (8.6% vs. 2.7%, p= 0.018) and congestive heart failure (14.1% vs. 7.1%, p= 0.039). They had comparable age but higher prevalence of female gender (p= 0.000). Left internal mammary artery was used more frequently in obese patients (85.9% vs. 69.9%, p= 0.001). Obese patients had less post-operative myocardial infarction (0% vs. 4%, p=0.029) but a longer period of hospital stay (13.7 vs. 12.6 days, p= 0.01). Both groups had comparable rates of other post operative morbidities including acute renal failure, respiratory failure, CVS, bleeding, unplanned re-operation and sternal wound infection. Hospital mortality was (5.5% vs. 4%, p= 0.597) for obese and non-obese patients respectively.
Conclusion: Egyptian obese patients although had higher perioperative morbidities, they had decreased incidence of post operative myocardial infarction and comparable other post-operative morbidities and mortality with non-obese.

Poster Session D

Impact of Diabetes Mellitus in Middle East Patients Undergoing Coronary Artery Bypass Grafting

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Background: Diabetes mellitus (DM) is a major risk factor for cardiovascular disease. It affects about 15% of Middle East population. Patients with DM are known to be a high risk group for early morbidity and mortality following coronary artery bypass grafting (CABG). The purpose of this study was to identify the impact of DM and its related co-morbidities on short-term morbidity and mortality following CABG, and if there any outcome differences between diabetic and non-diabetic patients.
Methods: Data were prospectively collected from 354 patients scheduled for CABG in two tertiary centers during a period of 3 months. Mean age was 56±9 years, 205 (57.9%) were diabetics. All patients underwent an elective operation.
Results: Diabetics were significantly more hypertensive (74.6% vs. 54.4%, p= 0.000), had a history of cerebrovascular stroke (CVS) (7.3% vs. 1.3%, p= 0.01) and congestive heart failure (12.7% vs. 5.4%, p= 0.027). They were less smokers (59.5% vs. 79.9%, p= 0.000) but had higher body mass index (30.2 ± 5.6 vs. 28.2 ± 4.9, p= 0.001). Age was comparable and female gender was more in the diabetic group (p= 0.000). Despite that diabetics had a higher Euroscore (2.4 ± 1.5 vs. 2.0 ± 1.3, p= 0.002), no significant differences were found as regards post-operative complications. Post operative acute renal failure, respiratory failure, CVS, acute myocardial infarction, bleeding, unplanned re-operation or sternal wound infection was all comparable for both groups. Hospital mortality was not statistically significant (4.9% vs. 4%, p= 0.799%) for diabetic and non-diabetic group respectively.
Conclusion: Diabetic patients although had higher pre-operative morbidities, they yet had comparable post-operative morbidity and mortality.

Poster Session C

Young Diabetic Patients Had Increased Coronary and Extracoronary Atherosclerotic Burden as Detected by Multidetector Computed Tomography

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Background: Cardiovascular complications are the major cause of diabetes- associated morbidity and mortality. Coronary artery calcium score (CACS) was found to be a powerful predictor of coronary artery disease (CAD). The presence of extra-coronary calcification as a useful predictor of CAD is not yet established. In this study, we tested the hypothesis that young diabetic patients may have increased coronary and extra-coronary calcification as a reflection of increased atherosclerotic burden.
Methods: We studied 380 patients (151 were diabetics) under age of 60 years who were scheduled for computed tomography coronary angiography (CTCA) because of suspected CAD. Severity of CAD was assessed by Gensini score. CACS as well as calcium score in the aortic valve (AVC), mitral annulus (MAC), ascending aorta (AAC) and descending aorta (DAC) were measured by 256-multidetector computed tomography (MDCT) scanner with dedicated software for calcium calculation. Patients with known CAD were excluded.
Results: Diabetic and no-diabetic patients had comparable age. However, diabetics had higher Gensini score, CACS and extra-coronary calcium score (ECCS), as shown in table. Multiple logistic regression analyses were performed to examine the association between various CAD risk factors and calcium scores. Diabetes was found to be the strongest predictor of CACS and ECCS (Odds ratio [OR]= 2.38, confidence interval [CI]= 1.4-3.9, p= 0.001) and (OR= 3.7, CI= 2.3-6.2, p= 0.000) respectively.

	Diabetics (n= 151)	Non-diabetics (n= 229)	p value
Age (years)	55 ± 4	54 ± 5	0.103
Gensini score	21.4 ± 28.4	8.8 ± 11.7	0.000
CACS	147 ± 232	16 ± 143	0.000
AVC	46 ± 123	18 ± 85	0.000
MAC	8 ± 62	4 ± 32	0.063
AAC	42 ± 138	22 ± 87	0.000
DAC	90 ± 325	28 ± 118	0.000

[MDCT data]
Conclusion: Young diabetic patients had increased coronary and extracoronary atherosclerotic burden.