Group II (controls): 40 subjects without left ventricular diastolic dysfunction, based on resting echocardiographic findings. All participants were informed about the sitting of the study; informed consent was obtained from each one. Medical history was taken for all participants, and then they subjected to clinical examination, anthropometric measurements, body surface area, transthoracic echocardiography examination and measurements of human serum tumor necrosis factor alpha level by using specific enzyme-linked immunosorbent assay kit.

**Results:** The mean TNFα levels were significantly higher in the cases (3.48 ± 1.06 pg/ml) than that of the controls group (1.22 ± 0.36 pg/ml), (p value < 0.001). Also there were significantly lower of the TNFα levels in the grade I compare to grade II of diastolic dysfunction (3.18 ± 0.86 vs. 3.91 ± 1.21 pg/ml), (p value = 0.03). There were significantly higher of mean levels of TNF alpha in the subjects with history of hypertension, diabetes and ischemic heart disease than those without (3.03 ± 1.48 vs. 2.03 ± 1.20; 3.15 ± 1.51 vs. 2.16 ± 1.29 and 3.9 ± 1.85 vs. 2.16 ± 1.21 pg/ml) respectively, (p-values < 0.05).

**Conclusion:** This study concluded that left ventricular diastolic dysfunction was associated with significant high level of serum TNFα and there was a direct correlation between serum TNFα level and severity of disease. The study also concluded that the mean of serum TNFα level tend to be higher in those with history of (hypertension, diabetes mellitus and ischemic heart disease) in comparison with those without.

**Evaluation of pulmonary artery pressure in the aged population**

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**Aim:** We sought to non-invasively evaluate pulmonary hypertension in elderly patients with no clear cause of pulmonary hypertension.

**Methods:** We enrolled 200 consecutive patients who are at least 60 y with no clear cause of pulmonary hypertension, referred for echocardiographic evaluation at Heliopolis and Ain Shams University Hospitals in the period from August 2017 to February 2018. All patients underwent transthoracic echocardiography to measure the pulmonary artery systolic pressure, diastolic function indices, left atrial diameter and left ventricular ejection fraction and wall motion abnormalities. Pulmonary hypertension was defined as pulmonary artery systolic pressure ≥36 mm Hg.

**Results:** The mean age of the whole series was 65.5 ± 5.5 years. Patients with pulmonary hypertension (20% of the whole series) were more often females, hypertensive, more likely to have larger left atrial diameter, diastolic dysfunction, and more likely to have mitral regurgitation (p < 0.05 for all). Multivariate logistic regression analysis identified female gender, diastolic dysfunction, and lower ejection fraction as the independent predictors of the presence of pulmonary hypertension.

**Conclusions:** Pulmonary hypertension is fairly prevalent in elderly patients. Female gender, diastolic dysfunction, and lower ejection fraction were the independent predictors of the presence of pulmonary hypertension in this patient group.

**Immediate versus deferred PCI in patients presented with acute ST segment elevation myocardial infarction with moderate to high thrombus burden**

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**Background:** The management of acute ST elevation myocardial infarction is still under the umbrella of research due to the plenty of areas that are waiting for answers. During performing primary PCI, moderate to high thrombi may be found occluding the culprit artery partially or totally. Up till now, there are no definitive guidelines to follow in the cases of acute STEMI with moderate to high thrombus burden. So, the optimal management of a large intracoronary thrombus in patients with acute coronary syndromes and with an urgent need of revascularization is still unclear. Our object is to investigate whether deferring the percutaneous coronary intervention in patients presented with STEMI with moderate to high thrombus burden after a course of intensive dual anti-platelet and IV Glycoprotein IIb/IIIa receptor antagonists (Tirofiban 25 mcg/kg bolus and 0.15 mcg/kg/min maintenance infusion or Eptifibatide 180 mcg/kg bolus and 0.5 mcg/kg/min) for 24-48 hours improves the outcomes compared with immediate PCI.

**Methods:** We analyzed 100 patients using interventional, non-randomized case control study. Patients were divided into 2 groups, 50 in each group. It included the patients presented with acute ST elevation myocardial infarction with moderate to high thrombus burden. The first group included patients who underwent coronary angiography with immediate PCI. While the second group included the patients who were deferred on dual anti-platelet and Glycoprotein IIb/IIIa receptor antagonists (Aggrastat, or Eptifibatide (Integritin)) for 24-48 hours. Then all patients had a pre-discharge echo for assessment and followed up 4 weeks after discharge for MACE.

**Results:** Compared to the immediate PCI, The deferred PCI shows no statistical difference as regard the in-hospital mortality (Immediate PCI group 0(0%) and deferred group 1(2%), P = 0.315), complications (0(0%) in the first group and 3(6%) in the second group as well as The MACE after 1 month follow up (0(0%) in the first group and 0(0%) in the second group for morbidity and mortality). Conclusion: There is no difference as regard in-hospital mortality as well as complications pre-discharge and also for the MACE in the 1 month follow up.

**Role of multislice CT in assessment of coronary artery remodeling**

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**Introduction:** Positive arterial remodeling may be a characteristic of early proliferative lesions, allowing considerable plaque accumulation despite normal luminal size. These accumulating plaques, characterized by inflammatory and proliferative processes, may be particularly “vulnerable” to rupture leading to acute coronary syndromes.

**Aim:** To study the role of multislice CT coronary angiography in plaque characterization and vessel wall analysis in positively