

### **3- Left atrial size as a predictor for pulmonary hypertension in Ischemic Heart Disease**

**Published in: Fayoum University medical Journal(1/8/2020)**

**BACKGROUND:** Left atrial (LA) size reflects diastolic burden and was considered by many investigators to be a prognostic parameter of common cardiovascular death. However, the association between LA size and function and elevated pulmonary artery pressure in Ischemic Heart Disease (IHD) has not been well investigated. We hypothesized that LA size and function are associated with pulmonary hypertension (PH) in IHD.

**METHODS:** Eighty patients with Coronary Artery Disease (CAD) were studied divided into two groups (ACS and chronic IHD). Twelve lead ECG was done to detect any abnormalities either LA enlargement, CAD or PH. Transthoracic echocardiography (TTE) was done to assess LA dimensions, volume and function and assessment of PASP. LA size was determined in three different methods; namely, LA volume index (LAV), LA area index, and LA dimension. LAV total emptying fraction was also determined. Pulsed Doppler E, A, E/A, tissue Doppler E', and E/E' were measured. Pulmonary artery systolic pressure (PASP) was estimated.

**RESULTS:** All LA size parameters are significantly associated with PH. LAV emptying fraction, E, E/A, and E/E' were also associated with PH significantly. CAD patients with PH showed larger LA size, higher E, E/A, and E/E' and lower LAV emptying fraction and A than CAD patients without PH.

**CONCLUSION:** LA size and function are related to PH in CAD patients.

---