Clinical importance of left atrial enlargement

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The most common cardiovascular diseases are systemic hypertension, ischemic heart disease and heart failure. The earliest pathophysiology in these disorders is Left Ventricular (LV) diastolic dysfunction. Left Atrial (LA) enlargement is the first reaction in LV diastolic dysfunction. As witness to chronically elevated LV filling pressures, LA enlargement is a reliable marker of diastolic dysfunction. At least 50% of hypertensive patients are asymptomatic and 25% of myocardial infarction happens silently. Early recognition of LA enlargement would help physicians to detect primary silent disorders at earlier stages. Most practitioners consider the P wave on Electrocardiogram (ECG) as a diagnostic clue for the presence or absence of arrhythmias. However, P wave on ECG is an indicator of ventricular diastolic function. This fact needs to be emphasized by the cardiology community. Next to ECG, LA size and volume measured by 2D echocardiography are excellent parameters to assess diastolic function in a long-term fashion. LA size has an important role in LV diastolic dysfunction similar to the role that Glycosylated Hemoglobin (HbA1c) plays in clinical assessment of diabetes mellitus. Sophisticated but error prone, momentary Doppler parameters are getting too much attention at the cost of simple, shrewd ECG and 2D echo.

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