

alterations. Haemodynamic and radionuclide studies have demonstrated long-term improvement in RV function after PTMC. However, its exact quantification by conventional echocardiographic technique is difficult owing to complex 2D anatomy and only a few studies have examined the immediate impact of mitral valvuloplasty on echocardiographic markers of RV function.

Aim: This study is to evaluate the immediate and short term follow up impact of successful percutaneous transluminal mitral valve commisurotomy on RV function in patients with mitral stenosis using 2D echo and Doppler tissue imaging (DTI) echo.

Methods: During the study period (Jan 2012 – July 2013) 50 patients (mean age 26 + 9yrs) with rheumatic MS, all in sinus rhythm were studied before and 24 to 48hrs after PTMC. Multiple parameters of global and longitudinal RV function were assessed by conventional and tissue Doppler imaging echo.

Results: Immediately following PTMC mitral valve area increased from baseline value of $0.79 + 0.19\text{cm}^2$ to $1.66 + 0.28\text{cm}^2$ ($P=0.0001$) and RV outflow tract fractional shortening (RVOT – FS) increased from $56 + 15\%$ to $70 + 12\%$ ($P = 0.002$).

There was a significant decrease in systolic pulmonary artery pressure from $44.4 + 24.2\text{mmHg}$ & $32.1 + 14.4\text{mmHg}$ ($P=0.002$).

RV Tei index from $0.42 + 0.025$ to $0.26 + 0.16$ ($P=0.021$).

Tissue Doppler velocities at the septal tricuspid annulus remained at unchanged.

Conclusion: Immediately after successful PTMC significant improvement in parameters of infundibular and global RV function as assessed by RVOT fractional shortening and Tei index was observed.

Echocardiographic assessment of regional RV dysfunction in acute pulmonary thromboembolism

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Background: A normally contracting right ventricular apex associated to a severe hypokinesia of the mid-free wall (McConnell sign) has been considered a distinct echocardiographic pattern of acute pulmonary embolism. This study is done to evaluate the clinical utility of the McConnell sign in the diagnosis of acute right ventricular dysfunction due to pulmonary embolism.

Methods: We have studied 40 patients having acute massive or submassive pulmonary thromboembolism at our institute by echocardiography during July 2013 to July 2014 for presence or absence of McConnell sign.

All echocardiographic studies were randomly examined by two experienced and independent echocardiographers, blinded to the patient diagnosis and without Doppler information.

Results: The McConnell sign was detected in 25 of 40 patients (62.5%) and the finding was absent in 15 (37.5%) cases. The sensitivity and specificity of the McConnell sign for the diagnosis of pulmonary embolism were respectively 62.5 and 40%.

Conclusions: In a clinical setting of patients with acute pulmonary thromboembolism the McConnell sign cannot be considered a diagnostic test, even though it is an important tool in risk stratification and helps in early management of unstable patients.

Left atrial volume index as an indicator of left ventricular diastolic dysfunction and hypertrophy

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Background: This study was performed to point out a possible correlation between left atrial volume index (LAVI) and left ventricular diastolic dysfunction and hypertrophy (LVH).

Methods: In 200 patients without LV systolic dysfunction, left atrial volume and LV wall thickness were measured by 2D Echocardiography. LAVI was calculated by dividing LAV by BSA (body surface area). LV diastolic dysfunction was calculated by using different parameters (IVRT, DT, E/A ratio). 100 controls were taken to obtain the reference values. 99% of test cohort patients were hypertensive. Patients with low EF, significant mitral valve disease or recent MI were excluded from study cohort.

Results: Results showed a statistically significant correlation between left atrial volume and left ventricular hypertrophy (p value < 0.001). LAVI had a linear correlation with grades of diastolic dysfunction. Higher grades of diastolic dysfunction was associated with larger LA volume. Increased LV Mass was also associated with higher LAVI.

Conclusions: LAVI appear to be a reliable tool to noninvasively categorise patients (mostly hypertensive) to have increased LV mass and higher grades of diastolic dysfunction and to identify at risk patient who have high chance of developing diastolic heart failure in future.

Utility of dobutamine stress echo in pre op risk evaluation in liver transplant patients

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Background: Patients scheduled for elective major non-cardiac vascular surgery are especially high-risk group, with respect to both peri-operative and late cardiac events. Myocardial infarction is the major cause of peri-operative and late death in this population. The various studies employing dobutamine stress echocardiography for pre-operative risk stratification are heterogeneous and difficult to compare. New wall motion abnormalities during stress, especially extensive new wall motion abnormalities and a history of myocardial infarction was also an independent predictor of late cardiac events.

Here we evaluate the utility of the dobutamine stress echo in patients planned for liver transplantation. Patients with end stage liver disease with various underlying etiology are totally different type of populations; with multiple comorbidities, malnourished, on beta blockers to prevent portal hypertension. All these factors affect the tool in prognostication.

Methods: 30 patients posted for liver transplantation were enrolled in this study. Beta blocker therapy was stopped 3 days prior to the dobutamine stress echo. Dobutamine stress echo was taken with incremental of 10 micrograms/kg/min, 20, 30 and 40 microgram. Atropine 1 mg was given at stage 4 if adequate heart rate was not achieved. 2d echocardiography was performed with