

echocardiography accurately correlates with subsequent recovery of LV function and confers a benign prognosis.

Takotsubo cardiomyopathy— Review of our 36 cases

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Objectives: We aimed to describe clinical features of emergency department patients finally diagnosed to have TC and to delineate its causal role.

Methods: We reviewed the charts retrospectively to analyze all patients who presented in our Institution with acute coronary syndrome (ACS) between June 2010 & May 2014, and later diagnosed with TC as per the Mayo clinic diagnostic criteria. Absence of significant coronary stenosis was confirmed by coronary angiography or coronary computed-tomography angiography. Clinical characteristics & laboratory data were obtained from reviewing medical records. We finally analyzed factors from several studies (including ours) to evaluate the true causality of stress in the development of TC.

Results: 36 out of 537 patients were found to have TC after review of charts. The median age was 42 years (range 23 to 67 years) and 26 of them were females; 34% pre-menopausal, youngest with age 31 years. 68% and 56% of them had known hypertension and diabetes mellitus respectively. Presenting symptoms were divided in 3 groups. Group I (n=12, 33%) had mental stress in form of anxiety; Group II (n=18, 50%) had chest pain mimicking ACS without anxiety; and Group III (n=6, 17%) had other medical problems (seizures, post-operative, post chemotherapy, acute asthma / COPD). Mean ejection fraction at the presentation is 28.6% and at TC resolution is 58.3%. Median troponin I level was 1.69 ng/ml (0.46-2.29), excluding the patients who underwent cardiopulmonary resuscitation. Coronary angiographies of 30 patients were normal and remaining 6 patients had non-critical stenosis. Cardiogenic shock was the presenting symptoms in 4 of them; none of the present patient registry has died.

Conclusion: Most of the patients with TC were found to be post-menopausal females. Stressful events are often not identified in emergency department. The causative nature of stress in the development of TC cannot be firmly established from any existing data.

Behavioral changes in LV torsion in patients with HCM as compared to normal subjects

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Objectives: The main objectives of our study are 1) To assess myocardial dysfunction in patients with HCM using tissue Doppler indices 2) To assess myocardial dysfunction by strain imaging using tissue Doppler imaging and 2-D speckle tracking echocardiography.

Background: Hypertrophic cardiomyopathy, an autosomal dominant disorder due to mutation of genes encoding sarcomeric proteins, leads to left ventricular diastolic dysfunction. Recently

the research in this area suggests systolic dysfunction exists in patients with hypertrophic cardiomyopathy even though traditional measures of systolic dysfunction are normal.

Methods: Total 18 patients diagnosed with hypertrophic cardiomyopathy according to echocardiography parameters i.e. thickness of interventricular septum/posterior wall thickness was >1.3 or hypertrophy involving apex only with or without left ventricular outflow tract obstruction were included in the study and were compared with normal age-matched control. We measured torsion and strain imaging as well as strain imaging by tissue Doppler echocardiography.

Results: The result of the study showed that there is considerable increased torsion was observed in patients with hypertrophic cardiomyopathy as compared to normal subjects (16.61±7.43 vs 10.42±4.73, p=0.0005). Tissue Doppler indices - systolic annular velocity (7.7±0.7 vs. 8.7±1.00, p=0.012) and lateral wall E/E' (12.52±5.27 vs. 6.66±1.67, p<0.001) were significantly different in patients with hypertrophic cardiomyopathy and normal subjects. The average systolic strain and strain rate as well as diastolic strain rate were significantly different in both the groups when strain imaging performed by tissue Doppler echocardiography.

Conclusions: The global subtle systolic dysfunction, as measured by LV torsion and strain imaging, is present in patients with HCM even though the patients are having normal ejection fraction or fraction shortening.

Can we predict the degree of hypertrophy and segmental distribution in cases of Hypertrophic Cardio Myopathy (HCM)

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Objectives: The aim of the study was to compare and correlate the degree and distribution of LV hypertrophy detected by various Echocardiographic methods with that of electrocardiographic findings, in cases of HCM.

Methods: the study population included 80 patients who were diagnosed as HCM by available echocardiographic methods. Four basic patterns of distribution of hypertrophy were identified by echocardiography. TYPE I was confined to anterior segment of the interventricular septum. TYPE II involved both anterior and posterior segments. TYPE III involved both the mid portions of the septum. TYPE IV involved the apex and posterior part of the septum. Great care was taken to make an accurate short axis left ventricular sweep from aortic root to apex ensuring approximate circular cavity through out. M-Mode recordings were studied for the presence of mid systolic closure of the aortic valve and systolic anterior motion of the mitral valve. The various ECG changes that were noted in cases of HCM like LVH, deep T inversions, Q waves, and left and right atrial abnormalities were compared and analyzed with that of the four basic patterns of distribution of hypertrophy.

Results: 25 patients had a TYPE I pattern and in them LVH was seen predominantly in 89.5 % followed by deep S wave in 21.1 %, left atrial abnormality in 15.8 % and normal ECG was found in 10.5 % and right atrial abnormality was noted in 5.3 %. TYPE II was found in 24 patients and in them LVH was seen predominantly in 88.9 % followed by pseudo infarct pattern in 33.3 %, deep S waves in 27.8 % and left atrial abnormality in 16.7 %. 14 patients had TYPE