Echocardiography

PP-186

Left Ventricular and Atrial Functions in Hypertrophic Cardiomyopathy Patients with Very High LVOT Gradient: A Speckle-Tracking Echocardiographic Study

Murat Sunbul[1], Kursat Tigen[1], Tansu Karaahmet[3], Cihan Dundar[2], Beste Ozben[1], Ahmet Guler[2], Altug Cincin[1], Mustafa Bulut[2], Ibrahim Sari[1], Yelda Basaran[1]
[1]Marmara University Faculty of Medicine, Department of Cardiology, Istanbul, [2]Kartal Kosuyolu Heart Education and Research Hospital, Department of Cardiology, Istanbul, [3]Acibadem University Faculty of Medicine, Department of Cardiology, Istanbul

Background: Determination of myocardial deformation (strain) by two dimensional (2D) speckle tracking echocardiography (STE) is a new methodology for determining left ventricular (LV) regional function in patients with hypertrophic cardiomyopathy (HCM). The aim of this study was to assess LV and left atrial (LA) functions with 2D STE in HCM patients and to explore relation between strain analysis and LV outflow tract (LVOT) gradient.
Methods: Thirty-seven consecutive HCM patients (23 male, mean age:48.8±14.6 years) and 26 controls (10 male, mean age:42.8±11.7 years) were included in the study. All subjects underwent a transthoracic echocardiography for evaluation of LV and LA functions with 2D STE. HCM patients were divided into two groups according to the presence of a resting LVOT gradient >100 mmHg.
Results: LV global longitudinal strain (GLS), global radial strain (GRS), and global circumferential strain (GCS) were significantly lower in HCM patients compared to controls (-21.0±3.3% vs -25.8±2.7%, p=0.001, 39.4±13.0% vs 47.7±7.0%, p=0.003, and -22.7±4.1% vs -25.2±3.3%, p=0.013, respectively). Both LA reservoir and conduit functions were significantly lower in HCM patients (20.7±8.9% vs 38.1±10.1%,p<0.001, and 10.1±4.2% vs 13.7±3.3%, p<0.001). Thirteen HCM patients had a resting LVOT gradient >100 mmHg and they had significantly decreased GLS and twist compared to HCM patients with lower resting LVOT gradient. Correlation analysis revealed that LVOT peak velocity was associated with GLS (r=-0.453,p=0.005) and twist (r=-0.359,p= 0.040).
Conclusions: STE may be used to assess LV and LA functions in HCM patients. Higher LVOT gradient results in deterioration of LV strain and twist mechanics in HCM patients.

PP-187

Cryoablation of Non-valvular Paroxysmal Atrial Fibrillation does not Change Tissue Doppler Derived Left Ventricular Diastolic Parameters in Short Term

Cansın Tulunay Kaya, Siamak Mousavi, Başar Candemir, Ali Timuçin Altın, Aydan Ongun, Mustafa Kılıçkap, Ömer Akyürek, Muharrem Güldal, Celal Kervancıoğlu, Çetin Erol
Ankara University School of Medicine Cardiology Department, Ankara

Purpose: Atrial fibrillation (AF) is associated with left ventricular diastolic dysfunction. Radiofrequency ablation has been shown to improve left ventricular diastolic functions on short and long term. The data on efficacy of cryoablation on improving diastolic left ventricle functions is less established.
Methods: 24 consecutive patients (age 22-76 years) undergoing cryoablation for nonvalvular paroxysmal atrial fibrillation were included in the study. Transthoracic echocardiography with mitral inflow pulsed wave Doppler and Pulsed Wave Tissue Doppler Imaging (PWTDI) from mitral medial and lateral annuli was performed before cryoablation for baseline left ventricular diastolic function measurements. The measurements were repeated after two months.
Results: Two patients presenting with AF on the day of the control echocardiogram were excluded. Of the remaining patients preablation and postablation mitral inflow early (E) and late (A) velocities as well as deceleration times were similar. PWTDI of the medial and lateral mitral annulus showed no significant changes in early (E'), late (A') or systolic (S) velocities after cryoablation. E/E' ratios were calculated in order to estimate left ventricular filling pressures. The values were similar before and after ablation.
Conclusıon: Cryoablation of non valvular paroxysmal atrial fibrillation does not influence tissue Doppler derived left ventricular diastolic parameters in short term. Longer term data is warranted as the beneficial effect may be slower before making a conclusion

Pre and Postablation Parameters

Parameter	Preablation	Postablation	p value
Mitral E (cm/s)	77±16	70±13	0.12
Mitral A(cm/s)	66±22	65±19	0.88
E'med (cm/s)	8.79±2.67	8.03±2.02	0.37
A'med (cm/s)	8.29±2.03	8.73±2.12	0.46
S med (cm/s)	6.95±1.33	7.21±1.80	0.54
E/E' med	10.20±3.02	9.42±3.74	0.51
E'lat (cm/s)	10.73±3.37	11.02±4.21	0.68
A'lat (cm/s)	9.62±3.40	9.18±3.62	0.61
S lat (cm/s)	7.60±1.56	8.51±2.96	0.27
E/E' lat	8.1±2.54	7.43±2.59	0.36
med. medial, lat. lateral			

PP-188

Epicardial Adipose Tissue Thickness in Hemodialysis Patients

Burak Altun[1], Hakan Tasolar[2], Necmi Eren[3], Emine Binnetoğlu[4], Mehzat Altun[5], Ahmet Temiz[1], Emine Gazi[1], Ahmet Barutcu[1], Orçun Altunören[3], Yücel Çölkesen[1]
[1]Canakkale 18 Mart University, Medicine School, Department of Cardiology, Canakkale, [2]Adiyaman University Training and Research Hospital, Department of Cardiology, Canakkale, [3]Adiyaman University Training and Research Hospital, Department of Nephrology, Adiyaman, [4]Canakkale Onsekiz Mart University Department of Internal Medicine, Canakkale, [5]Canakkale 18 Mart University, Health Services Vocational College, Canakkale

Aim: Cardiovasculer disease is most important cause of mortality and morbidity in end stage renal disease patients receving hemodialysis. Epicardial adipose tissue (EAT) had a relationship with atherosclerosis and coronary artery calcification in patients who did not have chronic kidney disease. In this study, we aimed to investigate EAT and carotis intima media thickness (CIMT) in HD patients who had a higher cardiovascular mortality profile than general population.
Method: Sixty HD patients and 30 healthy controls were enrolled the study. EAT and CIMT were measured by transthoracic echocardiography.
Results: EAT and CIMT were significantly higher in HD patients than healthy controls (6,9±1,6 vs 3,8±1,7, p<0,001; 0,9 ±0,1 vs 0,6±0,1, p<0,001). In ROC curve analysis, by referencing CIMT, EAT had a % 80,9 sensitivite and %78,1 specifity for predicting atherosclerosis (EAA = 0.820, %95 CI 0,731-0,890, P<0.0001).
Conclusıon: In our study, EAT thickness were higher in HD patients than general population. Finally EAT can be useful and equivalent to CIMT for predicting atherosclerosis.