Heart rate changes and the epicardial adipose tissue

<table>
<thead>
<tr>
<th></th>
<th>HRC (&lt; 43)</th>
<th>HRC (&gt; 43)</th>
<th>p value</th>
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<tbody>
<tr>
<td><strong>ALL CASES</strong></td>
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<tr>
<td>Epicardial adipose tissue thickness (mm)</td>
<td>6.17±1.64</td>
<td>4.20±1.42</td>
<td>&lt;0.001</td>
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<td><strong>PATIENTS GROUP</strong></td>
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<tr>
<td>Epicardial adipose tissue thickness (mm)</td>
<td>6.52±1.43</td>
<td>5.11±1.90</td>
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<td><strong>CONTROL GROUP</strong></td>
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<tr>
<td>Epicardial adipose tissue thickness (mm)</td>
<td>3.76±0.70</td>
<td>3.68±0.68</td>
<td>0.83</td>
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</tbody>
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HRC: post exercise heart rate recovery in 2 minutes

**PP-200**

**Left Atrial Mechanical Functions, Atrial Electromechanical Delay and P Wave Dispersion in Patients with Mild to Moderate Psoriasis**

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**Objectives:** Many systemic diseases including cardiovascular disturbances have been detected in psoriatic patients. In the previous studies, left ventricular (LV) subclinical myocardial dysfunction was reported in the psoriasis patients. To evaluate the effect of psoriasis on left atrial (LA) functions, which is an important determinant left ventricular filling, atrial electromechanical coupling and P wave dispersion in mild to moderate psoriasis patients.

**Methods:** Thirty (mean age 39±13 years) patients with psoriasis and thirty (mean age 34±8 years) controls were enrolled. The severity of the disease was evaluated by the “Psoriasis Area and Severity Index.” LA volumes were measured using the biplane area-length method and LA mechanical function parameters were calculated by echocardiography. Atrial electromechanical delays were measured by tissue Doppler imaging. 12-lead electrocardiogram was used to measure P wave dispersion. All ECGs were stored in a digital system and all the measurements were done by computer based methods.

**Results:** There were no significant differences between the groups for left atrial mechanical function indices. No difference was detected between the groups with regards to interatrial electromechanical delay (PAlat – PAtricus) and intratral atrial mechanical delay (PAsp – PAtricus) (14.4±5.7 ms vs 12.5±4.2 ms p>0.05 and 6.3±3.5 ms vs 5.1±3.4 ms p>0.05, respectively). There were no differences between groups with regards to P wave dispersion.

**Conclusions:** This study showed that, patients with mild to moderate psoriasis had conserved left atrial mechanical function and unimpaired atrial conduction of sinus impulses.

**PP-201**

**P-wave Dispersion and Evaluation of Atrial Conduction Times Using Tissue Doppler Echocardiography in Inflammatory Bowel Disease**

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**Objectives:** Inflammatory bowel disease (IBD) is a systemic disease characterized by exaggerated inflammation. The impact of inflammation on atrial arrhythmia is unknown. In this study, we aimed to investigate the relationship between P-wave dispersion (PWD), intratrial electromechanical delay (EMD) and IBD.

**Methods:** The study group consisted of thirty five IBD patients (18 males, 17 females; mean age 43.97±13.98 years) and twenty one controls that have similar age and gender characteristics (15 males, 6 females; mean age 40.14±10.24 years). P-wave dispersion (P max, P min) and PWD were calculated with 12-leads electrocardiogram; atrial electromechanical coupling intervals (PA) and EMD were measured by tissue Doppler imaging.

**Results:** PWD was longer (45.40±11.21 ms vs. 30.76± 9.99 ms, p<0.05) in IBD group. P min was shorter in IBD group (54.46± 9.83 ms vs. 69.14± 7.11 ms, p<0.05) while P max was similar in both groups (99.86± 16.78 ms vs. 99.90± 11.08 ms, p=0.991). In tissue Doppler imaging, Lateral PA and sepal PA were found to be more prolonged in IBD group (lateral PA 69.86± 1.13 ms vs. 56.24± 9.93 ms, p<0.05; sepal PA 45.08± 7.98 ms vs. 38.38± 9.96 ms, p=0.008). Tricuspid PA did not differ between groups (35.40± 8.14 ms vs. 30.81± 7.71 ms, p=0.002). Interal atrial EMD (lateral – tricuspid PA) and left intraatrial atrial EMD (lateral – sepal PA) were longer in IBD group (34.46± 10.79 ms vs. 25.43± 7.52 ms, p=0.001; 24.80± 9.31 ms and 17.86± 7.35 ms, p=0.005, respectively). Right side intra-atrial EMD did not differ significantly between groups (9.66± 5.80 ms vs. 7.57± 4.05 ms, p=0.154).

**Conclusion:** We found significant prolongation of PWD, left intra-atrial and inter-atrial EMD in patients with IBD. These findings may indicate an increased risk for the development of atrial fibrillation in IBD patients.

**PP-202**

**Right Ventricular Isovolumic Contraction Acceleration Before and After Percutaneous Closure of Atrial Septal Defects**

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**Objective:** Tricuspid annular isovolumic myocardial acceleration (IVA) time determined by tissue Doppler (TD) is a reliable parameter in evaluation of right ventricular(RV) systolic functions independent of preload and afterload changes. In present study, we aimed to assess the recovery of right ventricular systolic function after transcatheater closure of atrial septal defects.

**Methods:** In total 25 cases of which 21 were female (84%), with an average age of 39±8±17.03 were enrolled in the study who were diagnosed with seundemum type atrial septal defects (ASD) via transhoracic echocardiography (TTE) and transesophageal echocardiography (TEE) and for whom percutaneous closure decision was made between 2009 and 2011, in polyclinics conditions. Standard transthoracic echocardiography and tissue Doppler imaging were performed in left lateral decubitus position to all the patients 12-24 hours before percutaneous ASD closure procedure and in the first month after successful percutaneous ASD closure procedure.

**Results:** Significant decreases were observed in RV end-diastolic diameter, RV left ventricular (LV) end-diastolic diameter ratio, right ventricular systolic myocardial velocity (Sm), right ventricular early myocardial velocity (Em) and right ventricular late myocardial velocity (Am) in the control echocardiography in the first month when compared with pre-procedure values. While significant increase was observed after procedure in right ventricular IVA, no significant change was observed in right ventricular global performance index, in right ventricular Em/Am ratio and left ventricular EF.

**Conclusion:** Percutaneous closure of ASD resulted in recovery of right ventricular function as early as 1 month after closure.

**PP-203**

**Assessment of Diastolic Function with Mitral Annular Plane Systolic Excursion in Obese Adults**

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**Background:** Mitral annular plane systolic excursion (MAPSE) correlates with diastolic parameters indicating close relations between systolic and diastolic functions. To our knowledge, MAPSE has not been evaluated to diagnose left ventricle (LV) diastolic dysfunction at early stage in obese adults. For this reason, we aimed to the assess the diagnostic accuracy of MAPSE in the detection of diastolic dysfunction of different severity in obese adults.

**Methods:** Forty obese patients with diastolic dysfunction at early stage and 40 obese control subjects with normal diastolic function were included in our study with an equal number of men and women. The patient group was divided into two group as grade I obesity group who had stage I diastolic dysfunction, and grade 2 obesity group who had stage 2 diastolic dysfunction.

**Results:** MAPSE was significantly lower in patient group compared with controls (P<0.001). MAPSE was also more lower in grade II obesity group than grade I obesity group (P<0.001). Furthermore, MAPSE was negatively correlated with body mass index (BMI) (P=0.004) (Figure 1) and E/Em ratio (P<0.001), and correlated
positively with Em velocity (P<0.001). BMI had a positive correlation with E/Em ratio (P<0.001) and negative correlation with Em (P<0.001) and Sm (P<0.001) values. ROC curve analysis was used to identify optimal threshold point of MAPSE for detecting early diastolic dysfunction of LV in obese patients. The optimal threshold point of mitral annular motion was ≤1.45 mm with 92.5% sensitivity (95% CI 79.6-98.4) and 77.5% specificity (95% CI 61.5-89.2) (Figure 2).

Conclusions: We considered, based on these results, that using MAPSE to evaluate early stage LV diastolic dysfunction in obese patients may be a reasonable approach.

PP-204
Aortic Dissection With Prolapse of Flap into the Ventricle
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A 74 year old male, who had been treated for hypertension, was admitted to the emergency department with chest pain of four hours duration radiating to his back. The initial electrocardiogram showed signs of myocardial ischemia with ST segment depression in anterolateral and inferior leads. Blood pressure was 85/55 mmHg, heart rate was 105 bpm on his physical examination. Minimal (grade 2/6) decrescendo diastolic murmur was audible on the left sternal edge. In addition, bibasilar crackles were detected on pulmonary auscultation. Emergency two-dimensional echocardiography showed severe ascending aortic dissection with an intimal flap prolapsing into the left ventricular despite normal left ventricle size and systolic function. Transesophageal echocardiography demonstrated circumparietal intimal disruption that started just above the aortic root and extended distally through the aortic arch and into the carotid artery. The circumparietal intimal flap was prolapsing into the left ventricle during diastolic phase, causing severe aortic regurgitation and resulting in diastolic occlusion of both coronary arterial ostia (Figure A, Figure B, Figure C). The patient underwent a combined coronary artery bypass grafting and replacement of the aortic valve, ascending aorta and aortic arch.

PP-205
Pan Cardiac Hydatid Cyst
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Hydatid disease is a human infection caused by the larval stage of Echinococcus granulosus, which is still endemic in many cattle-raising areas. Cardiac hydatid cysts are very rare, involving 0.5 to 2% of all cases, but potentially a very serious complication of the hydatid disease. The diagnosis of cardiac cyst hydatid may be difficult due to the nonspecific symptoms and varying clinical presentations. A 46-year old man who had a known previous history of hepatic cyst hydatid was admitted to our clinic because of progressive dyspnea, atypical chest pain and fatigue for two weeks. On physical examination, his respiratory rate was 18/min; heart rate was 112 beats/min and blood pressure was 110/70 mmHg. Electrocardiography showed sinus tachycardia. Transthoracic echocardiography (TTE) revealed multiple intracardiac and pericardial unilocular cystic spheric hyperechogenic masses with well-defined margins (Figure-1 and 2). A contrast-enhanced computed tomography (CT) showed two cyst in the left and right atrium and multiple cyst in pericardium and a cyst in left ventricle posterior wall (Figure-3 and 4). On the basis of these findings, the patients was referred cardiac surgery but he refused and has been followed up medically under albendazole treatment. Herein, we report a case of a pan cardiac hydatid cyst. The diagnosis was established by TTE and CT Scan. This case illustrates the diagnostic value of the non invasive imaging means in hydatid cyst of the heart.