OP-142

Recurrent Electroconvulsive Therapy and Adapational Response of the Heart

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Aim: Data about cardiac response to recurrent electroconvulsive therapy (ECT) in healthy heart are lacking. We investigated the effects of recurrent (seven times) ECT on cardiac function to reveal the presence or absence of adaptive changes in patients free of cardiovascular disease.

Method: We enrolled twenty-three patients who underwent to ECT with different psychiatric disorders. Echocardiographic examination including diastolic mitral inflow and tissue Doppler features was recorded before and after total seven times ECT in all patient.

Result: Male/Female ratio was 11/12. Mean age was 37 (19-71). There was not a significant difference in mitral E wave velocities and tissue Doppler E' velocities after the first ECT compared to baseline values. (p=0.161, p=0.083). The results were similar after the latest ECT session. (p=0.403, p=0.310). However there was a significant increase in transmural A wave velocity after the first and the seventh ECT session compared to baseline values (p=0.008, p=0.017).

Conclusion: Our study revealed that mitral diastolic inflow A wave velocity was increased 20 minutes after the ECT and this increase persisted after recurrent ECT sessions in apparently healthy hearts. This finding is considered possibly as the indicator of acutely increased sympathetic tone.

OP-143

Impact of Chronic Obstructive Pulmonary Disease on Severity of Coronary Artery Lesions on the Angiogram

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Backgrounds: Chronic obstructive pulmonary disease (COPD) has many comorbidities such as coronary artery disease (CAD) and lung cancer.

Objectives: We analysed that impact of COPD on intensity and severity of coronary lesions on the angiogram in the groups of patients with COPD according to the Global Initiative for Obstructive Lung Disease (GOLD) grades updated in 2011.

Methods: The study included 102 patients with diagnosed COPD and 80 randomly selected subjects without any pulmonary disease who underwent coronary angiography. According to the GOLD grade for COPD, patients were divided into 4 groups; A, B, C and D. The severity and extent of CAD were determined using Gensini score.

Results: There were no significantly differences in age, body mass index, smoking, plasma lipid levels, frequency of hypertension and diabetes. The mean Gensini score in COPD (25.7±32.9) was significantly higher than controls (17.5±24.4; p=0.01). While Gensini score was the highest level in group D (64.9±34.9), it was the lowest level in group A (10.2±19.4; p=0.0001). COPD was independently predictive for Gensini score after a multivariate logistic regression analysis (odds ratio 1.625; 95% confidence interval 2.172–12.232; p=0.001).

Conclusions: Severity and intensity of coronary atherosclerosis increases in accordance with increases in the GOLD grades.

Cardiac Imaging

OP-144

Serum Sclerostin Levels are Associated with Aortic Valve Calcification in Maintenance Hemodialysis Patients

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Introduction: Arteriovenous fistula (AVF), an important option for hemodialysis vascular access, is prone to recurrent stenosis and thrombosis. Sclerostin, a novel protein secreted by the osteocytes, has been recently shown to be associated with renal osteodystrophy. The objective of this prospective study was to determine if there was an association between serum sclerostin levels, AVF calcification and one-year AVF survival.

Material and Methods: The study involved 350 hemodialysis patients followed for 12 months. AVF calcification was evaluated as previously described. AVF surveillance was conducted by clinical and ultrasonographic evaluation. AVF dysfunction is diagnosed on angiographic basis.

Results: Serum sclerostin levels in hemodialysis patients were higher when compared to healthy controls (1519±1378 vs 128±49 pg/mL, p<0.0001). Patients with calcified AVFs had higher serum sclerostin levels than patients with not (1841±1516 vs 1261±1173 pg/mL; p=0.002). Serum sclerostin levels was correlated with AVF calcium score (r=0.489, p<0.0001; Figure 1). One-year AVF survival was reduced in patients with calcified AVFs (Figure 2; HR for AVF thrombosis: 1.88; 95% CI, 1.35-2.42; p=0.002). Patients with 25-hydroxy D3 levels greater than median value (21.6 microg/L; Group 1) were associated with an increase in AVF survival, compared to patients with 25-hydroxy D3 levels greater than median value and receiving calcitriol (Group 2), patients with 25-hydroxy D3 levels lower than median value and receiving calcitriol (Group 3) and finally patients with 25-hydroxy D3 levels lower than median value and not receiving calcitriol (Group 4) (Log-rank: p=0.001). One-year AVF survival was lower with increasing serum sclerostin quartiles (Log-rank, p=0.01). Multivariable-adjusted regression analyses revealed that increased serum sclerostin concentrations were independently associated with decreased one-year AVF survival (39% decrease per 1-SD increase in sclerostin concentration, p=0.001).

Conclusions: Increased serum sclerostin levels appear to be independently associated with AVF survival and calcification among hemodialysis patients.
OP-146
Increased Levels of Oxidative Stress Indices and Lack of Antioxidant Respond Because of Ischemia-Reperfusion Injury Associated with Occurrence of Atrial Fibrillation after Coronary Artery Bypass Surgery

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Introduction: Postoperative atrial fibrillation (POAF) is the most common arrhythmia following coronary artery bypass surgery (CABG). Although pathogenesis of POAF is multifactorial, oxidative stress induced by ischemia-reperfusion injury is a major contributory factor. The vulnerability of myocardial tissue to the oxidative stress is also dependent on the activity of the antioxidant systems. In this trial we aimed to investigate the impact of oxidative stress and antioxidant respond caused by ischemia-reperfusion injury in the course of aortic cross clamp (ACC).

Methods: 117 patients in sinus rhythm with ischemic heart disease underwent elective coronary artery bypass surgery for myocardial revascularization were enrolled to our study. Oxidative stress indices including total oxidant status (TOS), oxidative stress index (OSI), and total antioxidant capacity (TAC) values were measured before and after removal of ACC. Postoperative atrial fibrillation was detected by analysing the rhythm records of telemetry unit during 96 hours postoperatively. In addition to oxidative stress parameters other factors associated with the development of AF postoperatively were evaluated.

Results: During the postoperative follow up, atrial fibrillation was occurred in 37 patients and 80 patients were maintained with sinus rhythm. In patients developed POAF, the changes of TOS, TAC and OSI values before and after ACC were significant statistically by comparison to patients maintained with sinus rhythm (Table 1). In multivariate analysis preoperative C reactive protein (CRP) levels, advanced age and left atrium enlargement were associated with postoperative atrial fibrillation.

Conclusion: The results of this study suggest that although mild oxidative stress development and antioxidant respond occurs in coronary artery bypass surgery as a reason of ischemia reperfusion injury, an exaggerated oxidative stress development not balanced with antioxidant respond can be responsible at the pathogenesis of postoperative atrial fibrillation.

Table 1
<table>
<thead>
<tr>
<th>Before Aortic Cross Clump</th>
<th>After Aortic Cross Clump</th>
<th>p value</th>
</tr>
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<tbody>
<tr>
<td>TOS (μmol H2O2 Eq/1)</td>
<td>19.69 ± 18.92</td>
<td>34.37 ± 18.99</td>
</tr>
<tr>
<td>TAC (μmol Trolox Eq/1)</td>
<td>2.24 ± 0.33</td>
<td>2.42 ± 0.44</td>
</tr>
<tr>
<td>OSI (AU)</td>
<td>8.48 ± 7.18</td>
<td>13.96 ± 6.90</td>
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Oxidative stress indices and antioxidant respond during CABG in patients developed POAF

OP-147
The Validity and Reliability of the Turkish Version of the University of Toronto Atrial Fibrillation Severity Scale

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Introduction: Health-related quality of life (QoL) is significantly impaired in patients with atrial fibrillation (AF) compared with healthy controls. There are various instruments to assess QoL in patients with AF. University of Toronto Atrial Fibrillation Severity Scale (AFSS) is a disease-specific health-related QoL questionnaire designed for patients with AF. The aim of this study is to determine the reliability and validity of the Turkish version of the University of Toronto AFSS.

Materials- Methods: University of Toronto AFSS consists of 19 items combined into 3 parts to measure total AF burden, health care utilization and severity of the AF-related symptoms. AFSS and short-form 36 (SF-36) were completed by 80 patients with documented AF. The Canadian Cardiovascular Society Severity in Atrial Fibrillation (SAF) scale and European Heart Association (EHRA) scale were also assessed by the treating physicians. To assess test-re-test reliability AFSS were re-administered to 28 clinically stable patients at 1 month follow-up. Internal consistency reliability, test-re-test reproducibility and construct validity were evaluated.

Results: Mean age of the patients was 62.7 ± 11.4 years and 57.5% were male. Paroxysmal AF was present in 32% of patients, and 20% were on antiarrhythmic drugs to maintain sinus rhythm. All patients completed AFSS in <5 minutes. Outcome scores of the Turkish version of AFSS showed strong correlations (r>0.60) with theoretically related SF-36 domains. Additionally, AFSS outcome scores showed a linear correlation with the SAF and EHRA scores (Table 1 and 2). Total AF burden and symptom severity were strongly correlated with the patient's SAF or EHRA class (Table 1 and 2). Cronbach's alpha values for internal consistency (Table 3) were consistent and similar with the English version of the AFSS. Intraclass correlation coefficients for reproducibility exceeded 0.80 for every item.

Conclusion: Convergent-divergent and known-groups validity and reliability were established for the Turkish version of the University of Toronto AFSS.

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