



## Non-invasive Arrhythmia

Monday, October 28, 2013, 15:45 PM–17:00 PM  
Hall: BAKU

Abstract nos: 146-151

### 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

Veysel Oktay<sup>1</sup>, Onur Baydar<sup>1</sup>, Ümit Yaşar Sinan<sup>1</sup>, İsmail Polat Canbolat<sup>1</sup>, Gürkan İmre<sup>1</sup>, Okay Abacı<sup>1</sup>, Cüneyt Kocaş<sup>1</sup>, Zerrin Yiğit<sup>1</sup>, Cenk Eray Yıldız<sup>2</sup>, Alican Hatemi<sup>2</sup>, Ayşem Kaya<sup>3</sup>

<sup>1</sup>Istanbul University, Institution of Cardiology Department of Cardiology, Istanbul,

<sup>2</sup>Istanbul University, Institution of Cardiology Department of Cardiovascular

Surgery, Istanbul, <sup>3</sup>Istanbul University, Institution of Cardiology Department of Biochemistry, Istanbul

**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 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

	Before Aortic Cross Clamp	After Aortic Cross Clamp	p value
	Mean±SD	Mean±SD	
TOS(μmol H2O2 Eq/)	19,69±18,92	34,37±18,99	0,002
TAC(mmol Trolox Eq/l)	2,24±0,33	2,42±0,44	0,044
OSI (AU)	8,48±7,18	13,96±6,90	0,002

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

Nihan Kahya Eren<sup>1</sup>, Selcen Yakar Tülüce<sup>1</sup>, Barış Kılıçaslan<sup>2</sup>, Cem Nazlı<sup>1</sup>, Oktay Ergene<sup>3</sup>

<sup>1</sup>Izmir Katip Celebi University Atatürk Education and Research Hospital, Cardiology

Department, Izmir, <sup>2</sup>Izmir Tepecik Education and Research Hospital, Cardiology

Department, Izmir, <sup>3</sup>Dokuz Eylül University, Faculty of Medicine, Cardiology Department, Izmir

**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.