Table 1

Heart failure stage	Stage A	Stage B	Stage C	Stage D	P value for trend
Anxiety score	14.3 ± 8.7	12.8 ± 8.5	12.5 ± 9.2	14.5 ± 9.7	NS
NYHA class	NYHA I	NYHA II	NYHA III	NYHA IV	
Anxiety score	13.5 ± 8.6	12.8 ± 9.0	11.7 ± 9.3	15.1 ± 9.9	NS
NS, not significant					

PP-067

Association of CA-125 Levels with Presence of Permanent Atrial Fibrillation in Patients with Systolic Heart Failure

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Background: Atrial Fibrillation (AF), a dysrhythmia with negative consequences on mortality and morbidity, is noted in approximately 30% of patients with Heart Failure (HF). Permanent AF is a situation in which the sinus rhythm can't be restored with the usual therapy. Paroxysmal and persistent atrial fibrillations eventually yield in permanent AF, particularly in patients with HF. An association of CA-125 with poor prognosis in patients with HF has been demonstrated previously by a number of studies. The purpose of the present study was to investigate the relationship between CA- 125 levels and permanent AF in patients with systolic HF.
Methods: The study included 216 patients (152 males and 64 females) with stable systolic HF (EF ≤45%). The patients were classified into two groups: those with permanent AF (n=76) and those without permanent AF (all in sinus rhythm on index ECG, hence called patients in sinus rhythm) (n=140). Patients were followed up for HF related hospitalization and mortality for 21 months.
Results: Patients with permanent AF had higher levels of CA-125 compared to those with sinus rhythm (113.1 U/ml vs. 34.5 U/ml; p<0.001). Patients with permanent AF had larger left atrial diameter compared to those with sinus rhythm (4.6±0.6 vs 4.4±0.7 cm, p=0.025). There were more patients with moderate-severe mitral regurgitation (50.0 vs. 26.6%; p=0,001), moderate-severe tricuspid regurgitation (53.9 vs. 25.7%; p<0.001) in the group with permanent AF compared to those with sinus rhythm. Number of HF related hospitalizations was also significantly higher among the patients with permanent AF than in those with sinus rhythm on follow up (63.2 vs. 47.9%; p=0.031). CA-125 levels predicted presence of permanent AF in patients with stable HF (AUC: 0.742, 95% CI 0.673-0.812, p<0.001). Furthermore, CA-125 level of more than 150 U/ml predicted presence of permanent AF with a sensitivity of 37% and specificity of 91% in a group of patients with systolic HF, and associated with 5.699 times more likelihood of permanent AF (Odds ratio, 95% CI 2.727-11.907, p<0.001).
Conclusıon: CA-125 levels were significantly higher among the stable systolic HF patients with permanent AF compared to those with sinus rhythm and there was a higher rate of hospitalizations in patients with permanent AF due to HF on follow up. It seems a high CA-125 level (>150 U/ml) can rule-in (high specificity) the presence of permanent AF in patients with HF.

PP-068

Serum Fetuin-A Levels for the Detection and Evaluation of the Left Ventricular Systolic Heart Failure

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Background: Activation of the immune system has been implicated in the pathogenesis of heart failure. Fetuin-A (α2-Heremans Schmid glycoprotein), as a negative acute-phase reactant, prevents the increase of inflammatory response of the body against it by increasing the cellular uptake of cationic inhibitors of proinflamatory cytokine synthesis. Fetuin-A levels in the blood were shown to be inversely associated with the proinflammatory cytokines such as IL-1 beta, IL-6 and TNF-alpha levels. In our study, it was aimed to evaluate the importance of serum fetuin-A levels in the diagnosis and assessment of left ventricular systolic heart failure and to compare with the level of serum CRP and pro-BNP.
Methods: We enrolled 66 patients with a diagnosis of heart failure and 31 patients without a diagnosis of heart failure forming a control group who admitted to the Department of Cardiology at Uludag University Medical Faculty, Bursa, between July 2011 to January 2012. After informed consent for biochemical examinations had been obtained, blood samples were collected from the controls and the patients with chronic heart failure. Both study and control group patients had detailed echocardiographic examination.
Results: Median serum fetuin-A levels of the heart failure group were significantly lower than the control group (p<0,001) [respectively 72.94 (14.11 to 648.88) µg/ml, 526.36 (282.98 to 726.58) µg/ml]. Serum CRP and pro-BNP levels in the heart failure group were detected significantly higher than the control group (p<0.001). In all cases, fetuin-A levels positively correlated with left ventricular ejection fraction (EF) and negatively correlated with pro-BNP and CRP (respectively, r:0.732 p<0.001, r:-0.542 p<0.001, r:-0.352 p<0.001). ROC analysis was done for the serum fetuin-A, the area under the ROC curve was 96% and the 'cut off' level was determined as 270,45 ug / ml for fetuin-A giving a sensitivity of 86,36% and specificity of 96,77% for the diagnosis of the left ventricular heart failure (p<0,001).
Conclusıons: In conclusion, our study is the first study as evidence for decreased serum fetuin-A levels in patients with left ventricular systolic heart failure. Serum fetuin-A was a diagnostic marker with high sensitivity and specificity for the patients with systolic heart failure and showed that it was as powerful marker as serum pro-BNP. However, due to a multifunctional protein, serum fetuin-A is affected by many factors. Prospective studies with larger sample sizes are needed to better clarify the diagnostic and prognostic role of fetuin-A in patients with heart failure.

The baseline clinical characteristics of the patients and control group

	Patient group (n=66)	Control group (n=31)	p value
Age (years) (mean±SD)	62.27±14.84	60.70±6.85	0.113
Hypertension (n, %)	36 (54.5%)	19 (61.3%)	0.685
Smoking (n, %)	6 (9.1%)	4 (12.9%)	0.722
Obesity (n,%)	14 (21.2%)	12 (38.7%)	0.117
LVEF (%)	29.5(18-45)	65 (54-73)	<0.001
Glucose (mg/dl)	91.66±16.41	93.22±13.69	0.647
Creatinine (mg/dl)	0.9 (0.6-1.2)	0.7 (0.6-1.1)	<0.001
Hemoglobin (g/dl)	12.88±1.96	14.16±0.97	<0.001
CRP (mg/L)	0.7 (0.3-19.7)	0.33 (0.3-0.68)	<0.001
Pro-BNP (µg/ml)	3442.5 (21.78-20806)	85.53 (18.16-184.10)	<0.001
Fetuin-A (µg/ml)	72.94 (14.11-648.88)	526.36 (282.98-726.58)	<0.001

CRP: C-reactive protein, BNP: B-type natriuretic peptide, CRP: C-reactive protein, LVEF: left ventricular ejection fraction

PP-069

A Comparison of the Effects of Carvedilol and Nebivolol on Oxidative Stress Markers in Patients with Non-ischemic Heart Failure

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Background: Heart failure (HF) has a poor prognosis despite advances in its management. Clinical and experimental studies have provided substantial evidence that oxidative stress is enhanced in HF. The third-generation beta-blockers, carvedilol and nebivolol have other beneficial features such as vasodilator and antioxidant effects in addition to beta1 receptor blocking effect. Thus, they may be considered as first line therapy in HF patients. However, it is unclear that carvedilol may be superior to nebivolol in HF patients. Thus, we investigated the effects of carvedilol and nebivolol on oxidative stress parameters in non-ischemic HF patients.
Methods: We included 56 asymptomatic non-ischemic HF patients with ejection fraction (EF) ≤40%. The patients were randomized to carvedilol (n=29, 18 male) or nebivolol (n=27, 18 male) groups. We evaluated clinical and laboratory characteristics which are associated with oxidative stress such as total oxidative status (TOS), total antioxidant capacity (TAC), oxidative stress index (OSI), uric acit, gamma glutamyl transferase (GGT), alkaline phosphatase (ALP). Echocardiography was performed. The left atrial size, left ventricular (LV) diameter and volumes, wall thickness were measured. LV EF was calculated by Simpson's method. Isovolumetric relaxation time (IVRT), isovolumetric contraction time (IVKT), ejection time (ET) were measured. Also, myocardial performance index (MPI) were calculated.
Results: Basaline clinic and demographic characteristics were similarly in carvediolol and nebivolol groups. LV EF (29.6±4.8 vs 31±5, p=0.20), MPI (0.70±0.13 vs 0.67±0.11, p=0.23), diameters and volumes was similar between two groups. TAC [1.25 (0.39-2.71) vs 1.23 (0.65-1.88) mmol Trolox Eq/l, p=0.92], TOS [2.64 (0.62-9.20) vs 2.45 (1.06-4.40) µmol H2O2 Eq/l, p=0.88], OSI [253 (45-1020) vs 213 (76-538) AU, p=0.44], üric acit (9.3±0.6 vs 9.3±0.6 mg/dl, p=0.32), ALP (77±37 vs 68±20 U/L, p=0.60), GGT [31 (11-106) vs 33 (8-88) U/L, p=0.58] were also comparable in both groups.
Conclusıon: Our findings show that carvedilol and nebivolol appear similar to their effects on oxidative stress parameters in non-ischemic HF patients.
Key words: Heart Failure, Carvedilol, Nebivolol, Oxidative stres.