

## Correlation table

	Correlation factor (r)
End systolic EFT - GS	r=0.387
End diastolic EFT - GS	r=0.438
End systolic EFT - GS6M	r=0.406
End diastolic EFT - GS6M	r=0.455
End systolic EFT - SYNTAX score	r=0.243
End diastolic EFT - SYNTAX score	r=0.202

GS; GRACE score in hospital, GS-6M; GRACE score for six months. EFT; Epicardial fat thickness.

## PP-294

### Increased Plasma hsCRP and MPO Levels may Predict Ischemia During MPI in Slow Coronary Flow

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**Objective:** It is unclear whether changes in plasma levels of inflammatory markers could explain the link between ischemia and slow coronary flow (SCF). We aimed to evaluate the plasma levels of high-sensitivity C-reactive protein (hsCRP), interleukin (IL)-6, and myeloperoxidase (MPO) during myocardial perfusion imaging (MPI) in SCF patients.

**Methods:** Study population consisted of 53 SCF patients and 30 controls. Coronary flow rates were documented by TIMI frame count (TFC). Plasma levels of hsCRP, IL-6, MPO, and MPI were obtained in all participants.

**Results:** The hsCRP, IL-6 and MPO levels of SCF patients were higher than controls (hsCRP:  $4.7 \pm 2.5$  vs.  $1.7 \pm 1.1$  mg/L,  $p < 0.001$ ; IL-6:  $8.2 \pm 4.3$  vs.  $5.2 \pm 2.1$  pg/mL,  $p < 0.001$ ; and MPO:  $75.9 \pm 59.6$  vs.  $24.3 \pm 16.7$  ng/mL,  $p < 0.001$ ). Twenty-one SCF patients exhibited myocardial perfusion defect (MPD) on MPI. In SCF patients, the highest hsCRP, IL-6 and MPO were observed in patients with both MPD and three-vessel slow flow. Mean TFCs were positively correlated with plasma levels of hsCRP ( $r = -0.424$ ,  $p = 0.002$ ), IL-6 ( $r = 0.367$ ,  $p = 0.007$ ), MPO ( $r = 0.430$ ,  $p = 0.001$ ), and reversibility score ( $r = 0.671$ ,  $p < 0.001$ ) in SCF patients. hsCRP and MPO were the independent variables, which predicted positive MPI-results (hsCRP: OR, 2.176; 95% CI, 1.200 to 3.943;  $p = 0.010$ , MPO: OR, 1.026; 95% CI, 1.007 to 1.046;  $p = 0.008$ ).

**Conclusion:** Inflammation might play a crucial role in both the pathogenesis and development of ischemia in SCF. Association of increased levels of inflammatory markers and ischemia suggests that endothelial inflammation might be largely responsible for clinical presentation. New combined treatment regimens should target at endothelial activation and inflammation in SCF.

## PP-295

### Short Term Effect of Percutaneous Recanalization of Chronic Total Occlusions on QT Dispersion and Heart Rate Variability Parameters

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**Aim:** QT dispersion (QTd) is a measure of inhomogeneity of myocardial repolarization, increases following impaired myocardial perfusion and its prolongation may provide a suitable substrate for life-threatening ventricular arrhythmias. We investigated the changes in QTd and heart rate variability (HRV) parameters after successful coronary artery revascularization in patient with chronic total occlusions (CTO).

**Methods:** One hundred and thirty nine successfully revascularized CTO patients were included in this study (118 men, 21 women, mean age  $58.3 \pm 9.6$  years). QTd was measured from a 12-lead electrocardiogram and QTd was defined as the difference between maximum and minimum QT interval. HRV analyses of all subjects were obtained. Frequency domain (LF:HF) and time domain (SDNN, pNN50 and rMSSD) parameters were analyzed. QT intervals were also corrected for heart rate using the Bazett's formula, and the corrected QT interval dispersion (QTcd) was then calculated. All measurements were made before and after percutaneous coronary intervention (PCI).

**Results:** Both QTd and QTcd showed significant improvement following successfully revascularization of CTO ( $55.83 \pm 14.79$  to  $38.87 \pm 11.69$ ;  $p < 0.001$  and  $61.02 \pm 16.28$  to  $42.92 \pm 13.41$ ;  $p < 0.001$ ). The revascularization of LAD ( $n = 38$ ), Cx ( $n = 28$ ) and RCA ( $n = 73$ ) resulted in decrease in HRV indices including SDDN, rMSSD and pNN50, however none of the variables reached statistical significance.

**Conclusion:** Successful revascularization of CTO may result in improvement in regional heterogeneity of myocardial repolarization, evidenced as decreased QTcd after the PCI. The revascularization in CTO lesions does not seem to have a significant impact on HRV.

## PP-296

### Evaluation of Diagnostic Value of Serum Vitronectin Level in Patient with Acute Myocardial Infarction

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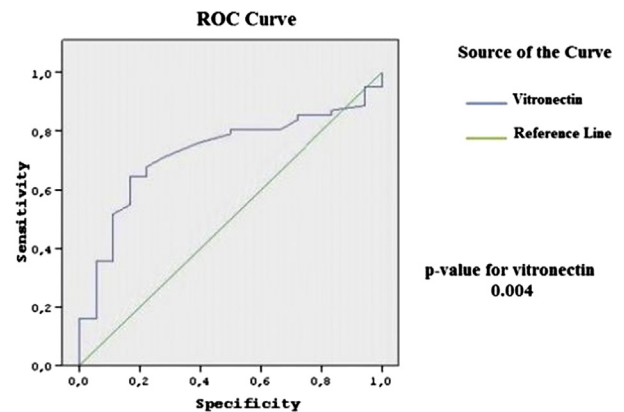
**Introduction:** Vitronectin (VN), a 459 aminoacid long glycoprotein with a mass of 75 kDa, is found in plasma, extracellular matrix (ECM) and  $\alpha$  granules of platelets. VN functions as a regulator of platelet adhesion and aggregation, coagulation and fibrinolysis. Plasma VN levels were found to be elevated in patients with coronary artery disease (CAD), and a positive correlation between VN levels and CAD severity has been demonstrated. VN was also shown to be an independent predictor of adverse cardiovascular outcomes following acute stenting in patients with acute coronary syndromes (ACS) or stable angina.

The aim of this study was to investigate the diagnostic role of serum VN level at admission in patients with ACS. The relation between extent of CAD and VN levels was also investigated.

**Methods:** Sixty-two patients (40 men, mean age  $59.9 \pm 10.3$  years and 22 women, mean age  $68.9 \pm 11.2$  years), who had been admitted to coronary care unit with first time diagnosis of ACS (ST elevation myocardial infarction [STEMI], non-ST elevation myocardial infarction [NSTEMI]) were consecutively included in the study. The control group consisted of 18 stable patients in whom normal coronary arteries were documented in coronary angiography. Patients were divided into two sub-groups as STEMI and NSTEMI. Blood samples were drawn within 6 hours after onset of chest pain and serum VN, high sensitive C-reactive protein (hs-CRP) and N-terminal pro-brain natriuretic peptide (NT-proBNP) levels were measured using an enzyme immunoassay method. Also, TIMI and GRACE clinical risk scores were calculated on admission for all ACS patients. Appropriate statistical methods were utilized to evaluate the diagnostic value of VN in ACS.

**Results:** The VN serum levels were demonstrated to be higher in MI patients ( $7.00 \pm 11.94$   $\mu\text{g/ml}$  in STEMI group,  $7.72 \pm 18.02$   $\mu\text{g/ml}$  in NSTEMI group vs.  $1.81 \pm 2.22$   $\mu\text{g/ml}$  in controls,  $p = 0.012$ ). When VN levels were compared between STEMI and NSTEMI groups, no significant differences were observed ( $p = 0.41$ ). Also, there was a significant positive correlation between VN levels and Gensini score only in NSTEMI patients ( $r = 0.436$ ,  $p = 0.013$ ). When the diagnostic value of VN levels for MI was investigated, a cut-off value of  $1.59$   $\mu\text{g/ml}$  yielded a sensitivity of 64%, a specificity of 84%, a positive predictive value of 93%, and a negative predictive value of 41%. Also, when the diagnostic utility of VN was assessed using ROC analysis, an area under the curve (AUC) of 0.72 was found (95% CI: 0.60-0.84;  $p = 0.004$ ; Figure).

**Conclusion:** The present study demonstrate that, VN may have a utility as a diagnostic marker in patients with ACS. Also, VN may have a role to predict extension and severity of CAD in patients with NSTEMI.



## PP-297

### Lower Serum Levels of Angiopoietin Like Protein-6 are Associated with Significant Coronary Artery Disease

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**Aim:** Angiopoietin-like protein-6 (Angptl6) is a growth factor which enhances the survival of hematopoietic stem cells. It is hypothesized that it may exert an anti-atherosclerotic effect through enhanced survival of endothelial progenitor cells. The

aim of this study is to investigate the relationship between serum Angptl6 levels and the angiographic extent and severity of coronary artery disease.

**Methods:** One hundred and thirty-four individuals who underwent coronary angiography due to a positive stress test were included in the study. Individuals who had at least 50% percent stenosis in a major epicardial artery and a Gensini score  $\geq 20$  constituted the patient group (n=68), and those who did not have any significant stenosis and with a Gensini score  $< 20$  constituted the control group (n=66). Serum Angptl6 levels were determined using the ELISA method.

**Results:** Serum Angptl6 levels were significantly lower in the patient group when compared to the control group (1193.5 $\pm$ 430.3 ng/mL vs. 1349.2 $\pm$ 427.8 ng/mL, respectively; p=0.044). There was a negative correlation between serum Angptl6 levels and the Gensini score which displayed a trend towards significance (r=-0.163, p=0.06).

**Conclusion:** Serum Angptl6 levels are lower in individuals with significant coronary artery disease when compared to those without. Angptl6 levels are inversely related to the angiographic extent and severity of disease, albeit without reaching statistical significance. The possible anti-atherosclerotic action of Angptl6 should be elucidated with further studies.

#### PP-298

##### Impact of Lunar Phases on the Occurrence of Acute ST Elevation Myocardial Infarction, Culprit Vessel and Success of Primary Percutaneous Coronary Intervention

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**Background:** Impact of lunar phases on the occurrence of myocardial infarction is controversial. We aimed to investigate the impact of lunar phases on the occurrence of acute ST elevation myocardial infarction (STEMI), culprit vessel and success of primary percutaneous coronary intervention (PCI) which has not been studied previously.

**Methods:** A total of 452 patients (mean age 58.9 $\pm$ 12.2, 20.1% female) between 2006 and 2011 in a single center with the diagnosis of acute STEMI and for whom primary PCI was performed were included into the study. Lunar cycle was divided into 4 phases named new moon, waxing moon, full moon and waning moon with  $\pm 3$  days around each phases.

**Results:** Overall, 24.8% of acute STEMI occurred in new moon, 24.8% in waxing moon, 27.7% in full moon and 22.8% in waning moon. There was no impact of lunar phases on the occurrence of acute STEMI (p>0.05). When analysing the culprit lesion, left anterior descending artery lesion was more common in full moon (p:0.042) where as rate of circumflex and right coronary artery lesions were similar in all lunar phases (p>0.05 for both). Mean age, male to female ratio and primary PCI success rate were similar in all lunar phases (p>0.05 for all).

**Conclusion:** Lunar phases do not seem to be associated with the occurrence of acute STEMI and success of primary PCI however, left anterior descending artery lesion (anterior myocardial infarction) seems to be more common in full moon period. The potential interrelation of lunar phases with acute STEMI needs to be evaluated with large scale studies.

#### PP-299

##### Evaluation of Association between Epicardial Adipose Tissue Volume and Coronary Artery Calcium Score with Multislice Computed Tomography

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**Introduction:** Epicardial adipose tissue is able to produce and secrete various types of adipo-cytokines and is thought to be an important cardiovascular risk indicator. Epicardial adipose thickness and/or volume is related with impaired glucose intolerance, metabolic syndrome, obesity, hypertension and atherosclerosis. In this study we aimed to explore the relationship between coronary artery calcium score (CACS) and epicardial adipose tissue volume (EATV).

**Method:** Ninety nine patients who admitted to Ankara Numune Education and Research Hospital Cardiology Department with chest pain and moderate cardiovascular risk between January 2012 and June 2012, were enrolled to the study. Multislice computed tomography (MSCT) was performed and CACS was calculated according to Agatston's Calcium Scoring. The patients were divided into two groups according to CACS: more or less than 100. EATV was calculated by MSCT. The patients with different tomography imaging protocols and suboptimal imaging quality, with arrhythmia and anemia were not included to the study.

**Results:** Demographic and clinical characteristics of study population are given in table 1. The ratio of patients with EATV more than 167,3 cm<sup>3</sup> was significantly higher in the group of CACS more than 100 according to the group of CACS less than 100 (p<0.001) (Table 2). It was determined that EATV and sex are independent variables for distinguishing CACS >100 and <100 groups (Table 3). In EATV > 167,3 cm<sup>3</sup> group, the probability of CACS >100 was 4,682 times higher than EATV<167,3 cm<sup>3</sup> group (95% CI: 1,298-16,892) (Table 3). The probability of CACS >100 was significantly higher at men than women (OR: 5,984; 95% CI: 1,237-28,958).

**Conclusion:** In this study it was shown that there is a significant association between EATV and CACS. With this study we demonstrated a closer association between CACS and EATV especially over a cutoff value. We think that, EATV can be used more common at coronary artery disease risk prediction with bigger trials.

#### Demographic and Clinical Characteristics of the patients

Variables	n=99
Age (years)	59,3 $\pm$ 9,1
Age range (years)	40-77
Gender	
Male	42 (%42,4)
Female	57 (%57,6)
Menopause	47 (%82,5)
History of hypertension	70 (%70,7)
Duration of hypertension (years)	10 (1-35)
History of diabetes mellitus	60 (%60,6)
Diabetes mellitus duration (years)	6 (1-30)
History of hyperlipidemia	70 (%70,7)
History of smoking	44 (%44,4)
Diastolic dysfunction	36 (%36,4)
Body mass index (kg/m2)	28,8 $\pm$ 3,8
Waist circumference (cm)	98,6 $\pm$ 10,9
Systolic blood pressure (mmHg)	143,7 $\pm$ 13,2
Diastolic blood pressure (mmHg)	88,6 $\pm$ 10,2
Framingham Score	11 (10-18)
Left ventricular ejection fraction	63 (58-72)
Epicardial adipose tissue volume (cm <sup>3</sup> )	120 (47,0-277,3)
Coronary artery calcium score	
0-10	56 (%56,6)
11-100	18 (%18,2)
>100	25 (%25,3)

#### Demographic and Clinical Characteristics of Patients by CACS

Variables	CACS<100 (n=74)	CACS>100 (n=25)	p-değeri
Age (years)	58,7 $\pm$ 9,2	61,2 $\pm$ 8,8	0,251
Gender			0,003
Male	25 (%33,8)	17 (%68,0)	
Female	49 (%66,2)	8 (%32,0)	
Menopause	42 (%85,7)	5 (%25,0)	0,137
History of hypertension	56 (%75,7)	14 (%56,0)	0,062
History of diabetes mellitus	44 (%59,5)	16 (%64,0)	0,688
History of hyperlipidemia	53 (%72,6)	17 (%70,8)	0,867
History of smoking	30 (%40,5)	14 (%56,0)	0,179
Left ventricular diastolic dysfunction	23 (%31,1)	13 (%52,0)	0,060
Body mass index (kg/m2)	29,2 $\pm$ 4,0	27,7 $\pm$ 3,0	0,083
Total cholesterol	205,8 $\pm$ 33,8	218,6 $\pm$ 39,8	0,122
High-density lipoprotein cholesterol	41 (19-64)	38 (27-64)	0,116
Triglycerides	178 (44-683)	197 (63-350)	0,592
EATV > 167,3	12 (%16,2)	12 (%48,0)	<0,001