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The Association Between Soluble Lectin-Like Oxidized Low-Density Lipoprotein Receptor-1 Levels and Coronary Slow Flow Phenomenon
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Background: Slow coronary flow (SCF) is defined as delayed opacification of coronary arteries during coronary angiography without significant stenosis and is associated with myocardial perfusion abnormalities, myocardial ischemia and myocardial infarction. Although the certain etiology and pathophysiological mechanism of SCF patients is still unknown, possible underlying mechanisms are endothelial dysfunction, chronic inflammation, microvascular dysfunction and diffuse angia.

Lectin-like oxidized low density lipoprotein (LDL) receptor-1 (LOX-1); a receptor for oxidized-LDL; seems to play important roles in the pathogenesis of atherosclerotic plaque development and progression. LOX-1 is released as soluble forms (sLOX-1) after proteolytic cleavage that can be measured in serum.

The association between sLOX-1 and multiple stages of vascular dysfunction, including endothelial dysfunction, atherogenesis and launching/initiation of atherosclerotic plaque rupture have already been demonstrated by other studies. Our aim of this study was to evaluate the sLOX-1 serum levels in patients with SCF phenomenon.

Methods: A total of 40 patients with angiographically proven coronary slow flow phenomenon (23 males and 17 females, mean age 56.33±13.04 years) and 43 patients with normal coronary arteries and normal coronary flow (16 males and 27 females, mean age 55.6±6.51 years) were included in this cross-sectional observational study. Coronary blood flow was measured according to the TIMI (Thrombolysis In Myocardial Infarction) frame count method for the all coronary arteries. sLOX-1 levels were measured in all study subjects from serum samples by sandwich enzyme-immunosorbent assay.

Results: Serum levels of sLOX-1 were significantly higher in the SCF group than normal coronary artery group (1061.80 ng/ml vs. 500.04±282.97 ng/ml, p<0.001). Also correlation analysis showed a positive correlation between serum sLOX-1 levels and the mean TIMI frame count (r=0.001).

Conclusion: The results of the present study show significantly higher sLOX-1 levels in patients with SCF compared to control subjects. The findings point out, sLOX-1 may be contributed in the pathogenesis of coronary slow flow.

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Risk Factors and Distribution of Coronary Artery Disease in Young Patients with ST-Elevation Myocardial Infarction
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Background: Coronary artery disease (CAD) is the most common cause of death in the world. An estimated 6% to 10% of myocardial infarction occurs in patients under the age of 45. Atherosclerosis is the main cause. In the present study, we investigated the age, risk factors and distribution of coronary artery lesions, under 45 years old, in 141 patients admitted to our hospital with ST-elevation myocardial infarction (STEMI).

Methods: We reviewed 141 patients treated with primary angioplasty for STEMI who were aged 45 or less. The demographic information and the risk factors for the cases were recorded, primary PCI results were analyzed. For this purpose, fasting blood-glucose, lipid panel, D-dimer, hs-CRP, homocysteine, blood pressure and body mass index were measured.

Results: The average age of the patients was 38.3±4.6 years. These patients were predominantly male (87.9%). 57% anterior, 41% inferior and 2% isolated posterior myocardial infarction (MI) were recorded. Cigarette smoking was present in 82% of patients. Low HDL (female <50 mg/dl, male <40 mg/dl), hypertyglycemia (>150 mg/dl), high LDL (>130 mg/dl) and family history respectively 66%, 32%, 38% and 25% were common risk factors. 43% of patients were overweight (BMI >25 kg/m²) and 30% of patients were obese (BMI >30 kg/m²) (Figure 1). Ratio of the patients with hypertension and diabetes mellitus (13% and 11%, respectively) were lower. Blood levels of hs-CRP (>1 mg/L), homocysteine (>13.9 mmol/L), D-dimer (>232 ng/ml) and fibrinogen (>380 mg/dl) were elevated in 56%, 59%, 40% and 34% of the patients, respectively. 66% of patients have single vessel disease. The most common vessel was the left anterior descending artery (51%) and then circumflex artery involvement was detected (27%) among the patients (Figure 2).

Conclusions: Smoking is the most important risk factor for CAD in young patients with STEMI. In addition, atherogenic dyslipidemia and obesity are the second and third most frequent risk factors in our study. Atherogenic dyslipidemia, obesity and smoking effect synergistically on the development of coronary atherosclerosis especially in young patients with familial predisposition. All above-mentioned risk factors take a role synergistically on the development of CAD, especially in young patients with familial predisposition.
further control coronary angiography because of an acute coronary syndrome. Clinicopathologic, and angiographic data were analyzed.

**Results:** Patients were divided into 3 tertiles according to the RDW values (12.9 ± 0.4, 14.2 ± 0.4 and 16.3 ± 1.5 respectively). Stent thrombosis developed in 47 (40.9%) patients in the lowest tertile, 39 (37.9%) patients in the middle tertile and 60 (58.3%) patients in the highest tertile (p<0.006). Female gender ratio was significantly high in the highest tertile (13 (11.3%), 8 (7.8%), 24 (23.3%), p<0.003, respectively). The RDW (odds ratio 1.397, 95% CI: 1.177-1.657, p<0.001), platelet count (odds ratio: 1.008, 95% CI: 1.004-1.012, p<0.001) remained independent predictors of stent thrombosis after multivariate logistic regression analysis. Receiver–operating characteristic (ROC) curve analysis demonstrated a cut off value 13.9 for the RDW predicted the development of stent thrombosis with a sensitivity of 57% and specificity of 52% (Area under the ROC curve: 0.59, 95% CI: 0.53 to 0.65, p=0.007).

**Conclusion:** High RDW values were found to be independently associated with the development of stent thrombosis in patients with ST-elevation MI.

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The Pharmacoeconomic Efficacy of Ivabradine and Nebivolol Treatment of Stable Angina Pectoris in Patients with Left Ventricular Dysfunction

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**Background:** We aimed to investigate the pharmacoeconomic efficacy of ivabradine and nebivolol in treatment of stable angina pectoris patients with left ventricular dysfunction.

**Methods:** This prospective study included 34 patients with a left ventricular ejection fraction (LVEF) <40% that were followed up by the cardiology department; 15 (44%) were men, 19 (56%) were female, and mean age was 61±5.1 years. Patients treated with nebivolol (17 patients, 50%) formed nebivolol group, patients who could not tolerate nebivolol and treated with ivabradine (17 patients, 50%) formed ivabradine group. The parameters recorded included heart rates, LVEF, hospitalization rates, quality of life (QoL) based on the Seattle Angina Questionnaire (SAQ) scores, the development of stent thrombosis in patients with ST-elevation MI.

**Results:** Before coronary angiography, all patients had routine blood tests including plasma fibrinogen levels. Patients with an occluded saphenous vein graft. To prove this relationship between plasma fibrinogen levels and saphenous vein graft patency, we observed 25 incident cases of CVD. Consumption of High-MD was 32% in men and 29% in women. The risk for myocardial infarction, coronary bypass, and CABG, coronary artery bypass graft; HDL, high-density lipoprotein; MPV, mean platelet volume.

**Conclusion:** The findings of this study suggest that nevirapine is more cost-effective than ivabradine in the treatment of stable angina pectoris patients with left ventricular dysfunction.

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Association between Plasma Fibrinogen Level and Saphenous Vein Graft Patency

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**Background:** Fibrinogen is related to pathogenesis of atherosclerosis. The inflammatory process in atherosclerosis may cause an increase in plasma fibrinogen level. Therefore, in this study we purposed to investigate whether plasma fibrinogen is associated with the patency of saphenous vein graft in patients at least 1 year after coronary artery bypass graft (CABG) surgery.

**Methods:** Patients who had undergone CABG surgery at least 1 year previously with at least one saphenous vein graft were included in the study. Patients were directed to cardiac catheterization for stable anginal symptoms or positive stress test results. Before coronary angiography, all patients had routine blood tests including plasma fibrinogen levels.

**Results:** Saphenous vein grafts were found to be patent in 199 patients and occluded in 132 patients. Plasma fibrinogen levels were significantly different between the two groups (2.85±0.49 g/L vs. 3.62±0.82 g/L, p<0.001, respectively). Although time after CABG operation differs significantly between the two groups (p<0.004), multiple logistic regression analysis showed that plasma fibrinogen levels were found to be significantly associated with the patency of vein graft (OR=2.27, 95% CI 1.6-3.9, p<0.001) (Table). In addition, a plasma fibrinogen value >3.45 g/L was determined to predict saphenous graft vein disease with a sensitivity of 91% and accuracy of 90% (AUC, area under the curve) (0.784) (Figure).

**Conclusion:** Our results demonstrated that plasma fibrinogen levels were higher in patients with an occluded saphenous vein graft. To prove this relationship between plasma fibrinogen values and saphenous vein graft patency, further investigations are needed.

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Mediterranean Diet and Cardiovascular Diseases in a Turkish Population

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**Aim:** Mediterranean diet (MD) is considered a model for healthy eating. However, prospective evidence in Turkey evaluating the relationship between MD and cardiovascular events is scarce. We surveyed the adherence of Turkish population to MD and its association with cardiovascular disease (CVD).

**Methods-Results:** Followed-up 900 participants (52 percent women) initially free of cardiovascular disease (CVD) during 5.1 years. The general dietary habits of study population were detected with a food frequency questionnaire. Data obtained from that questionnaire were tested with Mediterranean diet score in order to find out the relevance to Mediterranean diet. A MD score (scale 0-8) was computed reflecting high ratio of monounsaturated to saturated fat; high intake of alcohol, legumes, cereals, vegetables, and fruits; low intakes of meat and its products, milk and dairy products. Scoring <5 was defined as Low-MD consuming, while 5+ as High-MD consuming. We observed 25 incident cases of CVD. Consumption of High-MD was 21% in men and 19% in women. The risk for myocardial infarction, coronary bypass, angioplasty, and any cardiovascular disease in men increased by 1.3 (p=0.02), 1.4 (p=0.003), 1.5 (p=0.01), and 1.3 (p=0.02), respectively, for each MD score decrease. In women, the risk for myocardial infarction and angioplasty increased by 1.3 (p=0.02) and 1.5 (p=0.01), respectively, for each MD score decrease. The risk for coronary bypass, and any cardiovascular disease in women, crude odds ratios ranged from 1.1 to 1.3 but were not statistically significant.

**Conclusion:** The current rate of MD in Turkey is fairly low. There is an inverse association between adherence to MD and the incidence of fatal and non-fatal CVD in initially healthy adults.