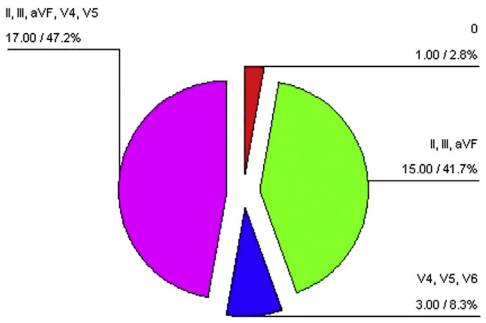

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To What Extent are We Applying Current Medical Treatment Approaches in Coronary Artery Disease?

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Introduction and Aim: Coronary artery disease (CAD) is the most frequently seen form of heart diseases. Globally, it is the leading cause of mortality in both gender. In recent years, there have been new improvements in the medical treatment of CAD. In most of the patients medical therapy is found to be more effective than revascularization therapies. In order to increase the success of treatments, therapies should be applied in accordance with the guidelines and the objectives in these guidelines should be achieved. In this study, we evaluated the patients, with angiographically documented coronary artery disease who were followed in our outpatient clinic and applied for the drug therapy re-arrangement after the withdrawal of medium acting nitrates. The aim of this study is to evaluate the treatments used and drug efficacy in these patients.
Methods: 72 patients (42 male, 30 female; age 67±18 years) were evaluated in this study. These patients were diagnosed CAD with coronary angiography and were followed in our outpatient clinic. After the withdrawal of medium acting nitrates these patients were examined again in the secondary care cardiology ouypatient clinic for drug therapy rearrangement. Patients were divided into three groups; 22 patients (30,6%) were using medical therapy, 20 patients (27,8%) had Percutaneous Coronary Intervention (PCI), 30 patients (41,7%) had coronary artery bypass graft (CABG) operation. Patients' clinical, demographic profile and medical treatments were recorded.
Fındıngs: : 19 patients (26,4%) were diabetic, 59 were (81,9%) hypertensive and 29 were (35,3%) smokers. 49 patients (68,1%) were using angiotensin converting enzyme inhibitors (ACE inh.), 57 were (79,2%) using beta blockers (B blk.), 26 were (36,1%) using statins, 70 were (97,2%) using acetylsalicylic acid (ASA) and 20 were (27,8%) using calcium channel blockers (CCB). We have found statistically significant difference between three groups in use of ACE inhibitors (p=0.018). When we analyzed, we found that this statistically significant difference was caused by the lesser usage of ACE inh. in the CABG group. We also found statistically significant difference in statin use between three groups (p<0.001).
Results: This study showed that in our country, drugs such as ACE inhibitors, statins and beta blockers, which are proven to have favourable effects on mortality, have been used far less than the guidelines' recommendations, however the patient group who had PCI seems to do better in reaching these goals. In the hospitalization period, which is important for patients compliance, patients and doctors should gain consciousness about these agents and encourage the usage of these agents.

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Relation of Serum Trace Element Levels and Coronary Atherosclerotic Progression

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Aım: Cardiovascular disease is the main reason of mortality in adults. Atherogenesis and thrombosis that often added on are the main reason of cardiovascular disease. Although, a lot of causes were identified in the occurrence of coronary artery disease (CAD), there is not any consensus about the role of these causes on the progression of CAD. Recently, deficiency or excess of the trace elements are accepted as one of the responsible mechanisms on atherogenesis. The role of the trace elements that have pivotal role in the many of oxidant and antioxidant enzymes, on the atherosclerotic progression has not been fully elucidated. In the present study, we aimed to investigate the role of serum trace element levels on the atherosclerotic progression that documented with repeated coronary angiography in patients with documented coronary artery disease.
Materıals-Methods: A total of eighty patients who had coronary angiogram before and will performed because of stable angina pectoris were enrolled to the study. Blood samples for the measurement of trace elements and transthoracic echocardiography were performed for each patient. According to second coronary angiogram, the study population were divided in to two groups as progression or not progression. Serum trace elements were examined between groups.
Results: There were 40 patients in progression group (61.8±11.1 year) and 40 patients (60.3±14.6 year) in non-progression group. Demographic characteristics did not statistically differ between groups. The elemental analysis of the the serum chromium level, chromium level was 0.0937 mg/L ± 0.0325 mg/L in progression group, while 0.0797 mg/L ± 0.0287 in non-progression group (p=0.045). Serum copper level was determined as 1.074 mg/L ± 0.374 mg/L in non-progression group, while 1.287 mg/L ± 0.369 mg/L in progression group. There were statistically significant difference between groups (p=0.013). With respect to serum selenium levels; in non-progression group selenium levels were significantly higher than in progression group (0.0438 mg/L ± 0.151 mg/L vs, 0.0368 mg/L ± 0.0104 mg/L, p=0.019).
Conclusıon: In the present study, we demonstrated for the first time that there is a relation between serum levels of trace elements and atherosclerotic progression. Therefore, serum trace element levels can be use as a biomarker for the early detection of atherosclerotic progression. Further studies should be planned in order to identify this relation.

Table 1

	Progression group n=40	Non-progression group n=40	p value
Age, year	61.8 ± 11.1	60.3 ± 14.6	0.605
Sex, male	24 (%60)	28 (%70)	0.348
BMI, kg/m2	28.4 ± 4.1	27.7 ± 4.2	0.448
DBP, mmhg	75.6 ± 9.1	76.5 ± 12.3	0.718
Heart rate, beats/min	78.2 ± 7.5	77.1 ± 8.9	0.561
Follow up, month	24.9 ± 17.0	22.7 ± 15.2	0.546
Previous DM, %	11 (%28)	16 (%40)	0.237
Previous HT, %	26 (%65)	24 (%60)	0.644
Smoking,%	18 (%45)	11 (%28)	0.104
Previous CVD, %	1 (%3)	1 (%3)	1.000
LVEF, %	56.9 ± 8.8	53.3 ± 10.2	0.089

Baseline characteristics of patients Data are expressed as mean ± SD or median for normally distributed data and percentage (%) for categorical variables. BMI: Body mass index, SBP: systolic blood pressure, DBP: Diastolic blood pressure, DM: Diabetes mellitus, HT: Hypertension, CVD: Cerebro vascular disease, LVEF: Left ventricular ejection fraction

Table 2

	Progression group n=40	Non-progression group n=40	p value
Glucose, mg/dL	117.9 ± 36.7	129.3 ± 37.4	0.171
Creatinine, mg/dL	0.9 ± 0.2	0.9 ±0.3	0.284
AST (u/L)	28.7 ± 18.1	29.3 ± 28.8	0.756
ALT (u/L)	27.7 ± 22.8	29.5 ± 18.1	0.701
Calcium, mg/dL	8.9 ± 0.5	9.2 ± 0.5	0.094
Magnesium, mmol/L	0.86 ± 0.14	0.85 ± 0.10	0.775
Total bilirubin, mg/dL	0.66 ± 0.38	0.65 ± 0.30	0.948
GGT, mg/dL	30.5 ± 19.7	34.1 ± 18.5	0.405
Total cholesterol, mg/dL	180.4 ± 42.6	186.1 ± 43.1	0.554
LDL-C, mg/dL	114.1 ± 31.5	116.7 ± 30.1	0.697
HDL-C, mg/dL	37.9 ± 7.2	35.5 ± 7.3	0.141
Triglycerides, mg/dL	146.8 ± 61.4	173.3 ± 86.4	0.118
White blood cell, x109/L	7.67 ± 2.72	9.04 ± 3.33	0.046
Hemoglobin, g/L	14.2 ± 1.6	14.0 ± 1.7	0.649
Neutrophil, 103/μL	5.31 ± 2.67	6.25 ± 3.08	0.149
Lymphocyte, 103/μL	1.62 ± 0.71	1.99 ± 0.78	0.032
Hs-CRP, mg/L	5.26 ± 3.45	6.70 ± 4.42	0.245

Laboratory parameters of patients Data are expressed as mean ± SD or median for normally distributed data. AST: Aspartate amino transferase ALT: Alanine amino transferase, GGT: Gamma glutamyl transferase, LDL-C: Low density lipoprotein cholesterol, HDL-C: High density lipoprotein cholesterol, Hs-CRP: High sensitivity C-reactive protein.