CACS <100 with the Group and CACS> 100 with potential to differentiate group all together on the Effect of Multiple Logistic Regression Analysis of Risk Factors Results

Variables independent	Odds Ratio	95% Confidence Interval	95% Confidence Interval	p-value
		Lower Limit	Upper Limit	
Age	1,055	0,981	1,135	0,149
Male factor	5,984	1,237	28,958	0,026
History of hypertension	0,467	0,125	1,744	0,257
Smoking history	0,551	0,122	2,489	0,438
Left ventricular diastolic dysfunctiondisfonksiyon	0,483	0,127	1,843	0,287
Body mass index	0,821	0,673	1,002	0,053
Total cholesterol	1,018	0,989	1,048	0,231
Low-density lipoprotein cholesterol	1,006	0,975	1,038	0,719
High-density lipoprotein cholesterol	0,968	0,896	1,045	0,398
EATV >167.3	4,682	1,298	16,892	0,018

PP-300

N Terminal pro-Brain Natriuretic Peptide Level is Associated with SYNTAX Score and Aortic Distensibility in Patients with Stable Coronary Artery Disease

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Objectıve: The high N-terminal pro-brain natriuretic peptide (NT-proBNP) level provides significant prognostic information in patients with coronary artery disease (CAD). It is unclear whether aortic distensibility (AD) which reflects aortic stiffness and extent and complexity of CAD assessed with SYNTAX score (SS) affects the secretion of NT-proBNP in stable CAD. We aimed to investigate the relation between NT-proBNP levels with AD and extent and complexity of CAD in stable CAD.
Methods: The study included 411 patients with stable CAD (Mean age=61.7±9.9 years, male/female= 247/164). The patients were divided into two groups according to the median NT-proBNP value (NT-proBNPlow group < 114 pg/ml and NT-proBNPhigh group ≥114 pg/ml). Aortic distensibility was calculated from the echocardiographically derived ascending aorta diameters and hemodynamic pressure measurements. Coronary angiography was performed and SS were determined in all patients. NT-proBNP and other biochemical markers were measured in all subjects.
Results: Aortic distensibility and ejection fraction values of NT-proBNPhigh group were lower and their SS levels were higher compared with NT-proBNPlow group ($p<0.05$, for all) (Table). NT-proBNP level was independently associated with AD ($\beta=-0.378$, $p<0.001$), SS ($\beta=0.262$, $p<0.001$) and ejection fraction ($\beta=-0.295$, $p<0.001$) on multiple linear regression analysis.
Conclusıon: NT-proBNP was independently associated with impaired elastic property of aorta and extent and complexity of CAD, as well as left ventricle systolic dysfunction.

Table. Baseline clinical and laboratory characteristics of patients

Variables	NT-proBNPlow Group (n=205)	NT-proBNPhigh Group (n=206)	p
Age, years	60.3±10.1	63.0±9.5	0.007
SYNTAX Score	14.8±7.3	21.8±9.4	<0.001
Ejection Fraction (%)	65.6±4.3	62.4±4.3	<0.001
Aortic Distensibility (cm2 dyn-1 x10-6)	3.2±1.5	1.7±0.77	<0.001

PP-301

Vitamin D Status and Clinical Severity in ST Segment Elevation Myocardial Infarction

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Purpose: Emerging data revealed the significant role of 25 (OH) vitamin D (vitD) in cardiovascular (CV) events. Clinical indices like Thrombolysis in Myocardial Infarction (TIMI) risk score, corrected TIMI frame count (CTFC) and high sensitivity cardiac troponin T (hs-cTnT) levels have short and long-term predictive values regarding CV mortality and morbidity in ST-segment elevation acute myocardial infarction (STEMI). The aim of this study was to determine the predictive value of vitD for clinical severity parameters in STEMI.
Methods: Patients with STEMI admitted to our hospital were prospectively and consecutively evaluated and proceeded to primary percutaneous coronary intervention (PCI). Patients with a previous history of coronary artery bypass graft (CABG), renal/hepatic failure and patients in need for emergency CABG were excluded from the study. 102 subjects ([mean±SD]age, 57±11 years) were enrolled in the study (female n [%]:18 [17,6%]). VitD levels were obtained on admission. VitD < 20 ng/ml was defined as vitD deficiency. CTFC were calculated after PCI for culprit lesion.
Results: VitD deficiency was detected in 63,4% (<30 ng/ml in 92,7%) of the study population. In vitD deficient group, significantly higher hs-cTnT admission values ([median] 3598 ng/L vs 2576 ng/L, p=0,015), TIMI-STEMI scores (25th-75th percentiles; 2-5 vs 1-3, p<0,001), LAD CTFC (Data±SEM; 18,4±2,3 vs 12,6±1,4 p=0,042) and RCA CTFC (27,5,4±3,6 vs 19,6±1,6 p=0,044) were detected compared with non vitD deficient group. VitD levels were inversely correlated with TIMI STEMI risk scores (r:-0,438, p<0,001). In multivariate regression analyses, vitD levels was found as an independent predictor of higher TIMI-STEMI scores after adjusting for age, gender, HT and DM (Table-1).
Conclusıons: Our findings suggest that low vitD levels might play a role in disease severity of STEMI patients by means of its independent associations with risk algorithms.

Table-1

Variables	β	p	Confidence Interval (95%)
Age (years)	0,327	< 0,04	(0,01 - 0,10)
Gender	0,139	0,44	(-1,29 - 2,91)
HT	0,059	0,78	(-1,49 - 1,97)
DM	0,082	0,66	(-1,45 - 2,26)
VitD	-0,440	0,01	(-0,16 - -0,02)
Regression model for TIMI-STEMI risk score			

PP-302

The Relationship Between Coronary Slow Flow and Urotensin II

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Objectıve: Although there have been a number of studies about coronary slow flow (CSF), the pathophysiologic mechanism still has not been fully understood. There are many proposed mechanisms such as; microvascular vasomotor dysfunction, diffuse atherosclerosis, inflammation, small vessel occlusion, increased microvascular resistance and endothelial dysfunction. Urotensin has 50 times more powerful vasoconstrictive effect than endothelin. It is not known that whether the urotensin plays a role in the pathophysiology of CSF.
Methods: This study included 32 patients with coronary slow flow and 32 patients with normal coronary arteries (NCA). Coronary flow is evaluated by TIMI (Thrombolysis In Myocardial Infarction) frame count (TFC) method. Coronary slow flow diagnosis is considered when TFCs for LAD ≥39, for Cx ≥27, and for RCA ≥24. Urotensin II levels were measured from the blood samples by Elisa method in both groups.
Results: The baseline clinical characteristics were similar in both groups. TIMI frame count was significantly higher in the CSF group than the NCA group ($p<0.001$). Urotensin II levels of SCF group were significantly higher than those of NCA group (122 pg/ml (71-831), 95 pg/ml (21-635), $p<0.001$). Additionally; the LDL levels and leukocyte count were higher in CSF group than the NCA group ($p=0.056$ and $p=0.02$) (Table 1).
Conclusıon: The higher levels Urotensin II in CSF group suggests that Urotensin II is the one of the factors that plays a role in the pathogenesis. Also, the higher white blood cells count in the slow coronary flow group makes us to think that inflammation may play a role in the pathogenesis.

Table 1: Demographic and clinical characteristics of the study groups

	Slow coronary flow			Normal coronary artery			p
	n	%	Mean±SD/Median (Q_1-Q_3)	n	%	Mean±SD/Median (Q_1-Q_3)	
Age (years)			57±10			54±9	0,25
Sex							
Male	17	53		18	56		0,81
Female	15	47		14	44		
Diabetes mellitus	7	22		10	34		0,27
Hypertension	18	56		18	62		0,64
Hiperlipidemi	16	50		8	28		0,07
Smoking	13	40		8	28		0,28
Systolic blood pressure (mmHg)			130 (120-160)			132 (110-155)	1
Diastolic blood pressure (mmHg)			80 (60-95)			80 (60-95)	0,21
Fasting serum glucose (mg/dl) (mg/dl)			99 (65-171)			101 (76-201)	0,17
Creatinin (mg/dl)			0,84 (0,5-1,3)			0,8 (0,5-1,4)	0,57
Total cholesterol (mg/dl)			192±30			190±33	0,76
LDLcholesterol (mg/dl)			123±26			108±30	0,056
HDL cholesterol (mg/dl)			40±10			48±15	0,03
Triglycerides (mg/dl)			133 (67-409)			147 (46-310)	0,54
Hemoglobin (g/dl)			13,7±1,3			13,4±1,5	0,42
Leukocytes (103/mm3)			8,6±2,1			7,4±1,7	0,02
TFC-LAD			43,5(29-52)			31,5 (25-36)	<0,001
TFC-CX			33 (20-40)			21 (17-25)	<0,001
TFC-RCA			32 (18-38)			20 (14-26)	<0,001
Urotensin (pg/ml)			122 (71-831)			95 (21-635)	<0,001

PP-303

Relation Between Red Cell Distribution Width and Severity of Coronary Artery Disease in Patients With Acute Myocardial Infarction

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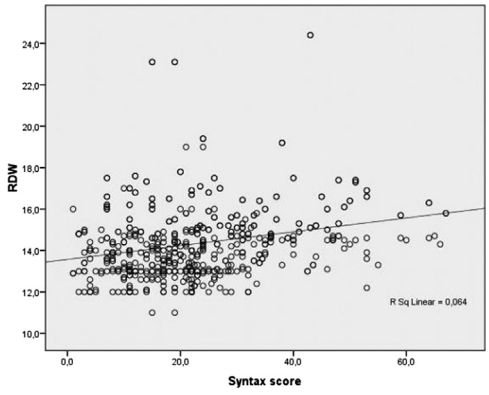
Objective: Increased red blood cell distribution width (RDW) has been associated with adverse outcomes in acute myocardial infarction (AMI). We evaluated the relationship between RDW and severity of coronary artery disease (CAD) in patients with AMI.
Methods: A total of 580 consecutive patients who were routinely referred to coronary angiography for AMI were included in the study. We analyzed the relation between RDW and angiographic severity of CAD. Syntax score (SS) was used to evaluate the severity of atherosclerosis.
Results: Patients (n=580) with elevated Syntax scores (SSs >32) had higher RDW values (15.1%±1.7% vs 14.1±1.7%, p<0.001). The SS was positively correlated with RDW level (r=0.252, p<0.001) and neutrophil/lymphocyte (N/L) ratio (r=0.178, p<0.001). There was a mild significant association between RDW level and N/L ratio (r=0.106, p=0.033). In the multiple logistic regression analysis, RDW (odds ratio = 1.165, 95% confidence interval 1.02-1.32, p=0.021) remained a significant predictor for the severity of CAD.
Conclusion: Red blood cell distribution width, an inexpensive and easily measurable laboratory variable, is independently associated with the severity of CAD in patients with AMI.



PP-304

Current Data for CVD in Bosnia and Herzegovina and Experience with Our Own Guidelines

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We want to underline that Bosnia and Herzegovina (B&H) was the first country in East Europe and fourth in Europe that implemented European recommendations for CVD prevention and HeartScore. We finished the Updated version of HeartScore Bosnia&Herzegovina and launched it in the year 2008. Nevertheless, epidemiological data of cardiovascular disease (CVD) in B&H are in red alert and we have to state that CVD has an overall increase curve. Epidemiological data of CVD in B&H are as follows: overall mortality in B&H in 2011.y was of 53% (compared with 51% in 2008.y). In Bosnia and Herzegovina (~ 4,100.000 inhabitants) CVD mortality rate according to adjusted data is 578/100000, and CVD morbidity over 11.800/100000, absentism over 55%, invalidity over 59%, and out of all health expenses CVD takes 30-54%. Our economical data are not encouraging; GDP (2010.y) was 18,2 bill.US$, real growth rate per year less than 1,5%, with tendency of further decreasing. Health care expenditure per capita is approx. 200 Euro (275 US$) and this is major limitation for serious and overall prevention actions, as well as action due to education and treatment. In the last ten years we invested in brand new cardiovascular tertiary level centers over 100 mill. Euro and in preventive programs less than 0,5 mill.Euro. Despite this discouraging data we have had decided to start with program of public campaign and program of issuing our own Guidelines for Patients, i.e. Guidelines for Arterial hypertension; Tobacco smoking; Obesity; Plasma lipids, and Guideline - Count Your CVD Fatal Risk by Yourself. The main idea and goals: to give just basic facts, to adjusted data and messages for average level of education, to made them understandable, and to avoid too professional medical vocabulary. All important messages in capital letters and underlined. Our further plans: Guideline for physical activity, Guideline for cardiometabolic risk, Guideline for heart and blood vessels diagnostic methods, Guideline for heart and blood vessels drugs, Guideline for interventions on blood vessels, Guideline for heart and blood vessels surgery. What we need to do: to improve identification of high risk individuals and to improve clinical approach. What are our priorities: prevention, population based education, hospital facilities and equipment on the secondary level, and primary and secondary CVD treatment. What is unacceptable; Insufficient support for preventive programs.

PP-305

C-reactive Protein, Immunoglobuline E and Natural Killer" Cells in Patients with Coronary Artery Disease

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Stability of atherosclerotic plaque is determined by multiple factors, as are immunological and inflammatory ones. Natural killer cells (NK) have proinflammatory property and ability of direct contribution to vascular lesion. Immunoglobulin E (IgE) could be involved in late atherosclerotic phases, improving plaque unstability and clinical events. Increased values of IgE are in different cardiovascular disease, especially in patients with unstable angina pectoris and ACS.
AIM: To determine CRP, IgE, NK cell values in patients with CAD proven by elective coronary angiography. Methods and patients: It was prospective study with 150 patients divided in 3 groups based on coronarography findings according to severity of coronary artery stenosis severity. I group includes patients with significant coronary artery stenosis >70%, II group included patients with coronary artery stenosis <70%, and the III group included patients without verified stenosis of coronary artery All patients, admitted on elective coronary angiography, with previous diagnosis of angina pectoris. From the study were excluded all the patients with diagnosis of acute inflammation, Diabetes mellitus, allergic, chronical inflammatory and atopic and malignant disease.
Results: In our study in I patien t group with coronary significant stenosis > 70% (meaning that atherosclerotic plaque includes 70% of artery lumen), concentration of CRP in serum was significantly higher according to II patient group with stenosis of <70%, and III group without verified stenosis of artery. Serum concentration of CRP between II (stenosis <70%) and III group without coronary artery stenosis proved by coronary angiography was almost equal. CRP value range in I group (>70% significant coronary artery stenosis) was 1,0-14,9 mg/dl, in II group (<70% coronary artery stenosis) was 0,4-5,5, and in III group (no verified coronary artery stenosis) was 0,2-3,7 mg/dL. Also in our study we found out IgE being higher in patient group >70 % with significant coronary artery stenosis, comparing it with patient group <70% of coronary artery stenosis, and with patient without verified stenosis. In our study NK cell representation in no verified coronary artery stenosis group of patient was significantly lower than in group with stenosis >70% or <70%.
Conclusion: Serum concentration of CRP implies fact of CRP being predictor of acute inflammation, and active atherosclerotic process. IgE could be hint of acute myocardial infarction, but in the same time high values could have protective role. NK cells has specific role in process of atherosclerosis, since being higher in coronary artery stenosis. CRP test has the best sensitivity and specificity, and therefore is the most beneficial and applicable in diagnostics.

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