



#### Good and poor collateral development according to the metformin dosage

	Low-dose metformin (n= 22)	High-dose metformin (n= 49)	p
Good collaterals, (%)	7 (31,8)	31 (63,3)	0,014
Poor collaterals, (%)	15 (68,2)	18 (36,7)	

#### OP-161

##### Is Calculated SCORE Risk Reliable in Asymptomatic Atherosclerosis? Sarajevo Survey on Vascular/Heart Ageing

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**Aim:** Aim of this article is to present our own, Bosnia and Herzegovina survey in patients with asymptomatic atherosclerosis and to compare European SCORE risk estimation and 2008 Framingham Risk tables on our sample of patients. In fact, 2008 Framingham Risk table included a concept of vascular/heart ageing. On the other hand a European SCORE system was basically aimed to quantify the absolute 10 years (fatal) cardiovascular risk. SCORE risk estimation and vascular ageing was modify in updated version of European guidelines but still it is insufficient. Cuende et al. (2010) suggests a new method of cardiovascular risk evaluation.

**Materials-Methods:** Sarajevo survey was conducted on the sample of completely (100%) asymptomatic patients (n=358). Participants were of 40-69 yrs, average yrs. 57.1±9.2, 142 females and 216 males. We performed non-invasive screening of aorta, carotid, iliac and femoral vessels and found asymptomatic atherosclerotic disease (atheroplaques) in 43,1% individuals and significance was of p<0,001. We found atherosclerotic plaques of various degrees in age subgroups; 40-49 yrs (18,3%), 50-59 yrs (48,9%), 60-69 yrs (32,7%). Calculation of fatal CVD risk on the basis of SCORE scale for high-risk European countries, due to age subgroups, was as follows; 40-49 yrs (2%), 50-59 yrs (3,45%) and 60-69 yrs (8,90%), respectively. Due to Cuende modification of SCORE tables their average vascular/heart age was significantly higher than their actual calendar age, and average vascular/heart age was higher for 14,5 yrs, p<0,001. After this results we underwent recalculating of vascular/heart age according to 2008 Framingham Risk Tables and we found 16,8 yrs higher results i.e. in age subgroup of 50-59 yrs, vascular/heart age was 75,9 yrs, and for age subgroup of 60-69 yrs, vascular/heart age was 85,3 yrs.

**Conclusion:** after these results we can confirm that current SCORE system underestimate real risk, especially in individuals with asymptomatic atherosclerosis and do not "recognized" them as high risk population. On the other hand it is very clear that official statistics for Bosnia and Herzegovina; morbidity of 11.800/100000 inhabitants, and mortality of 578/100000, are not correct. In fact, morbidity and mortality in our population is much more higher. On the basis of this results and other studies, as well, we must introduced risk estimation of cardiovascular risk factors on the basis of vascular/heart age to achieve real data and real "mirror" of our cardiovascular situation. We want to underline that we have to focused on identification of risk and high-risk asymptomatic individuals and immediately act in order to decrease our rates of morbidity and mortality.

#### OP-162

##### Serum Angiopoietin Like Protein-2 Levels are Positively Correlated to the Angiographic Severity and Extent of Coronary Artery Disease

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**Aim:** Angiopoietin like protein-2 (Angptl2), a proinflammatory protein, has been demonstrated to accelerate atherosclerosis in animal models through enhanced adhesion of leukocytes to endothelial cells. The aim of this study is to investigate the

relationship between serum Angptl2 levels and the angiographic severity and extent 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% stenosis in a major epicardial artery and a Gensini score ≥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 Angptl2 levels were determined using the ELISA method.

**Results:** Serum Angptl2 levels were significantly higher in the patient group when compared to the control group (49.8±29.0 ng/mL vs. 38.8±20.3 ng/mL, respectively; p=0.017). There was a positive and significant correlation between serum Angptl2 levels and the Gensini score (r=0.206, p=0.021). In multivariate analysis, Angptl2 level was an independent predictor of significant CAD.

**Conclusion:** Serum levels of Angptl2 are higher in individuals with significant CAD when compared to those without, and Angptl2 levels are positively correlated to the severity and extent of CAD. The exact role of Angptl2 in CAD pathogenesis and its potential value as a therapeutic target should be elucidated with further studies.

#### OP-163

##### The Relationship Between Fluoroscopically Detected Coronary Artery Calcification and Coronary Artery Disease

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**Introduction:** Fluoroscopically detected coronary artery calcification is aproven modality for prediction of coronary artery disease (CAD) in asymptomatic patients. In one research the predictive accuracy of CAC in asymptomatic male patients was very high (100% for CAD and 92% for clinically significant CAD) Fluoroscopically calcification finding confirmed the presence of already existing significant stenosis on the coronary artery or a high risk for hemodynamic disorder in another study. The SYNTAX score is a unique tool to score complexity of coronary artery disease. We wanted to investigate the relationship between fluoroscopically detected coronary artery calcification (CAC) and burden of CAD in consecutive patients using syntax score.

**Methods:** Fluoroscopically detected CAC was investigated in 338 patients in outpatient clinic. All patients were underwent coronary angiography. The relationship between fluoroscopically detected calcification and burden of coronary artery disease using syntax score and number of disease vessel were researched. Coronary calcification density, lengthiness, localization and accompanied with thrombus and other features were recorded. All statistical analysis were done by using SPSS 18.

**Results:** Most of the patients were asymptomatic (89%) but the others had chest pain symptoms. (11%) There were 230 male patients (68%, mean age 62±2 years old), 108 female patients. (32%, mean age 65±3 years old) Hypertension was in 78%, type 2 diabetes mellitus in 17%, hyperlipidemia in 35% and smoking in 33%. Fluoroscopically detected CAC were found in 94 patients (27,8%) and not found in 244 patients (72,2%). 212 patients (62,7%) had CAD and 126 patients (37,3%) didn't have. 95 patients (28,1%) one vessel, 117 patients (34,6%) had two or more CAD. We can see crosstabs table of frequency distribution of CAC & CAD in table 1. Correlation analysis showed weak correlation between CAC & CAD but reached statistical significance.(Table1)

Pearson chi-Square value: 20,515, p<0,0001 and Continuity Correction value: 19,393, p<0,0001. Pearson Correlation value: 0,246, p<0,0001

The sensitivity of CAC for detection CAD was 77,3% and specificity was 86,5%. Positive predictivity was 81,9% and negative predictivity 44,6%. (Table2) Also there was a good relationship between CAC and possibility of 2 or more vessel CAD. (Table3) (p<0,0001) Findings of positive fluoroscopically CAC meant more intermediate and high Syntax score than negative CAC. (Table 4) Fluoroscopically detected CAC was found to have a correlation with many findings of CAD so maybe in the future that will be more common in screening asymptomatic patients in outpatient clinics.

**Conclusions:** Our study showed that fluoroscopically detected CAC was easy and confidential method to screen many patients. The value of the method will be rised with more trials.

**Table 1. Frequencies of CAC and CAD with Chi-Square and Correlation test results**

	CAD positive	CAD negative	Total
Calcification positive	77 (81,9%)	17 (18,1%)	94 (27,8%)
Calcification negative	135 (55,3%)	109 (44,7%)	244 (72,2%)
Total	212 (62,7 %)	126 (37,3%)	338 (100%)
Pearson chi-Square value: 20,515, p <0,0001	Continuity Correction value: 19,393, p<0,0001	Pearson Correlation value:0,246, p<0,0001	