

## Laboratory parameters of patients

	Low syntax group (SS < 13) n=252	High syntax group (SS ≥ 13) n=151	p value
Glucose (mg/dL)	132±46	140±53	0.114
Creatinine (mg/dL)	0.96±0.21	1.02±0.25	0.004
LDL-C (mg/dL)	108±21	113±20	0.018
HDL-C (mg/dL)	38±8	38±9	0.912
Total cholesterol (mg/dL)	186±41	179±41	0.101
Triglycerides (mg/dL)	149±66	132±56	0.008
Total bilirubin (mg/dL)	0.59±0.17	0.65±0.21	0.001
Direct bilirubin (mg/dL)	0.20±0.07	0.22±0.08	0.017
LDH (u/L)	326±102	334±109	0.487
AST (u/L)	38±19	39±20	0.691
ALT (u/L)	27±12	27±13	0.872
GGT (u/L)	30±16	35±20	0.009
White blood cell (x10 <sup>9</sup> /L)	9.53±3.18	10.03±3.58	0.145
Hemoglobin (g/L)	13.9±2.1	13.7±2.0	0.365
Hs-CRP (mg/l)	19.5±13.1	25.7±24.1	0.006
Troponin-I (ng/mL)	2.75±0.93	3.45±1.22	0.155
CK-MB (U/L)	51±27	54±27	0.717

Data are expressed as mean ± SD or median for normally distributed data and percentage (%) for categorical variables. SS: Syntax score, LDL-C: Low density lipoprotein cholesterol, HDL-C: High density lipoprotein cholesterol, LDH: Lactate dehydrogenase, AST: Aspartate amino transferase ALT: Alanine amino transferase, GGT: Gamma glutamyl transferase, Hs-CRP: High sensitivity C-reactive protein, CK-MB: Peak creatine kinase-MB

## Effects of various variables on high syntax score in multivariate linear regression analyses

Variables*	β	SE	p value
Age	0.100	0.027	0.041
DM	0.090	0.713	0.064
Total bilirubin	0.171	2.158	0.005
LDL-C	0.121	0.016	0.014
CRP	0.096	0.015	0.052
Troponin-I	0.124	0.069	0.011

\*Adjusted for Age, DM, Total bilirubin, LDL-C, CRP and Troponin-T. DM: Diabetes mellitus, LDL-C: Low density lipoprotein cholesterol, CRP: C-reactive protein.

## Multivariate cox regression analyses of patients for all cause mortality

Risk factors	HR (95% CI)	p value
High syntax score	1.59 (1.25-2.04)	<0.001
Troponin I	1.06 (1.03-1.08)	<0.001

## PP-341

## The Relationship between Intrinsic Coagulation Pathway and Cardiac Syndrome X Development in Patients with Diabetes Mellitus

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**Objective:** Cardiac syndrome X (CSX) is a clinical entity characterized with typical exertional angina and myocardial ischemia shown by ECG or metabolically and normal epicardial coronary anjiogram without inducible vasospasm, of which underlying pathophysiological mechanisms are not well understood yet. Diabetes mellitus (DM) is an important risk factor for CSX development as it is for the obstructive coronary artery disease. But the question 'why some diabetic patients develop CSX while others not?' has not been answered yet. There are many papers suggesting hypercoagulability and endothelial dysfunction development in patients with DM. The aim of this study is to investigate whether plasma levels of coagulation factors XI (F XI) and XII (F XII) which take part in the intrinsic coagulation pathway working independent of endothelium play a role in the development of CSX in patients with DM.

**Method:** CSX diagnosis was done by the presence of exertional angina and myocardial ischemia shown by ECG or scintigraphy and normal or near normal epicardial coronary arteries without inducible coronary vasospasm. There are 72 patients diagnosed as CSX between June'11 and May'12 of which 48 known diabetics and two newly diagnosed diabetics were included to study group consisted of 50 patients. Control group was planned as 45 patients with DM who has no ischemia was shown by noninvasive tests. 11 patients refused to take part in the study so they were excluded and rest 34 patients formed the control group.

**Results:** Both of the coagulation factors XI and XII were higher in the CSX group in comparison with controls (respectively 129.9±23.3 IU/dL vs 118.2±19.4 IU/dL, p=0.019\*; 106.5±25.6 vs 99.1±23.7 IU/dL, p=0.187). Only high plasma levels of FXI was statistically significant. There was no difference between CSX and control group in terms of age, sex, body mass index (BMI), smoking, HT, and the time since diagnosis of DM. Plasma levels of LDL and total cholesterol was higher in the control group compared to patients, and the rest of laboratory values were similar between groups including HgA1c level. Even F XI and F XII levels were not related with smoking, BMI, time since DM diagnosis, and HgA1c levels.

**Conclusion:** The results of this study showed that the intrinsic coagulation pathway is more active in diabetic patients who developed CSX when compared to diabetics without CSX. This study may provide some data for the researchers seeking for the role of hypercoagulability in the development of CSX.

## PP-342

## Xenobiotics and Metabolic Disorders Impact on Inflammatory Values in Patients with Myocardial Infarction

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**Purpose:** In order to assess systemic inflammation activity depending on the metabolic status and occupational influence of xenobiotic 96 patients with myocardial infarction aged 20-64 yy were assessed.

**Methods:** State of the lipid, carbohydrate, purine metabolism, body mass ratio, hair composition of 28 elements, blood levels of c-reactive protein, total fibrinogen, tumor necrosis factor-α were evaluated. Patients were randomized into 2 groups: 1st group (I) included patients who had occupational contact with xenobiotics, 2nd (II) – patients who had no contact with xenobiotics, control – 25 healthy subjects.

**Results:** Myocardial infarction in 1st group patients under 50 y.o. develops predominantly on the background of normal values of lipid, carbohydrate, purine metabolism, low incidence of traditional cardiovascular risk factors and high activity of systemic inflammation evidenced by reliably higher levels of c-reactive protein (8,23±0,45 (I); 6,52±0,58 (II) (mg/l), p<0,05) and total fibrinogen (4,14±0,11 (I); 3,41±0,12 (II) (g/l), p<0,05), compared to control and 2nd group. Regardless of occupation, higher mean level of c-reactive protein prevailed in patients younger than 50. Mean level of tumor necrosis factor-α was higher in older age (over 51) and prevailed in 2nd group what may be related to higher incidence of metabolic disorders (atherogenic dyslipidemia, overweight, diabetes mellitus, etc. (48,90±7,16 (I); 85,24±15,66 (pg/ml), p<0,01 (II)). C-reactive protein and fibrinogen levels correlated with hair and plasma concentration of heavy metals: manganese, zinc, nickel, cobalt, cadmium, lead, strontium (r=0,484-0,990, p<0,01). Tumor necrosis factor-α analysis confirmed its strong relation with metabolic values: elevation of glycated hemoglobin, low density cholesterol, apolipoprotein-B.

**Conclusion:** Among patients younger than 50 who had occupational contact with xenobiotics myocardial infarction development is associated with high activity of systemic inflammation. Xenobiotics are capable to cause systemic inflammation and endothelial dysfunction, induce cytokine and acute phase proteins, resulting in acute coronary circulatory disorders even in absence of severe metabolic disorders. Continuous contact with technogenic chemical substances causes more intense influence on c-reactive protein and fibrinogen elevation, metabolic disorders – on tumor necrosis factor-α. Combination of continuous occupational contact with xenobiotics with metabolic disorders results in reciprocal enhancement of proinflammatory effects and complicated duration of myocardial infarction.

## PP-343

## Diagonal Ear Lobe Crease is Associated with Epicardial Adipose Tissue Thickness and Carotid Intima Media Thickness in Subjects Free of Clinical Cardiovascular Disease

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**Background:** Coronary artery disease is one of the leading causes of mortality worldwide. The diagonal ear lobe crease (ELC) has been recommended as a simple, noninvasive marker of cardiovascular diseases. Epicardial adipose tissue (EAT) thickness and carotid intima media thickness (CIMT) are closely related to cardiovascular disorders and atherosclerosis. There is no knowledge about the relation between EAT thickness, CIMT and diagonal ELC. The aim of our study is to evaluate the association between EAT thickness, CIMT and ELC.

**Method:** Study population was selected from apparently healthy individuals who were referred to hospital for a standard checkup. Sixty five subjects with ELC and sixty