UNIVERSITY OF LATVIA

79th International Scientific Conference of the University of Latvia

Evaluation of STEMI caused by the atherosclerotic disorder of the specific coronary artery

***Rėkus Algirdas*[1], *Jaruševičius Gediminas*[1,2], *Aldujeli Ali*[2]**

[1] *Lithuanian University of Health Sciences, Faculty of Medicine, Kaunas, Lithuania*

[2] *Lithuanian University of Health Sciences, Department of Cardiology, Kaunas, Lithuania*

- **Background.** ST-elevation myocardial infarction (STEMI) is an acute condition best treated by percutaneous coronary artery (CA) intervention. This retrospective study attempted to assess the association between STEMI caused by CA and disease risk factors, studies conducted and treatment data.
- **Aim.** To evaluate the connections between CA and of STEMI – experienced patients' data of those admitted to the Lithuanian University of Health Sciences Department of Cardiology.
- **Methods.** A retrospective single-centre study was conducted of 745 STEMI patients. Patients were divided into four groups, depending on CA induced STEMI: right coronary artery (RCA), left main artery (LM), left anterior descending (LAD), left circumflex (LCx). Gender, age, history of smoking, diabetes mellitus (DM), obesity, arterial hypertension (AH), TIMI flow before and after reperfusion, total number, length and diameters of stents used, initial laboratory tests: haemoglobin, glucose, creatinine, troponin I (TnI), potassium, leukocytes, total (TC), high (HDC) and low (LDC) – density cholesterol, triglyceride levels (TG) and mortality were evaluated. Chi-square test, Student's t-test, independent – samples Kruskal-Wallis test, ANOVA were used for analysis. The value of $p \leq 0.05$ was considered statistically significant.

- **Results.** The study evaluated 756 STEMI patients. No statistical significance was found between the CA and data: gender (p=0.217), age (p=0.466), smoking (p=0.378), DM (p=0.296), obesity (p=0.095), AH (p=0.194), TIMI flow before (p=0.173) and after intervention (p=0.488), number of stents used (p=0.629), initial laboratory tests: glucose (p=0.690), creatinine (p=0.156), TnI (p=0.808), potassium (p=0.185), leukocytes (p=0.912), TC (p=0.217), LDC (p=0.187), TG (p=0.4) and mortality (p=0.461). The statistical significance of the following data was determined: the total length of stents used in RCA was longer than LCx (p=0.03), the total diameter of the stents used in LAD was larger than RCA (p=0.02), the initial haemoglobin concentration was lower in LAD than RCA (p=0.02), HDC was found to be higher in LAD than in RCA (p=0.004).
- **Conclusion.** For the RCA, longer stents were used in general than the LCx, but the total stents' diameter for the LAD was larger than in case of the RCA. The haemoglobin concentration was lower in the LAD than in the RCA. HDC was found in higher concentration among LAD than the RCA.

.