Relation between dyslipidaemia and in-hospital complications of STEMI patients

Rėkus Algirdas[1], Jaruševičius Gediminas [2]

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

- **Background.** Dyslipidaemia is a major risk factor for developing ST-elevated myocardial infarction (STEMI), which is the leading cause of death among men and women worldwide. This study attempted to compare the incidence of STEMI complications between those with dyslipidaemia and those without.

- **Aim.** To evaluate the incidence of early in-hospital complications in patients with STEMI who had dyslipidaemia and those, who had not.

- **Methods.** This retrospective study involved 734 patients diagnosed with STEMI in the LUHS Department of Cardiology. Patients were considered to have dyslipidaemia, if they were diagnosed prior to STEMI. Patients were divided into two groups according to their dyslipidaemia status: with dyslipidaemia and without dyslipidaemia. The endpoints of the study were defined as early complications during in-hospital period (stroke, pulmonary venous stasis (PVS), death, atrial fibrillation (AF), ventricular extrasystole (VE), ventricular fibrillation (VF), and atrioventricular disease II-III ° block (AVB)). Statistical analysis was performed using IBM SPSS version 25.0. Chi-square ($\chi2$) criteria was used to compare qualitative characteristics and study correlations. Student's T-test was used to compare the average of two variable parameters in independent samples. Compare the average values of two nonparametric variables in independent samples – Mann-Whitney U-test. The value of p≤0.05 was considered as statistically significant.

- **Results.** The majority of patients had dyslipidaemia prior to the onset of STEMI 594 (80.1%). The presence of PVS on chest roentgenogram was statistically significant among patients with dyslipidaemia (p=0.005). Among STEMI patients with dyslipidaemia grade I venous stasis 205 (27.6%) is the most common. There is statistical significance between dyslipidaemic STEMI patients and in-hospital mortality (p=0.01). AF, stroke, II-III ° AVB, VE, VF frequency were not statistically significant (p=0.163, p=0.08, p=0.583, p=0.156, p=0.795 accordingly).

- **Conclusion.** There is a statistical significance that dyslipidaemia increases the incidence of pulmonary venous stasis, death in STEMI patients. Meanwhile, the association of dyslipidaemia with atrial fibrillation, II-III ° atrioventricular block, ventricular fibrillation, ventricular extrasystoles, and strokes of in-hospital STEMI patients were not statistically significant.