

## INFLUENCE OF SYSTEMIC INFLAMMATORY RESPONSE ON IN HOSPITAL OUTCOME IN PATIENTS WITH TYPE 2 DIABETES MELLITUS AND ST-SEGMENT ELEVATION MYOCARDIAL INFARCTION UNDERGOING PRIMARY PERCUTANEOUS CORONARY INTERVENTION

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Subjects with type 2 diabetes mellitus (T2DM) constitute 13-25% of patients with acute myocardial infarction with ST-segment elevation (STEMI) hospitalized for myocardial reperfusion therapy. The aim of this study was to evaluate systemic inflammatory response in patients with T2DM and STEMI undergoing primary angioplasty at our clinic and to estimate prognostic significance of inflammatory markers, C-reactive protein (CRP), for in-hospital mortality in type 2 diabetics compared to those without diabetes.

The retrospective-prospective clinical study included 574 STEMI patients (122 with, and 452 without T2DM), both male and female, who underwent primary percutaneous coronary intervention (pPCI). Examination of the biochemical parameters demonstrated significantly higher concentrations of CRP [med CRP mg/L (25th-75th) 45.0 (12.0 to 101.0) to 25.8 (from 11.3 to 53.7),  $p=0.013$ ] and glucose levels ( $12.4\pm 5.9$  vs.  $7.8\pm 1.9$ ,  $p=0.001$ ) in subjects with diabetes. There were no differences between the groups regarding the activity of CK-MB fraction and LDH.

Multivariate analysis showed that CRP is an independent prognostic factor of adverse outcome in the first 30 days after primary PCI in non-diabetic group, followed by patient age and smoking (95%CI) [1.012 (1.004-1.020);  $p=0.004$ ]. In contrast to diabetic patients, a significant mortality in non-diabetics was observed for the third tertile of (95%CI) [1.014 (1.008-1.020);  $p=0.001$ ]. This findings were presented on the Kaplan-Meier curve.

C-reactive protein turned out to be an independent prognostic factor for hospital mortality for the patients without diabetes mellitus type 2 undergoing primary percutaneous coronary intervention. *Acta Medica Medianae 2017;56(2):5-12*

**Key words:** STEMI, C-reactive protein, primary percutaneous coronary intervention, type 2 diabetes mellitus, inflammation