## 10-year outcomes after acute ST-elevation myocardial infarction treated with primary percutaneous coronary intervention – single center experience

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**Goal**: to investigate the long-term prognosis of acute ST-elevation myocardial infarction (STEMI) treated with primary percutaneous coronary intervention (PCI).

**Patients and Methods**: This prospective study included 229 patients who survived acute STEMI. They were followed (2011-2021) and classified into two groups (with/without major adverse cardiovascular events (MACE)), and compared by their baseline (age, gender, cardiovascular risk factors), laboratory (maximal CK/TnT, acute inflammatory (white blood cells (WBC), hs-CRP) and liver biomarkers (AST/LDH), glomerular filtration rate (eGFR)), angiographic (stenosed coronary arteries and their segments, Gensini score) and clinical severity parameters (hospitalization duration, total in-hospital complications, echocardiography (LVEF)).

**Results**: Cardiac rehospitalization, stroke, mortality and total MACE was present at 35.4%, 3.4%, 4.8% and 38.9% of patients, respectively. Logistic regression analysis revealed that several baseline (age, hypertension, metabolic syndrome, previous PCI/CABG), laboratory (LDH, max CK), angiographic (significant stenosis of LAD and ACx, multivessel CAD, proximal coronary stenosis, Gensini score), and clinical severity parameters (total in-hospital complications) increase, while the others (higher eGFR and LVEF) reduce the risk of the total MACE (for all P<0.05). In the multivariate analysis, the number of significantly stenosed coronary arteries, as well as lower LVEF and eGFR are the main predictors of the total MACE (for all P<0.05).

**Conclusion**: Long-term prognosis after acute STEMI is influenced by the severity of the CAD, systolic and kidney function.<sup>1-3</sup> Primary prevention must be directed to the treatment of arterial hypertension and metabolic syndrome generally, two modifable risk factors that increase the risk of MACE.

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