Effect of glycosylated hemoglobin on cardiovascular outcomes of patients with STEMI.

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Introduction: Dyglycemia on admission is associated with increased mortality rates in patients with ST-elevation myocardial infarction (STEMI).

Aim: Investigate the relationship between dysglycemia and angiographic and clinical outcome after primary or rescue angioplasty for STEMI.

Methods: We prospectively included 188 patients who underwent revascularization for STEMI. We compared intrahospital outcomes between the groups of patients with HG (HG+) and without HG (HG-). Plasma glucose was measured at hospital admission. HG was defined as plasma glucose > 11mmol/l.

Results: Among the overall population, 60 (31.9%) patients had HG. The mean age was 60.77 ±11.79 years. They were more frequently men (84,4%) with a more frequent history of diabetes and hypertension. A total of 19 cases (31.7% of the study group) of newly diagnosed diabetes mellitus were registered. In subjects with higher admission glucose the maximal levels of troponin I were higher, as well as maximal values of creatine phosphokinase. Coronary status was more severe in HG+ (52.6 % vs 47.4% p=0.003). Procedural success was lower in the HG+ group (31.4% vs 68,6% ) with higher rates of per-procedural complications (51.6% vs 48.4%, p= 0.019). Intrahospital outcomes were worse in the HG+ group as attested by a higher mortality (3.19% vs 4.25%, p=0.043). Those outcomes were similar in the HG+ group regardless to the diabetic status.

Conclusion: Hyperglycemia on admission is associated with greater myocardial injury and an increased risk of major adverse cardiovascular events at long-term follow-up.