

Ischemic Cardiopathy

Fasting Glycemia as a Predictor of In-Hospital Mortality in Patients with Acute Myocardial Infarction Undergoing Primary Angioplasty

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Background

The prognosis of patients with acute ST-segment elevation myocardial infarction (STEMI) has considerably improved, particularly due to reperfusion therapy. However, patients with diabetes mellitus (DM) constitute a high risk group. In patients with STEMI, hyperglycemia is associated with adverse prognosis, regardless of the previous diagnosis of DM.

Objective

To assess the prognostic value of fasting glycemia (FG) in patients with STEMI undergoing primary angioplasty.

Material and Methods

From a total of 227 patients admitted with STEMI, 31 patients with DM and 7 patients referred to rescue angioplasty were excluded. Glycemia at admission (GAd) and FG were registered; the population was divided according to FG: group A ≥ 110 mg/dl (hyperglycemic) and group B < 110 mg/dl (normoglycemic).

Results

The study population comprised 189 patients. Mean age was 62.1 ± 10.5 years, 82% were men and 40% were current smokers; pain-to-balloon time was 2.75 hours (25-75% interquartile range: 2-4.75); 12.1% had a Killip & Kimball (KK) class ≥ 3 , and 38% were anterior wall infarctions. Fifteen patients (7.9%) died during hospitalization; all deaths occurred in hyperglycemic patients. Multivariate analysis identified age ($p=0.048$) and FG ($p=0.002$) as independent predictors of mortality; KK class ≥ 3 ($p=0.001$), FG ($p=0.001$), and moderate to severe systolic dysfunction ($p=0.016$) were independent predictors of major cardiac events (death, reinfarction and heart failure). Glycemia at admission was not identified as an independent predictor of death or major cardiac events.

Conclusions

The results of the present study suggest that FG has a prognostic value in the short term in non diabetic patients with STEMI. Fasting glycemia is a simple tool for the early identification of a high risk population.