RELATION OF SYMPTOM-ONSET-TO-BALLOON TIME AND LONG-TERM MORTALITY IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION TREATED WITH DRUG-ELUTING STENTS

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Background: The time from hospital arrival to reperfusion in ST-segment elevation myocardial infarction (STEMI) has been predictive of in-hospital mortality. The purpose of the study was to evaluate the relationship between symptom-onset-to-balloon time and 3-year mortality in patients with STEMI treated with drug-eluting stents (DESs).

Methods: A series of 404 patients with STEMI treated with DESs from 2005 to 2007 were stratified according to risk profile and preprocedural Thrombolysis In Myocardial Infarction (TIMI) flow. All clinical, angiographic and follow-up data were collected. The relation between symptom-onset-to-balloon time and mortality was investigated according to risk profile and preprocedural TIMI flow.

Results: A total of 99 (24.5%) low-risk patients and 305 (75.5%) non-low-risk patients were identified. The 3-year mortality rate was 3.0% for low-risk patients and 10.5% for non-low-risk patients (p = 0.022), but it was not different according to symptom-onset-to-balloon time in both low-risk (p = 0.715) and non-low-risk patients (p = 0.954). Similarly, symptom-onset-to-balloon time and mortality were not related according to preprocedural TIMI flow (p = 0.565 for TIMI 0 to 1, p = 0.732 for TIMI 2 to 3). At multivariate analysis, age at presentation, basal and peak cardiac enzymes and postprocedural TIMI flow 0 to 1 were identified as independent predictors of 3-year mortality while symptom-onset-to-balloon time and preprocedural TIMI flow were not.

Conclusions: Symptom-onset-to-balloon time does not affect long-term outcomes even in non-low risk subjects and poor preprocedural TIMI flow in STEMI patients treated with DESs.