Predictors and Impact of No Reflow Phenomenon After Primary Percutaneous Coronary Intervention in Patients With Acute Myocardial Infarction

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Abstract

Background: Angiographic no-reflow during primary percutaneous coronary intervention (PCI) in patients with ST-elevated acute myocardial infarction (AMI) may result in unfavorable outcomes.

Objectives: The aim of our study was to investigate the clinical factors and angiographic findings that predict /no-reflow phenomenon and the outcome of AMI patients with no-reflow.

Methods: A total of 627 AMI patients, who underwent primary PCI within 24 hours of symptom onset were divided into a normal flow group (thrombolysis in myocardial infarction [TIMI] flow grade 3, n = 549) and a no-reflow group (≤TIMI flow grade 2, n =78), based on cine angiograms performed during PCI.

Results: A total of 78patients (12.4%) developed no-reflow phenomenon. Univariable and multivariable logistic regressions were used to identify predictors of no reflow after primary PCI. In univariable analysis, 10 variables (age, DM, chromic pretreatment with statins, Killip class,TIMI risk score of STEMI, admission glucose, TLC, time to- treatment interval, , baseline TIMI flow grade, Direct stenting were identified as predictors of no-reflow phenomenon

 After application of multivariable regression analyses method, 2 variables (TIMI risk score of STEMI, baseline TIMI flow grade) were considered as independent predictors of no reflow after primary PCI.

The in-hospital and 6-month mortality and of major adverse cardiac events (MACE) were significantly higher in the no-reflow group than in the optimal flow group.

Conclusion TIMI risk score of STEMI, baseline TIMI flow grade can be used to stratify STEMI patients into a lower or higher risk for angiographic no-reflow

key words: No reflow-Acute STEMI- MACE-Primary PCI-Predictors.