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Predictors of no-reflow in patients with ST segment elevation myocardial infarction undergoing primary percutaneous coronary intervention

Hamdy Shamseddin Mohammad
Assiut University, Egypt

Background & Aim: Primary percutaneous coronary intervention (PPCI) is associated with a serious problem known as the no-reflow (NR) which is associated with poor outcome. We aimed to identify the percentage of NR in patients with STEMI undergoing PPCI and its possible predictors.

Methods: We conducted an observational cohort study from October 1st 2015 to November 30th 2016 included 310 patients presented with STEMI and underwent PPCI. Seventeen patients were excluded for flow limiting mechanical obstructions. NR was defined as TIMI grade < 3 at procedure end in absence of coronary dissection or spasm. Patients were divided into 2 groups: patients with normal flow and those with NR to be compared regarding demographic, electrocardiographic as well as angiographic outcome.

Results: No reflow occurred in 31% of our patients, of which 25% died during hospital stay and two months post discharge, while total mortality among the normal flow group were only 3%. Using multivariate regression analysis, NR was more common with advanced age, delayed first medical contact with prolonged total ischemic time, Anterior infarction, higher syntax score (>19), longer target lesion (≥ 21 mm), higher thrombus burden (thrombus grade ≥ 4), wider reference luminal diameter (≥ 3 mm) and final TIMI frame count (≥ 22 frames) and all were independent predictors of NR.

Conclusion: NR developed in 31% of our cohort with advanced age, delayed medical contact, anterior MI with higher syntax score and high thrombus burden were its independent predictors.

Notes: