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Titel des Beitrags: Prognostic significance of epicardial blood flow before and after percutaneous coronary intervention in patients with acute coronary syndromes

Abstract: Objectives The aim of the study was to assess the relationship between baseline and post-procedural Thrombolysis In Myocardial Infarction (TIMI) epicardial blood flow grade and mortality in patients with acute coronary syndromes (ACS) who were treated with early percutaneous coronary intervention (PCI).

Background The impact of baseline and post-procedural TIMI flow grade on mortality in patients with ACS has been insufficiently studied. Methods This prospective registry included 10,455 patients with ACS who underwent coronary angiography and PCI: 2,853 patients with ST-segment elevation acute myocardial infarction, 3,060 patients with non-ST-segment elevation acute myocardial infarction, and 4,542 patients with unstable angina. The primary outcome was 1-year mortality. Results At 1 year, there were 976 deaths: 117 deaths among patients with TIMI flow grade 0 to 1, 105 deaths among patients with TIMI flow grade 2, and 754 deaths among patients with TIMI flow grade 3 (Kaplan-Meier estimates of mortality 28.3%, 18.4%, and 8.0%, respectively; odds ratio: 1.66, 95% confidence interval [CI]: 1.57 to 1.76, p< 0.001, for TIMI flow grade 0 to 1 vs. TIMI flow grade 2 and odds ratio: 2.51, 95% CI: 2.06 to 3.06, p< 0.001, for TIMI flow grade 2 vs. TIMI flow grade 3). By using the Cox proportional hazards survival model, we identified post-PCI
TIMI flow grade (hazard ratio: 0.60, 95% CI: 0.52 to 0.70; p< 0.001, for 1 grade increase in TIMI flow grade) but not baseline TIMI grade (hazard ratio: 1.08, 95% CI: 0.96 to 1.22; p = 0.20, for 1 grade increase in TIMI flow grade) as an independent correlate of 1-year mortality. Conclusions In patients with ACS treated with early PCI, post-procedural TIMI flow grade but not baseline TIMI flow grade is an independent correlate of 1-year mortality.