ISCHEMIC TIME IS A BETTER MORTALITY PREDICTOR THAN DOOR-TO-BALLOON TIME IN PATIENTS WITH ST-ELEVATION MYOCARDIAL INFARCTION

Poster Contributions
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Background: Current guidelines for ST-elevation myocardial infarction (STEMI) recommend early revascularization with optimal ischemic time (IT) <120 min and door-to-balloon (D2B) time <90 min. Revascularization delays may increase mortality. The focus of most previous analyses has been D2B time, while total IT is not frequently reported. We tested the hypothesis that total IT is a better mortality predictor than D2B time.

Methods: Total IT was defined as time from symptom onset to device activation, while D2B time was defined as hospital arrival to device activation. Patients were divided into groups according IT (<120, 120-239, ≥ 240 min) and D2B time (<30, 30-59, 60-89, and ≥ 90 min).

Results: Between 12/2008 and 04/2013, 786 patients with STEMI were treated in our STEMI center. Baseline demographics including age, cardiac risk factors and LAD infarct location were similar between groups. Thirty day mortality significantly increased across IT groups (2.7% to 14.2%; (odds ratio [OR] 0.16; 95% confidence interval [CI] 0.03 to 0.54; p= 0.001). In contrast, increases across D2B time groups did not correlate with mortality (6.3% to 9.3% (OR 0.65; 95% CI 0.20 to1.80; p = 0.34). (Figure 1)

Conclusions: In STEMI patients, IT is a better predictor than D2B time for 30-day mortality. Our findings suggest that the focus of STEMI care should be directed at early initiation of therapy and minimizing IT rather than D2B time alone. The potential impact of IT reporting in current STEMI registries warrants further investigation.