

A NOVEL STRATEGY TO REDUCE “ OFF-HOURS “ DOOR TO BALLOON TIME IN ST ELEVATION MYOCARDIAL INFARCTION

i2 Poster Contributions

Georgia World Congress Center, Hall B5

Sunday, March 14, 2010, 9:30 a.m.-10:30 a.m.

Session Title: DES I and Acute Coronary Syndromes

Abstract Category: PCI - Acute MI

Presentation Number: 2501-431

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A Novel Strategy To Reduce “Off-Hours” Door To Balloon Time in ST Elevation Myocardial Infarction

Objective: The aim of this study is to evaluate a strategy for reducing door to balloon time (D2B) in patients with ST-elevation myocardial infarction (STEMI) with “off-hours” presentation (nights and weekends).

Background: A widely recognized goal for D2B time based on national guideline statements is < 90 minutes in >75% of patients. This goal was not reached in “off-hour” patients at a university hospital in a large metropolitan area where many non-physician cardiac catheterization (cath lab) staff members lived >30 minutes from the hospital.

Methods: Data were collected on D2B over a 3 year period. To improve “off-hours” D2B, a novel in-hospital strategy was implemented whereby interventional cardiologists and cross trained Emergency Department (ED) staff transported patients to the cath lab and initiated catheterization while cath lab staff were in transit. D2B and components of D2B were analyzed subsequently.

Results: Amongst patients with STEMI, there was a significant improvement in the percent of “off-hours” patients achieving D2B < 90 minutes (93% compared to 51% and 35% in two earlier time periods, $P=0.0003$). D2B for “off-hours” patients was reduced from 106 to 74 minutes ($P=0.0003$) and in “on-hour” patients from 56.6 to 42.8 minutes ($P=0.025$). Improvements in D2B were primarily due to a reduction in door to cath lab time of 32 minutes (36.4 minutes vs.68.4 minutes ($P=0.0002$).

Conclusion: The goal of D2B < 90 minutes was achieved in a majority of patients, without added cost, even in “off-hours” presentation, by close cooperation between cross trained ED staff and interventional physicians.