16.4-S1

Bypassing ER to Improve Outcomes of Patients with STEMI: Analysis of Data from 2004-2010 ACSIS

Lubovich, Alla[1]; Gottlieb, Shmuel[2]; Rosenshein, Uri[1]
[1]Bnai Zion Medical Center, Cardiology, Haifa, Israel; [2]Tel-Hashomer, Neufeld Cardiac Research Institute, Tel Aviv, Israel

Background: Rapid reperfusion of an infarct-related artery is crucial for the successful treatment of STEMI. In our previous analysis of data from 2004-2006 ACSIS we showed that bypassing the ER shortens door-to-balloon time and improves 30 day MACE.
Objectives: The main aim of our current analysis is to demonstrate whether bypassing ER causes any meaningful reduction of MACE and mortality in a larger cohort of STEMI patients.
Methods: We analyzed data of 1552 patients with STEMI treated by primary PCI from the 2004, 2006, 2008 and 2010 ACSIS registry. Thirty percent of patients (459 of 1552) arrived directly to the Intensive Cardiac Care Unit (ICCU) or Catheterization Laboratory and 70% (1093 of 1552) were assessed first in the ER. Our primary end points were door-to-balloon time, 30 day MACE and 30 day and 1 year mortality in the two study groups. Our secondary end points were pre discharge ejection fraction, in - hospital pulmonary edema and in- hospital cardiogenic shock.
Results: The study groups were well balanced according to basic demographic characteristics. There was no significant difference in Killip class on presentation, percentage of anterior STEMI or pain to door time between the groups. There was significant reduction in mean door to balloon time in the bypass ER group (59 vs 97, p=0.001). There was no difference in 30 day MACE, 30 day mortality or 1 year mortality between the two study groups. There was significantly less in-hospital pulmonary edema in the bypass ER group. We performed subgroup analysis of patients with anterior STEMI, women and patients arriving during weekends. There was no significant difference in frequency of primary end points in any of these subgroups.
Conclusions: In the analysis of 2004-2010 ACSIS data, we demonstrated that the bypass ER policy led to significant shortening of door- to - balloon time. However, we were unable to demonstrate any significant difference in 30 day MACE, 30 day and 1 year mortality.