

Eur Heart J. 2008 Aug; 29 (15): 1834-1842

Clinical impact of an inter-hospital transfer strategy in patients with ST-elevation myocardial infarction undergoing primary angioplasty: the Emilia-Romagna ST-segment elevation acute myocardial infarction network.

Manari A, Ortolani P, Guastaroba P, Casella G, Vignali L, Varani E, Piovaccari G, Guiducci V, Percoco G, Tondi S, Passerini F, Santarelli A, Marzocchi A.

Source

Unità Operativa di Cardiologia Interventistica, Ospedale S Maria Nuova, Viale Risorgimento n 80, 42100 Reggio Emilia, Italy. manari.antonio@asmn.re.it

Abstract

AIMS:

This study sought to evaluate the impact of an inter-hospital transfer strategy on treatment times and in-hospital and 1 year cardiac mortality of patients with ST-segment elevation acute myocardial infarction (STEMI) undergoing primary percutaneous intervention (p-PCI) in the Italian region of Emilia-Romagna, where an efficient region-wide system for reperfusion has been established.

METHODS AND RESULTS:

3296 patients with STEMI, undergoing on-site p-PCI (2444 patients) (OS group) or p-PCI after inter-hospital transfer (852 patients) (T group) between 1 January 2004 and 30 June 2006 in the Italian region of Emilia-Romagna, were considered. During the study period, the number of patients undergoing p-PCI increased both for patients admitted to interventional centres and for those admitted to peripheral hospitals. At the same time, the proportion of patients with STEMI initially admitted to peripheral hospitals and not transferred and the door-to-balloon time delays of transfer patients decreased. In spite of longer door-to-balloon delay in the transfer group [112 min (86-147) vs. 71 min (46-104)], in-hospital cardiac mortality (OS 7.0 vs. T 5.4%, $P = 0.10$) did not significantly differ between the two groups. After multivariable adjustment, the transfer strategy was not associated with increased risk of in-hospital [odds ratio 0.956; 95% confidence interval (CI) 0.633-1.442] and 1 year (hazard ratio 0.817; 95% CI 0.617-1.085) cardiac mortality.

CONCLUSION:

This study, concerning an established STEMI regional network, suggests that a strategy of inter-hospital transfer for p-PCI, when supported by an organized system of care, may be applied with rapid reperfusion times and favourable short- and long-term clinical outcomes.