

Assessment of the management of acute myocardial infarction in emergency room, compared to prehospital management

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Purpose: Prehospital medical management of STEMI is believed to offer better outcome as compared to emergency department management. However, few data are available to document populations, on-site management and outcome in these two settings.

Methods: A continuous survey was carried out in a geographical area of 3 million inhabitants, prospectively including all patients with STEMI. Baseline characteristics, management and outcome were compared for patients managed in the mobile intensive care units (MICU) and in the emergency department (ED).

Results: 1630 STEMI patients were included, 1184 (73%) in MICU and 446 (27%) in ED. Clinical

Characteristics were similar in both groups. Reperfusion rate was 98% in MICU group vs. 95% in ED group. Time from symptom onset to first medical contact (FMC) was 85 min [50-170] in MICU group vs. 160 min [77-318] in ED group (p<0.001). Median delay from FMC to fibrinolysis was 20 min [15-30] in MICU group vs. 46 min [27-62] in ED group (p<0.001). Median delay from FMC to PPCI (needle time) was 78 min [64-100] in MICU group vs. 125 min [84-233] in ED group (p<0.01). 24% of patient in MICU group underwent a fibrinolysis vs. 17% in ED group (p<0.01). Adjunctive medications (anti-platelet and anti-thrombotic) use was consistent to guidelines. In hospital mortality and one month mortality were similar in both groups (5% and 7% in MICU group vs. 5% and 9% in ED group).

Conclusion: Time from symptom onset to FMC, and from FMC to reperfusion therapy were higher in the ED group for both reperfusion strategies. Efforts should focus on improving identification and management of STEMI patients in the emergency departments.