

Implementation of AMI clinical pathway for uncomplicated acute myocardial infarction at a local hospital: three years experience, outcomes and impacts

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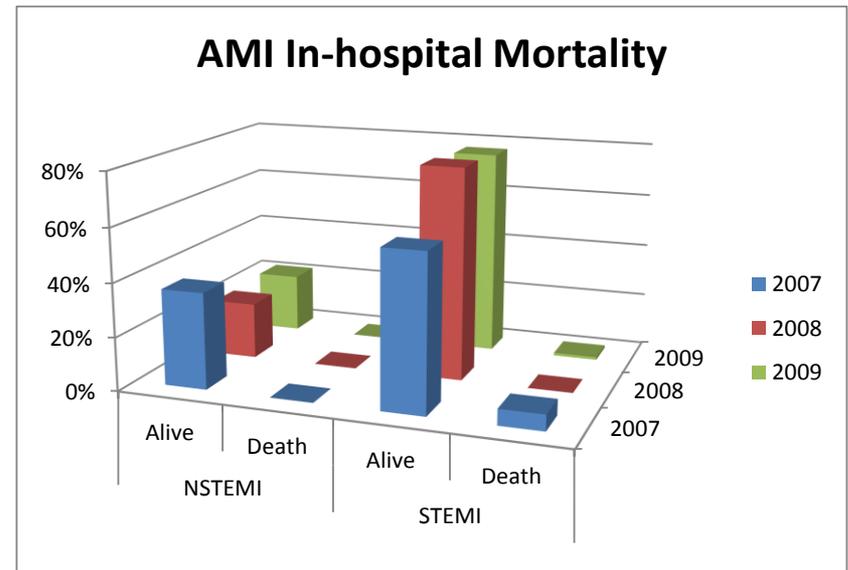
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Introduction: Development of Acute Myocardial Infarction (AMI) Clinical Pathway was aiming at incorporating evidence-based medicine into clinical practice in the management of uncomplicated AMI patients. The use of Clinical Pathways has increased over the past decade in many developed countries. Less regular adoption of Clinical Pathways is noted in developing countries and in Asia. There is no published data on the implementation and the subsequent impacts of Clinical Pathways in Hong Kong. This study explored the logistics, results and impacts of such development, in a university teaching hospital receiving acute patients in Hong Kong. The parameters focused included the magnitude of improvement in quality care of patients with AMI, the length of hospital stay, the in-patient and 30-day mortality, the door-to-needle time (DNT) in thrombolytic therapy (TT) and door-to-balloon time (DBT) in primary percutaneous coronary intervention (primary PCI) in ST-segment elevation myocardial infarction (STEMI) patients.

Methods: AMI Clinical Pathway was implemented in a university teaching hospital since January 2007. All data were prospectively entered into the AMI Clinical Pathway database and independently monitored and audited by independent committee. Retrospective analysis of data was carried out at the end of the study period. P value of <0.05 was regarded as statistically significant.

Results: A total of 535 AMI patients were recruited and managed according to the pathway protocol. 402 patients had successfully completed the pathway and 72.9% had a diagnosis of STEMI. At the beginning, the average length of hospital stay was 4.0 ± 2.6 days, the in-patient and 30-day mortality were 6.0% and 9.6% respectively, the mean DNT was 105.9 ± 66.4 minutes and the DBT was 161.3 ± 95.6 minutes. In 2009, after 3 years of implementation of the Clinical Pathway, the

average length of hospital stay was shortened to 3.9 ± 1.8 days ($p=0.627$), the in-patient and 30-day mortality improved to 0.9% ($p=0.013$) and 0.9% ($p=0.003$) respectively as well, the mean DNT reduced to 39.6 ± 17.3 minutes ($p<0.001$) and the DBT 107.2 ± 24.9 minutes ($p=0.018$).



Conclusions: AMI clinical pathway helps to streamline and standardize patient care in those with uncomplicated AMI. All clinical outcome parameters, including the DNT, DBT and mortality rate have improved since its implementation in 2007.

