

Impact of Cardiac Care Variation on ST-Elevation Myocardial Infarction Outcomes in Malaysia.

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Source

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Abstract

Developing countries face challenges in providing the best reperfusion strategy for patients with ST-segment elevation myocardial infarction because of limited resources. This causes wide variation in the provision of cardiac care. The aim of this study was to assess the impact of variation in cardiac care provision and reperfusion strategies on patient outcomes in Malaysia. Data from a prospective national registry of acute coronary syndromes were used. Thirty-day all-cause mortality in 4,562 patients with ST-segment elevation myocardial infarctions was assessed by (1) cardiac care provision (specialist vs nonspecialist centers), and (2) primary reperfusion therapy (thrombolysis or primary percutaneous coronary intervention [P-PCI]). All patients were risk adjusted by Thrombolysis In Myocardial Infarction (TIMI) risk score. Thrombolytic therapy was administered to 75% of patients with ST-segment elevation myocardial infarctions (12% prehospital and 63% in-hospital fibrinolytics), 7.6% underwent P-PCI, and the remainder received conservative management. In-hospital acute reperfusion therapy was administered to 68% and 73% of patients at specialist and nonspecialist cardiac care facilities, respectively. Timely reperfusion was low, at 24% versus 31%, respectively, for in-hospital fibrinolysis and 28% for P-PCI. Specialist centers had statistically significantly higher use of evidence-based treatments. The adjusted 30-day mortality rates for in-hospital fibrinolytics and P-PCI were 7% (95% confidence interval 5% to 9%) and 7% (95% confidence interval 3% to 11%), respectively ($p = 0.75$). In conclusion, variation in cardiac care provision and reperfusion strategy did not adversely affect patient outcomes. However, to further improve cardiac care, increased use of evidence-based resources, improvement in the quality of P-PCI care, and reduction in door-to-reperfusion times should be achieved.

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