

Ethnic Differences and Trends in ST-Segment Elevation Myocardial Infarction Incidence and Mortality in a Multi-Ethnic Population

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Abstract

Introduction: This study aimed to compare the incidence and mortality of ST-segment elevation myocardial infarction (STEMI) across the 3 main ethnic groups in Singapore, determine if there is any improvement in trends over the years and postulate the reasons underlying the ethnic disparity. **Materials and Methods:** This study consisted of 16,983 consecutive STEMI patients who sought treatment from all public hospitals in Singapore from 2007 to 2014. **Results:** Compared to the Chinese (58 per 100,000 population in 2014), higher STEMI incidence rate was consistently observed in the Malays (114 per 100,000 population) and Indians (126 per 100,000 population). While the incidence rate for the Chinese and Indians remained relatively stable over the years, the incidence rate for the Malays rose slightly. Relative to the Indians (30-day and 1-year all-cause mortality at 9% and 13%, respectively, in 2014), higher 30-day and 1-year all-cause mortality rates were observed in the Chinese (15% and 21%) and Malays (13% and 18%). Besides the Malays having higher adjusted 1-year all-cause mortality, all other ethnic disparities in 30-day and 1-year mortality risk were attenuated after adjusting for demographics, comorbidities and primary percutaneous coronary intervention. **Conclusion:** It is important to continuously evaluate the effectiveness of existing programmes and practices as the aetiology of STEMI evolves with time, and to strike a balance between prevention and management efforts as well as between improving the outcome of “poorer” and “better” STEMI survivors with finite resources.

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