



Quality of Care and Outcomes Assessment

DIFFERENCES IN LATE CARDIOVASCULAR MORTALITY FOLLOWING ACUTE MYOCARDIAL INFARCTION AMONG THREE MAJOR ASIAN ETHNICITIES

Poster Contributions

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Background: Few studies have reported on disparities in long-term AMI outcomes among Asian ethnicities.

Methods: We conducted a nationwide study of 15,151 patients hospitalized for AMI from 1st January 2000 to 31st December 2005 in Singapore. Outcomes out to 1st March 2012 were compared among Chinese, Malay and Indian Singaporean patients. Multivariate adjustment for GRACE risk score, discharge medications and 30-day revascularization was performed using Cox regression. The relative survival ratio was computed by dividing the observed cardiovascular (CV) event-free survival of AMI patients with the expected CV event-free survival of a comparable general population.

Results: Mean follow-up was 7.8 years. Chinese were the oldest with the highest proportion of women while Indians had the most diabetics and strongest familial predisposition (Table 1). Median GRACE score was highest among Chinese followed by Malays and Indians. Unadjusted in-hospital mortality was highest among Chinese while late CV mortality was highest among Malays. Compared with Chinese, the adjusted late CV mortality hazard ratio approached unity in Indians but was significantly higher in Malays. The relative survival ratio was significantly reduced for all 3 ethnicities.

Conclusion: Among patients hospitalized for AMI in Singapore, significant ethnic differences exist in risk factor burden and late case-fatality. All 3 Asian ethnicities had a high long-term residual risk of CV adverse events following an AMI.

Table 1. Baseline Clinical Characteristics, Treatment and Outcomes by Ethnicity

	Chinese (n = 10,100)	Malay (n = 3,005)	Indian (n = 2,046)
Median Age (25 th , 75 th percentile), years	64 (54-74)	61 (51-71)	58 (49-70)
Women, %	29	27	23
Diabetes Mellitus, %	35	42	51
Family History of Premature CHD, %	11	15	22
Prior MI, %	11	11	15
ST-elevation MI, %	47	46	47
Primary PCI, %	23.9	20.3	27.0
Fibrinolysis, %	19.2	21.3	21.6
Median GRACE score (25 th , 75 th percentile)	144 (119,173)	138 (115,167)	131 (109,160)
Unadjusted in-hospital mortality, %	9.8	7.6	6.5
Unadjusted late CV mortality, %	43	46	38
Adjusted Late CV mortality Hazard Ratio*	1.00	1.36 (95% CI 1.25-1.47)	1.05 (95% CI 0.94-1.16)
5 year Relative Survival Ratio†	0.73 (95% CI 0.72-0.74)	0.69 (95% CI 0.66-0.71)	0.79 (95% CI 0.76-0.81)

CHD indicates coronary heart disease; CI indicates confidence interval; MI, indicates myocardial infarction; PCI, percutaneous coronary intervention; *1.8 year hazard ratio with Chinese as the reference group; †relative survival ratio compared with background population.