Type-II MI - Demographics, Presentation, Management and Outcome, Results From ACSIS 2008-2010

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Background: Although almost five years have elapsed since a consensus document classified type-II myocardial infarction (MI) as MI secondary to ischemia due to either increased oxygen demand or decreased supply, knowledge is still scarce regarding epidemiology, causes, management and outcome of patients with type-II MI.

Methods: A comparative analysis was performed between patients with type-I and type-II MI who participated in two national Acute Coronary Syndrome Israeli Surveys (ACSIS) in the years 2008 and 2010.

Results: Of the total number of 2818 patients with acute MI who were included, 127 (4.5%) had type-II MI. The main causes for type-II MI were: Anemia (36%), sepsis (28%), arrhythmia (20%), post-surgical procedures (16%), hypoxia (16%) and heart failure (13%). In contrast to type-I MI, patients with type-II MI tended to be more frequently females (43.3% vs. 22.3%, p<0.0001), older (75.6+12 vs. 63.8+13, p<0.0001) and had more cardiovascular comorbidities (p<0.0001). Clinical presentation differed between groups (Table 1). Patients with type-II MI were less likely to undergo coronary angiography (36% vs. 88%, p<0.0001), and had substantially higher 30-day mortality rates (13.6% vs. 4.9%, p<0.0001).

Conclusions: We found significant differences in demographics, comorbidities and clinical presentation between patients with type-I and type-II MI. These differences may explain underutilization of coronary angiography, and higher mortality among patients with type-II MI.

Presenting symptom	TYPE II	TYPE I	p
Typical angina	54.3	84.5	<0.0001
Atypical chest pain	20.5	7.5	<0.0001
STEMI	20.0	55	<0.0001
Heart failure	59.1	25.5	<0.0001
Syncope	5.5	4.1	NS
Arrhythmia	14.2	4.7	<0.0001
Dyspnea	11.8	3.9	0.00002