Title: Acute Myocardial Infarction in young adults, risk factors and clinical outcomes

Category: Acute Coronary Syndromes

Abstract

Background: AMI in young individuals can cause death and disability in early life and has serious consequences for the patients, their family causing an increased economic burden on health system. Identifying the risk factors for AMI in this group of people is necessary for risk factor modification and developing cost-effective secondary prevention strategies as young. The aim of this study was to determine the risk factors and in-hospital outcome of AMI among young (age ≤45 years) adults.

Methods: This is a retrospective, single centre study conducted at our center, Makkah during 2016-2018. All AMI patients during the period were divided into two groups: young adults (ages≤45) and older adults (age>45). The two groups were compared using t-test and chi-squared test for continuous and categorical data respectively.

Results: Age data were available for 2112 patients admitted with AMI. Out of these 391 (18.5%) patients were young adults with mean age of 39.5±4.8 whilst 1721 (52%) were older adults with mean age of 60.2±9. Young adult Patients were more of male gender (92.3% vs 82%, p<0.001) more smoker (45.8% vs 30.2%, p<0.001) and had more prevalence of obesity (37.8% vs 28%, p<0.001) but were less diabetics (39.1% vs 56.4%, p<0.001) and less hypertensive (34.3% vs 57.9%, p<0.001).

Young adult patients had more extensive thrombus and frequently required thrombus aspiration (19.3% vs. 13.7%, p=0.005) but less common left main disease (3.4% vs 0.5%, p<0.001) and 3 vessels disease (6.7% vs 15%, p<0.001).

Young adult patients had less deterioration of LV function (EF 42.4±10.4 vs. 41.1±10.6, P0.02).In-hospital complications including pulmonary oedema, cardiogenic shock, cardiac arrest and mortality were similar in the two groups.

Conclusion: Young adult patients presented with acute myocardial infarction are more frequently smokers and obese. These patients also have more thrombus burden. These results underscores the importance of smoking cessation, weight reduction programmes and Health education for public especially of this age.