Gender differences in patients presenting with NSTEMI in the STAR registry

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Background: In most acute coronary artery (ACS) related literature, the female gender constitutes a smaller proportion compared to the male gender. The presentation of ACS in females is frequently atypical, causing a delay in diagnosis and management. This study is based on gender-specific data in the Saudi Acute Myocardial Infarction Registry Program (STARS-1 Program).

Methods: A prospective multicenter study, conducted with patients diagnosed with ACS in 50 participating hospitals.

Results: In total, 762 (34.12%) patients were diagnosed with Non ST segment Elevation Myocardial infarction Of this group, only 164 (21.52%) were women. The mean age of the female group (64.52 ± 12.56 years) was older and the mean body mass index (BMI) was higher (30.58 ± 6.23) than the male group. A significantly higher proportion of the female group was diabetic or hypertensive, however, a smaller proportion was smoking. Hyperlipidemia was not significant between the two groups, although present in almost half (48%) of the female group. The history of angina/MI/stroke and revascularization was similar, except for renal impairment. The presentation was atypical compared to the male group as only 70% presented with chest pain, and the rest with shortness of breath or epigastric pain. At presentation, the female group were more tachycardiac, had higher blood pressure, and a higher incidence of being in class 11-111 Killip heart failure. Only 32% had a normal systolic function, and the majority had either mild or moderate systolic dysfunction.

Guideline directed medical therapy were not different between the two groups, except for the initiation of a beta-blocker on admission. In particular, the rate of percutaneous coronary intervention (PCI) was similar. Overall, the in-hospital mortality was similar (5%), with more women diagnosed with atrial fibrillation and heart failure at follow-up.

Conclusion: Women had a higher prevalence of risk factors affecting the presentation and morbidity but not mortality. Improving these risk factors and the lifestyle is a priority to improve the outcome and decrease morbidity.