

Effect of Body Mass Index on Management and Outcomes in Patients with Acute Myocardial Infarction

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BACKGROUND

Obesity is a known risk factor for coronary artery disease. However, it is also suggested that obese patients may have better outcomes after a coronary event, sometime termed as “obesity-paradox”. Our study aimed to assess impact of BMI on clinical presentation and outcomes after acute myocardial infarction (AMI).

MATERIALS AND METHODS

This is a retrospective, single centre study conducted at KAMC, Makkah during 2016-2018. All AMI patients during this study period were divided into two groups obese ($BMI \geq 30$) and non-obese ($BMI < 30$). The two groups were compared using t-test and chi-squared test for continuous and categorical data respectively.

RESULTS

This study cohort included 1191 AMI patients with mean BMI of 28 ± 12 . A sizeable proportion ($n=328$, 28%) were obese with $BMI > 30$. Obese patients tended to present with AMI at a younger age (55 ± 12 vs. 58 ± 12 years, $p=0.001$).

PCI with radial approach was performed in large majority of patients but tended to be more common in

obese patients (84% vs 80%, $p=0.07$). Contrast volume (145 ± 74 vs. 126 ± 87 ml, $p=0.001$) and flouro-time (12.9 ± 12.7 vs. 10.7 ± 12.5 min, $p=0.008$) were significantly higher in obese patients.

There was no significant difference ($p > 0.05$ for all) in complications of AMI including pulmonary oedema, cardiogenic shock and cardiac arrest in the two groups. Post-MI ejection fraction was also similar in both groups (42%). There was numerical but statistically non-significant lower in-hospital mortality in obese patients in unadjusted analysis (2.4% vs 3.9%, $p=0.3$). Further detailed analysis including analyses after adjustment of confounding variables will be presented at SHA.

CONCLUSIONS:

Obese patients had AMI at a younger age. Procedure time and contrast volume for PCI were more for obese patients. However, in-hospital mortality and complications were not different statistically on unadjusted analyses. We will also include adjusted analyses for confounding variables for presentation at SHA.