

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

*Ghada Shalaby Ali*

## 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 $\pm$ 12. A sizeable proportion (n=328, 28%) were obese with BMI>30. Obese patients tended to present with AMI at a younger age (55 $\pm$ 12 vs. 58 $\pm$ 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 $\pm$ 74 vs. 126 $\pm$ 87 ml, p=0.001) and flouro-time (12.9 $\pm$ 12.7 vs. 10.7 $\pm$ 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.