Impact of Body Mass Index on Outcomes After Primary Angioplasty in Acute Myocardial Infarction: The Obesity Paradox


Background: The significance of body mass index (BMI) in pts with acute myocardial infarction (AMI) undergoing primary percutaneous coronary intervention (PCI) is unknown. Methods and Results: In the CADILLAC trial, 2035 pts undergoing primary PCI for AMI were divided into 3 groups based on BMI: non-obese (<25), mildly obese (25-30) and very obese (>30). Serum for IMA was separated and stored at –20°C prior to analysis. Endothelial NADPH oxidase appears to be an important contributor to the age-related cardiovascular deterioration. Endothelial NADPH oxidase activities in different age groups were determined. Serum samples were collected and traditional cardiac necrosis markers (total CK, CKMB, cTnl, Myoglobin and ACB) were measured. The activity and expression of the NADPH oxidase were evaluated by histochemistry. Results: The activity and expression of the NADPH oxidase were increased in older age groups. The activity and expression of the NADPH oxidase was significantly lower in the younger age group (89+20 vs. 100+20 vs. 120+30 AU). Conclusion: The obesity paradox may be explained by the fact that non-obese patients with AMI are older and more frequently have anterior infarction than their obese counterparts.