Impact of body mass index on clinical outcome in patients with acute coronary syndromes treated with percutaneous coronary intervention.

Abstract:

Studies that have tested the relationship between body weight as assessed by body mass index (BMI) and clinical outcome after percutaneous coronary intervention (PCI) have given contradictory results. The aim of the study was to investigate the impact of BMI on clinical outcome and assess the impact of adjustment for other cardiovascular risk factors on the relationship between obesity and clinical outcome in patients with acute coronary syndromes (ACS) following PCI. This study included 9146 patients with ACS who underwent coronary angiography and PCI: 2610 patients with ST-segment elevation acute myocardial infarction, 2792 patients with non-ST-segment elevation acute myocardial infarction, and 3744 patients with unstable angina. The primary outcome of this analysis was 1-year mortality. Quartiles of BMI were: 12.8 to 29.1 to 50.7 (4th quartile). Within the first year following PCI, there were 756 deaths: 228 deaths in the 1st BMI quartile, 209 deaths in the 2nd BMI quartile, 161 deaths in the 3rd BMI quartile and 158 deaths in the 4th BMI quartile (Kaplan-Meier estimates of mortality 10.3%, 9.1%, 7.2%, and 7.0%, respectively; odds ratio [OR] = 1.51, 95% confidence interval [CI] 1.22-1.86, P< 0.001 for 1st vs 4th BMI quartile). After adjustment in the Cox proportional hazards model, the association between BMI and 1-year
mortality was attenuated to the level of statistical insignificance (hazards ratio [HR] = 1.25, 95% CI 0.94-1.64; P = 0.127 for 1st vs 4th BMI quartile). In conclusion, in patients with ACS undergoing PCI, obesity as assessed with BMI was not an independent correlate of 1-year mortality.