

INTERVENTIONAL CARDIOLOGY

BMI inversely associated with bleeding and mortality after PCI

Increased BMI is often associated with poor health and worsening outcomes after a variety of medical interventions. However, in a retrospective analysis of patients who received percutaneous coronary intervention (PCI) for stable coronary artery disease or non-ST-segment elevation acute coronary syndrome, BMI was inversely associated with bleeding and death at 1 year after the procedure.

Patients who received PCI ($n = 14,178$) were stratified according to BMI (quartile [Q]1, 14.1–24.8; Q2, >24.8–27.1; Q3, >27.1–29.8; and Q4, >29.8–56.3 kg/m²). The primary end point of all-cause mortality at 1 year occurred in 413 individuals. However, for patients with the lowest BMI (Q1), the Kaplan–Meier estimate of mortality at 1 year was 4.4% compared with 2.3% for those with the highest BMI (Q4; log-rank test $P < 0.001$).

Furthermore, the frequency of bleeding in patients in Q1 was 13.8% compared

with only 7.7% for patients in Q4 (OR 1.90, 95% CI 1.63–2.23, $P < 0.001$). Although bleeding occurred more often in women than men (15.4% vs 9.1%; $P < 0.001$), the frequency decreased with increasing BMI in both sexes ($P < 0.001$ for trend in both men and women). The team calculate using Cox proportional hazard models that for each 1 kg/m² decrease in BMI the adjusted risk of bleeding or 1-year mortality increases by 5% ($P < 0.001$) and 3% ($P = 0.048$) respectively.

The investigators note that no interaction was seen between bleeding and BMI in predicting mortality, which might indicate that bleeding increases the risk of death regardless of BMI.

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Original article Ndrepepa, G. *et al.* Relation of body mass index to bleeding during percutaneous coronary interventions. *Am. J. Cardiol.* doi:10.1016/j.amjcard.2014.11.022