Obese MI patients have lower mortality than normal weight patients

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MedWire News: Obese and very obese patients have a lower risk of dying after an acute myocardial infarction (MI) than patients with a healthy weight, research published in the *European Heart Journal* shows.

Investigators from Germany and Switzerland report that among unstable angina/non-ST elevation (NSTEMI) patients treated with early revascularization, those who were obese or very obese were less than half as likely to die in the three years after treatment as patients who had a normal body mass index (BMI).

Lead investigator Heinz Buettner (Herz-Zentrum, Krozingen, Germany) commented: "Although there is no doubt that people who are overweight, obese, and very obese have a higher risk of developing diabetes, hypertension, and coronary artery disease, the evidence from our study shows once a coronary event has occurred and been optimally treated, obese patients switch to a more favorable prognosis compared with normal weight patients."

Buettner and team followed-up 1676 consecutive patients admitted to hospital suffering from unstable angina/NSTEMI between 1996 and 1999.

All patients underwent coronary angiography, and, if appropriate, early catheter-based revascularization. Around 70% were revascularized, with coronary stents implanted in around 80% of these patients. A minority were treated with coronary artery bypass grafting.

A third (n=551) of patients had a healthy BMI (18.5-24.9), half (n=824) were overweight (BMI of 25.0-29.9), and 18% (n=292) were obese (BMI of 30.0-34.9) or very obese (BMI above 35.0). The proportions undergoing percutaneous coronary intervention and CABG were similar across all BMI categories, the investigators note.

Cumulative 3-year all-cause mortality rates were 9.9% for patients with a healthy BMI, 7.7% for overweight, 3.6% for obese, and zero (no death) for very obese patients.

Compared with healthy BMI patients, obese and very obese patients had a hazard ratio for mortality of 0.38 (p=0.012). This remained significant after adjustment for confounding prognostic factors including coronary status and left ventricular function (HR=0.27, p=0.036).

"The reduction in mortality rates was consistent among all sub-groups and persisted after adjustment for a number of variables," explained Buettner. "These findings contrast with primary prevention studies that implicate BMI as a strong risk factor for mortality."

He added that the findings complement and extend knowledge of the impact of obesity on cardiovascular disease by "suggesting that the prognostic impact of obesity is confounded by a cardiovascular event."

Buettner also said adjustments excluded the possibility that the improved survival was due to obese patients being more likely to be prescribed cardiovascular drugs on discharge, while evidence to date suggests that lifestyle modifications are not involved.

He said that potential mediators of the apparent protective effect could be treatment differences, lower age, endogenous cannabinoids, lower platelet counts, and excess triglyceride content in heart tissue.

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