Body mass index and poststroke mortality

Background: Obesity is an established cardiovascular risk factor. We studied the association between body mass index (BMI) and all-cause mortality after stroke. Methods: A registry started in 2001 with the aim to register all hospitalized stroke patients in Denmark now includes 21,884 patients in whom BMI was recorded. There are five BMI groups: underweight (BMI <18.5), normal weight (BMI 18.5-24.9), overweight (BMI 25.0-29.9), obese (BMI 30.0-34.9) and severely obese (BMI 6 35). All patients underwent an evaluation including stroke severity, computed tomography, and cardiovascular risk factors. Survival was followed up to 5 years after stroke (median 1.5 years). Independent predictors of death were identified by means of a survival model based on 13,242 individuals with a complete data set. Results: Compared to normal-weight patients, mortality was lower in overweight [hazard rate (HR) 0.73, 95% CI 0.66-0.81], obese (HR 0.84, 95% CI 0.73-0.98) and severely obese stroke patients (HR 0.84, 95% CI 0.64-1.10), while mortality was higher in underweight patients (HR 1.63, 95% CI 1.41-1.90). Conclusions: Poststroke mortality is inversely related to BMI: overweight and obese stroke patients have a lower poststroke mortality rate than normal-weight and underweight patients.