


Intended for healthcare professionals

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Abstract

Background

The association between abdominal obesity and recurrent atherosclerotic cardiovascular disease after myocardial infarction remains unknown.

Objective

The purpose of this study was to investigate the prevalence of abdominal obesity and its association with recurrent atherosclerotic cardiovascular disease in patients after a first myocardial infarction.

Design and methods

In this register-based observational cohort, 22,882 patients were identified from the national Swedish Web-system for Enhancement and Development of Evidence-based Care in Heart Disease Evaluated According to Recommended

Therapies (SWEDEHEART) registry at a clinical revisit 4–10 weeks after their first myocardial infarction 2005–2014. Patients were followed for recurrent atherosclerotic cardiovascular disease defined as non-fatal myocardial infarction, coronary heart disease death, non-fatal or fatal ischaemic stroke. Univariate and multivariable-adjusted Cox regression models were used to calculate hazard ratios and 95% confidence intervals in quintiles of waist circumference as well as three categories of body mass index including normal weight, overweight and obesity.

Results

The majority of patients had abdominal obesity. During a median follow-up time of 3.8 years, 1232 men (7.3%) and 469 women (7.9%) experienced a recurrent atherosclerotic cardiovascular disease event. In the univariate analysis, risk was elevated in the fifth quintile (hazard ratio 1.22, 95% confidence interval 1.07–1.39) compared with the first. In the multivariable-adjusted analysis, risk was elevated in the fourth and fifth quintiles (hazard ratio 1.21, confidence interval 1.03–1.43 and hazard ratio 1.25, confidence interval 1.04–1.50), respectively. Gender-stratified analyses showed similar associations in men, while

U-shaped associations were observed in women and the body mass index analyses.

Conclusions

Abdominal obesity was common in post-myocardial infarction patients and larger waist circumference was independently associated with recurrent atherosclerotic cardiovascular disease, particularly in men.

We recommend utilising waist circumference to identify patients at increased risk of recurrent atherosclerotic cardiovascular disease after myocardial infarction.

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