Abstract

Title: The obesity paradox, myth or truth in adults with cardiovascular disease.

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Programme: Dietician study programme, 180/240 ECTS
Type of paper: Examination paper, 15 hp
Date: May 30, 2013

Background: It has long been generally accepted that obesity is a risk factor for many diseases. Despite this, new research indicates that a higher BMI could be a protective factor for those with a chronic cardiovascular disease. This discovery is called the obesity paradox and could change the perception of patients' BMI in both public health and clinical work.

Objective: The objective of this systematic review article is to examine the scientific evidence for the existence of the obesity paradox in chronic cardiovascular disease, i.e. if a BMI > 25 kg/m² is associated with lower mortality among adults with chronic cardiovascular disease.

Search strategy: The databases used in the literature study were PubMed, Summon, Scopus and Cochrane. The keywords were: obesity paradox, cardiovascular, heart, male, BMI, intentional weight loss, cardiovascular mortality and mortality heart failure.

Selection criteria: Studies, which had an adult population classified after BMI that suffered from chronic cardiovascular disease and had all-cause mortality and cardiovascular mortality as endpoints, were included.

Data collection and analysis: Ten studies were included. They were all estimated to be of medium to high study quality. The conclusions were graded according to GRADE on the endpoints of all-cause mortality and cardiovascular mortality.

Main results: A correlation between increasing BMI and decreasing mortality was found in the studies. In participants with very low BMI and extreme obesity, mortality was the highest.

Conclusions: In studies where the reference group was BMI 18.5-24.9m², there was no evident correlation between BMI and mortality among patients with chronic heart disease. The evidence level was low (++). In studies where there was no lower BMI-limit defined, underweight could be included and therefore the evidence level was very low (+). In these cases a high BMI could be protective for mortality particularly in short term. The contributing effects of a high BMI and effects of a lifestyle are difficult to distinguish.