CARDIOVASCULAR ENDOCRINOLOGY

Cardiovascular risk—general versus abdominal adiposity

Cardiovascular risk assessment on the basis of waist circumference or waist-to-hip ratio shows no benefit compared with risk calculated from BMI, according to the findings of a study published in the *Lancet*. Moreover, the report “underlines the value of general practitioners continuing to measure cholesterol and blood pressure for cardiovascular risk prediction, irrespective of body shape,” says study author Emanuele Di Angelantonio (University of Cambridge, UK).

Previous observational studies have been conflicting regarding the relative contribution of overall and abdominal adiposity to the risk of cardiovascular disease. Also, a previous systematic review of 27 guideline statements showed substantial variation in recommendations about the value of including clinical measures of adiposity in risk scores for the primary prevention of cardiovascular disease in developed countries.

“We collated and harmonized individual participant data from all available relevant long-term prospective

studies of cardiovascular disease, and analyses were restricted to individuals in these studies without a history of cardiovascular disease at the initial examination,” recounts Di Angelantonio. “Although obesity is clearly a major indicator of heart disease in itself, BMI, waist circumference, and waist-to-hip ratio each had a similar impact on the risk of heart attack and strokes.”

In addition, whether assessed alone or in combination, BMI, waist circumference, and waist-to-hip ratio did not importantly improve prediction of the time of first onset of cardiovascular disease when additional information existed on blood pressure, history of diabetes mellitus and cholesterol measures.

The findings of the Emerging Risk Factors Collaboration contradict earlier studies, which suggested that people with ‘central’ obesity (determined by waist-to-hip ratio) have a threefold greater risk of a heart attack than those with general obesity (determined by BMI).

“Because 90% of the participants in this study were of European descent,

additional studies are needed in people of non-European descent,” concludes Di Angelantonio.

Linda Koch

Original article The Emerging Risk Factors Collaboration. Separate and combined associations of body-mass index and abdominal adiposity with cardiovascular disease: collaborative analysis of 58 prospective studies. *Lancet* 377, 1085–1095 (2011)