



QUESTIONING THE METABOLIC SYNDROME

A World Health Organisation (WHO) report in *Diabetologia* has argued that metabolic syndrome has limited value as a diagnostic tool and should not be applied as a clinical diagnosis.

The authors from the Institute of Metabolic Science in Cambridge, England, stated that the syndrome (if indeed it is a syndrome, they say) was never intended for use as a predictor of heart disease, and that other risk assessment tools are far more accurate.

The WHO report gives a chronology of the metabolic syndrome – from its birth as a concept in 1988, to its subsequent rapid growth in critical reviews. Metabolic syndrome has come to represent a combination of conditions that include abdominal obesity, glucose intolerance, insulin resistance, hypercholesterolemia, hypertriglyceridaemia, and hypertension.

In their critique, the researchers state that there is no accepted underlying mechanism of the syndrome. Many mechanisms have been proposed, including

insulin resistance and central obesity. In the absence of a clear mechanism, interim definitions of the metabolic syndrome can only be considered provisional rather than definitive. The use of different definitions has also led to confusion when comparing prevalence figures and impact. As a risk prediction tool, the Framingham Risk Score is far more accurate than the metabolic syndrome (the metabolic syndrome describes relative risk and not absolute risk). Although the metabolic syndrome can predict diabetes and cardiovascular disease, it was not intended for use as a risk predictor.

The researchers said that future research should focus on (a) clarifying the metabolic pathways that underlie the development of diabetes and cardiovascular disease, (b) understanding early-life determinants of metabolic risk, (c) developing strategies for reducing heart disease and diabetes risk, and (d) developing population-based prevention strategies.

An accompanying editorial to the

report stated that the fact that the metabolic syndrome does not have a clear mechanism alone questions its existence. It said that while the syndrome does predict morbidity and mortality rates from cardiovascular disease, the question is whether the syndrome predicts that risk over and above the prediction based on the individual syndrome components. The editorial states that the answer to this question is no, and it may be time to put the concept of the metabolic syndrome to rest. **SMA**

Source:

(1) Simmons RK, et al. *The metabolic syndrome: useful concept or clinical tool? Report of a WHO expert consultation. Diabetologia 2010; DOI: 10.1007/s00125-009-1620-4.* (2) Borch-Johnsen K, Wareham N. *The rise and fall of the metabolic syndrome. Diabetologia 2010; DOI: 10.1007/s00125-010-1659-2.*