LETTERS TO THE EDITOR

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The authors had no conflicts of interest.

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Criteria for diagnosing the metabolic syndrome

Dear Sir:

I read a recent review in the Journal by Grundy (1), which claimed some value in diagnosing the metabolic syndrome in clinical practice. This claim is in contrast with the view expressed by Reaven (2) in the same issue of the Journal. Reaven stated that 1) providers should avoid labeling patients with the term metabolic syndrome, 2) adults with any major cardiovascular disease (CVD) risk factor should be evaluated for the presence of other CVD risk factors, and 3) all CVD risk factors should be individually and aggressively treated in accord with the joint statement by the American Diabetes Association and the European Association for the Study of Diabetes (3). Grundy emphasized that obesity is a risk factor for CVD. However, neither abdominal obesity nor the metabolic syndrome, defined on the basis of the National Cholesterol Education Program Adult Treatment Panel III (NCEP-ATP III) criteria, was shown to be a significant independent risk factor for CVD in multiple regression analyses (4, 5).

Obesity has recently become regarded as an endocrine disease rather than as an anthropometric disorder, and mutual relations between insulin resistance, endothelial dysfunction, and inflammation are recognized to be central mechanisms of the metabolic syndrome (6). Furthermore, a high C-reactive protein (CRP) concentration has been established as a strong independent risk factor for CVD (7) and is significantly positively related to insulin resistance (8) and leptin concentrations (9) and significantly negatively related to adiponectin concentrations (10) in persons with a normal body mass index. Grundy included the proinflammatory state in his clustering of metabolic risk factors (metabolic syndrome) but did not include obesity in this clustering in his Figure 1 (1). Therefore, I propose that CRP concentration be included as one of the NCEP-ATP III’s criteria for diagnosing the metabolic syndrome and that waist circumference be excluded from the criteria. We previously reported in Japan that a CRP concentration of 0.65 mg/L is the optimal cutoff value to be used as a criterion for the metabolic syndrome (11). Until such time that this criterion, or any other new criterion, for defining the metabolic syndrome is proven to be a significant independent risk factor for CVD, we should not label persons as having the metabolic syndrome.

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Reply to E Oda

Dear Sir:

The origin of the question as to “how many angels can dance on the head of the pin” is obscure, but it is purportedly a somewhat satirical response to many of the philosophical arguments engaged in by medieval theologians. However, there is no confusion as to its modern meaning as an expression of totally pointless arguments.

I believe that the letter by Oda in response to the 2 Perspective articles (1, 2) recently published in this Journal further contributes to the similarities between the various published versions of how to diagnose the metabolic syndrome and the intellectual joustings that led to questions concerning the terpsichorean adventures of angels.

For example, the World Health Organization definition of the metabolic syndrome demands evidence of insulin resistance and includes obesity (as measured by either body mass index) or abdominal obesity (as determined by waist circumference) as an ancillary criterion (3). Diagnosis of the metabolic syndrome, as outlined by the Adult Treatment Panel III (ATP III) of the National Cholesterol Education Program, does not require that any one essential factor be present, but does include obesity criteria that can only be met by having a sufficiently large waist circumference (4). Not only does the International Diabetes Federation (IDF) definition of the metabolic syndrome include waist circumference as the only legitimate measure of obesity (5), but a person cannot have the metabolic syndrome, no matter how abnormal the other criteria are, unless they meet an ethnic-specific value for waist circumference. It is clear from his letter that Oda is not impressed with the use of waist circumference as a criterion for diagnosing the metabolic syndrome, as suggested by the ATP III and IDF, and has suggested that waist circumference be expunged as a criterion with which to diagnose the metabolic syndrome. On the other hand, Oda is not willing to abandon the effort to diagnose the metabolic syndrome and suggests that C-reactive protein (CRP) replace waist circumference as 1 of the 5 criteria in the ATP III definition.

It seems to me that if we continue to focus attention on the best way to diagnose a clinical entity designated as the metabolic syndrome, we deserve to be viewed as trying to decide how many angels can dance on the head of the pin. It also appears to me that no matter how the metabolic syndrome is defined, the usual suspects are always contending for their rightful role as being one of the criteria. Perhaps it is time to cease this approach and begin to focus on why the abnormalities now considered as components of the various forms of the metabolic syndrome, as well as some of the additions discussed in this response to Oda’s letter, all cluster together. Maybe if we understood that better, we could truly begin to respond effectively to the clinical challenge of the rapidly increasing number of abnormalities and clinical syndromes that occur more commonly in insulin-resistant patients. In my view, the major clinical problem that exists today is not how to define the metabolic syndrome but how to effectively address the abnormalities that are components of the various definitions, including the one proposed by Oda. We are all aware of the medical crisis that is looming as the world becomes heavier and more sedentary. The major drawback to our ability to address this critical problem is the difficulty in changing lifestyle behaviors, not in determining what is the best way to diagnose an unnecessary clinical entity—the metabolic syndrome.

The author had no conflict of interest concerning this letter.

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