

Letter to the Editor

Is Central Obesity a Good Predictor of Carotid Atherosclerosis in Japanese Type 2 Diabetes with Metabolic Syndrome? Comment on the Article by Yasuda *et al.*

Dear Sir;

Yasuda *et al.* reported that central obesity was not significantly associated with carotid intima-media thickness independent of known cardiovascular risk factors in a multivariate regression analysis and concluded that the new definition of metabolic syndrome in which central obesity is an indispensable factor may not be a better predictor of the development of carotid atherosclerosis in Japanese type 2 diabetic patients than the assessment of the aggregation of components of metabolic syndrome [1]. Kadota *et al.* also reported in a large scale longitudinal study that because the prevalence of non-obese participants with several metabolic risk factors was quite high and their cardiovascular disease risk was high, excluding them from the diagnosis of metabolic syndrome because of absence of obesity might overlook their risk [2]. Therefore, the definition of metabolic syndrome proposed by the Japanese Examination Committee of Criteria for Metabolic Syndrome should not be used in clinical practice and in preventive medicine because this definition requires obesity as an obligate component. Besides, this definition was already revealed to be quite inappropriate as a predictor of cardiovascular disease by the Hisayama Study [3]. Definitions of metabolic syndrome are chaotic. The International Diabetes Federation (IDF) proposed a new worldwide definition which was criticized as the most dangerous one by Reaven. The American Heart Association and the National Heart, Lung, and Blood Institute jointly stated that the National Cholesterol Education Program definition is superior to IDF definition and the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD) jointly stated that no existing definition of metabolic syndrome meets criteria as a syn-

drome and that one should not label people with this syndrome. Recently, the clinical utility of the major component of this syndrome, waist circumference, was criticized jointly by the Obesity Society, the American Society for Nutrition, and ADA [4]. Meanwhile, obesity has been considered as an endocrine and inflammatory disorder intimately related to insulin resistance rather than merely an anthropometric disfigurement, and high-sensitivity C-reactive protein (CRP) was established as an independent risk factor for both diabetes and cardiovascular disease. Therefore, CRP may be superior to anthropometric parameters as a component of metabolic syndrome. We examined agreements among various definitions of metabolic syndrome for Japanese and elucidated that there are substantial disagreements among these definitions of metabolic syndrome [5]. Therefore, we should not clinically label people with metabolic syndrome as ADA and EASD jointly stated until a truly consensual definition of metabolic syndrome for Japanese would be established.

References

1. Yasuda T, Matsuhisa M, Fujiki N, Sakamoto F, Tsuji M, Fujisawa N, Kimura M, Ishibashi R, Kaneto H, Yamasaki Y, Watarai T, Imano E (2007) Is central obesity a good predictor of carotid atherosclerosis in Japanese type 2 diabetes with metabolic syndrome? *Endocr J* 54(5): 695–702.
2. Kadota A, Hozawa A, Okamura T, Kadowak T, Nakamura K, Murakami Y, Hayakawa T, Kita Y, Okayama A, Nakamura Y, Kashiwagi A, Ueshima H for the NIPPON DATA Research Group (2007) Relationship between metabolic risk factor clustering and cardiovascular mortality stratified by high blood glucose and obesity: NIPPON DATA90, 1990–2000. *Diabetes Care* 30: 1533–1538.
3. Kiyohara Y, Doi Y, Ninomiya T (2006) Actual evidence of metabolic syndrome. *J Jpn Soc Intern Med* 95: 1710–1715 (in Japanese).
4. Klein S, Allison DB, Heymsfield SB, Kelley DE, Leibel RL, Nonas C, Kahn R (2007) Waist circumference and cardiometabolic risk: a consensus statement from Shaping America's Health: Association for Weight Management and Obesity Prevention; NAASO, The Obesity Society; the American Society for Nutrition; and the American Diabetes Association. *Diabetes Care* 30: 1647–1652.
5. Oda E, Abe M, Veeraveedu PT, Watanabe K (2007) Considerable disagreements among definitions of metabolic syndrome for Japanese. *Circ J* 71: 1239–1243.