Chinese Body Mass Index Is Much Lower as a Risk Factor for Coronary Artery Disease

To the Editor:

I read with great interest the report by Wolk et al 1 that body mass index (BMI) is a risk factor for unstable angina and myocardial infarction in patients with known coronary artery disease. They used a BMI of 25.6 as normal.

The average Chinese BMI is much lower; the normal mean is 18.5 to 23.9. 2 Because the Chinese have a lower baseline BMI to begin with, it takes fewer increments to reach an obese level, so that BMI of 24 to 27.9 is considered overweight and ≥28 is considered obese. 2 At a BMI of 23.0 to 24.9, the risk of hypertension, hypertriglyceridemia, and coronary artery disease doubles, and the risk increases 3-fold at a BMI of 25.0 to 26.9. 3

Because 1 of every 4 persons living on this planet is a Chinese, it is important to be aware of this ethnic difference when one deals with patients of a different ethnicity. The Chinese are getting fatter. 4 However, one must keep in mind that the mean BMI as a risk factor for the Chinese is much lower than that of the Western population. 4,5

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Response

We appreciate Dr Cheng’s interest in our article 1 and his insightful comments. Dr Cheng makes a very important point, namely that there are ethnic differences in what is considered a “normal” body mass index (BMI), which in turn has implications for cardiovascular risk related to elevated BMI. In populations in which the average BMI is lower, increased cardiovascular risk may be evident for BMI values that would be considered normal in other populations. This proposition is in fact consistent with our data. 1 We found that the positive relationship between BMI and the risk of acute coronary events also was evident for mildly elevated BMI. Indeed, when a BMI of 20 kg/m 2 was used as a reference point, increased adjusted odds ratios were seen even for BMI values considered normal in Western populations, 2 which suggests that the definition of normal BMI is somewhat arbitrary and that a truly normal BMI value depends on the demographic characteristics of the population studied.

The BMI of 25.6 kg/m 2 referred to by Dr Cheng represented the highest BMI value in the lowest BMI quintile in our population. However, even in Western populations, average BMIs differ significantly between countries. 3 Therefore, it must be emphasized that our results should not be directly extrapolated to different populations. Indeed, further studies are needed to determine the relationship between BMI and cardiovascular risk in various ethnic groups.

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