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Letter to the Editor

Reply-Letter to the Editor – Metabolic healthy overweight/obese individuals: Not just a restricted group

Dear Editor,

We would like to thank Drs. Spatola and Badalamenti for their interest and comments [1] on our recently published article [2]. Their response provided us an opportunity to reevaluate our data in regard to the definition and clinical implications of the metabolically healthy overweight/obese (MHO) phenotype.

As Drs. Spatola and Badalamenti pointed out, the obesity paradox has gained great attention for the past 2 decades not only in end stage renal disease (ESRD), but also in other medical conditions such as cardiovascular disease (CVD), cancer, diabetes, and respiratory disease [3]. There is still a lot of controversy surrounding the obesity paradox as to whether it is real or an artifact. The obesity paradox has been criticized in that it could be explained by collider stratification bias, reverse causation, and misclassification [3]. On the other hand, some authors recently reported plausible biological mechanisms to explain the phenomenon [4].

The MHO phenotype represents individuals from the general population who are overweight/obese but have comparable CVD risk and mortality to normal weight or non-obese individuals. The MHO is based on the 'absence' of intuitively expected harmful effects of obesity, rather than a 'protective' function of the excess adipose tissue in these individuals. Hence, it may be conceptually different from the obesity paradox, which focuses on the potential protective effect of obesity in patients with established protein-energy wasting conditions such as ESRD or congestive heart failure (CHF).

Our study excluded patients with a history of stroke, myocardial infarction, CHF, or cancer and focused on MHO individuals from the general population. The National Health and Nutrition Examination Survey III did not provide data on ESRD status. However, the prevalence of stage 3–5 chronic kidney disease (CKD) defined by estimated glomerular filtration rate was 2.0% in the MHO group and 5.7% in the metabolically unhealthy overweight/obese (MUO) group in our study. In addition, our results were materially unchanged when we analyzed the data after excluding those with stage 3–5 CKD. Co-morbidities such as diabetes or hypertension were already included in our criteria for defining metabolic health.

We agree with Drs. Spatola and Badalamenti that body mass index (BMI) is not an ideal tool for defining obesity, despite its convenience, reproducibility, and wide spread use. It has been proposed that body composition such as fat or lean body mass would provide more accurate prognostic information on mortality than BMI in dialysis patients [5]. When body composition data are available, it would be reasonable to incorporate them into the definition of the MHO phenotype.

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Conflict of interest

None.

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