Reviewer's report

Title: Metabolic syndrome is associated with change in subclinical arterial stiffness - A community-based Taichung Community Health Study

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Reviewer: Sungha Park

Reviewer's report:

This is a study demonstrating that metabolic syndrome is significantly associated with progression of arterial stiffness in a community based cohort. However, there are some queries that need to addressed.

1. As mentioned by the authors, the major limitation of this study may be the originality. The study performed by Safar et al have already demonstrated that metabolic syndrome is associated with progression of aortic stiffness (J Am Coll Cardiol 2006;47:72-75). However, since the study by Safar et al was performed on patients with high prevalence of hypertension, diabetes, and dyslipidemia, it would seem that this particular study may be unique in that it was performed in a relatively healthy population cohort. If the study is the first of it’s kind in a community based cohort, the authors needs to emphasize this finding to increase the originality of this study.

2. Descriptions in the statistical analysis is very confusing. Although the authors mention that variables predicting the baPWV change were evaluated with multivariate regression analysis, there are no data in the Results or the Tables section. Please clarify.

3. Figure 1 is very confusing. It seems like the dependent variable is the change in baPWV at followup. However, there is no clear description of this in the Method or the Result. Please clarify.

4. For the multivariate correction, smoking should also be corrected as smoking is associated with increase in baPWV.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests