Reviewer’s report

Title: Blood pressure, body mass index and risk of cardiovascular disease in Chinese men and women

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Reviewer: Zhi-Jie Zheng

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The purpose of this study intended to test the hypothesis whether effect of blood pressure on the risk of cardiovascular disease modified by the levels of BMI, using a data from the follow up study of the 1991 China National Hypertension Survey. In general, the authors described fairly clearly the rationale, design and methods, and major findings of the study. However, the manuscript would have been much improved if the authors could address the following major issues.

Major Compulsory Revisions

1) The authors indicated that participants from 13 provinces who were interviewed and examined in the original 1991 China National Hypertension Survey were excluded from the follow-up study due to the unavailability of the contact information, and the baseline characteristics of those excluded were not significantly different from these included. What baseline characteristics (variables) did the authors examine in the analyses, e.g., age, gender, ethnicity, locality (urban vs. rural, North vs. South), BMI, BP, medical history?

2) With limited information available on death certificates, what measure and processes did the study use to validate a fatal myocardial infarction or other cardiovascular diseases, particularly if the case occurred out of hospital, simultaneously or unattended? What were the composition of the incident cases reported in this study (% fatal vs. non-fatal cases, incident cases vs. recurrent cases, CHD, stroke, and other forms of CVD, etc)

3) Information on the proportions of participants who were hypertensives (defined as such in the methods section), those treated with anti-hypertensives, as well as those with a history of cardiovascular disease should be included in the table 1.

4) The authors chose to use systolic or diastolic blood pressure as a continuous variable in the analyses. How would the hypertension treatment affect the analyses? Would the use of hypertension status, as defined to include the hypertensive treatment, yield similar results?

5) From the Table 1, it seems that 60% of individuals with low BMI were from the South or rural area, while 85% of those with high BMI were from the North and urban area. Do the found association of BP with incident CVD by BMI levels remains if analyses based on and stratified by the North vs. South and Rural vs. Urban.

Minor Essential Revisions: Suggest to read-proof the text.
Level of interest: An article of importance in its field

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

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests