Peer Review Report

Review Report on Central adiposity indicators maintain a stronger association with the risk of hypertension: a prospective cohort study in southwest China

EVALUATION

Q 1   Please summarize the main findings of the study.

In this manuscript entitled 'Central adiposity indicators maintain a stronger association with the risk of hypertension: a prospective cohort study in southwest China' the authors compared the association of commonly
used baseline adiposity indicators and long-term adiposity changes with hypertension in an adult population in Southwest China. The study is based on a large cohort study (The Guizhou Population Health Cohort Study (GPHCS)) with a total of 9280 adult recruited from 2010 to 2012 and followed up through repeat surveys between 2016 and 2020. Solid measurement on anthropometric indicatos, medical history and lifestyle, and subsequenlty on outcome ascertainment were taken. The paper is very well written, the authors worked on an interesting topic and, in my opinion, there are few small suggestions to consider.

Q 2   Please highlight the limitations and strengths.

Minor Concerns
– One possible bias to avoid is that relative to subjects lost to follow-up. What characteristics did these subjects have at baseline (especially for the exposure variables under study)?
– It is unclear whether anthropometric measurements at follow-up were taken by trained investigators or by questionnaire? Please specify
– Continuous variables with skewed distribution should be described with median and interquartile range, and appropriate statistical tests should be used for comparisons (e.g., laboratory measures)
– Given the large sample size, Pearson's correlation coefficients tend to be statistically significant, but this may be unimportant in a clinical evaluation. The estimation of r should be described and classified according to the strength of the association (low, moderate or strong – see
https://www.researchgate.net/post/A_standard_way_to_categorize_the_strength_of_correlation).
– How do the authors explain the negative correlation with weight change and WC versus blood pressure?
– It seems unclear whether anthropometric measures were tested individually or jointly in the various proposed Cox models. Please Specify
– Have the authors hypothesized that some of these measures might give better model performance when considered in combination (see https://pubmed.ncbi.nlm.nih.gov/19005195/)
– Comparison of the performance of various models and anthropometric measurements should be made using appropriate statistical methods for non-nested models, e.g., AIC and BIC
– HR data for the continuous assessed variables are also presented in the models. Was a test for the linearity of this association performed?
– Have other indicators of obesity known in the literature and calculable in this cohort (such as hip measures, waist-hip ratio, or ABSI) been considered?

Q 3 Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.

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PLEASE COMMENT

Q 4 Is the title appropriate, concise, attractive?

Yes

Q 5 Are the keywords appropriate?

Yes

Q 6 Is the English language of sufficient quality?

Yes

Q 7 Is the quality of the figures and tables satisfactory?

Yes.

Q 8 Does the reference list cover the relevant literature adequately and in an unbiased manner?)

Yes

QUALITY ASSESSMENT

Q 9 Originality

Q 10 Rigor

Q 11 Significance to the field

Q 12 Interest to a general audience

Q 13 Quality of the writing

Q 14 Overall scientific quality of the study

REVISION LEVEL

Q 15 Please make a recommendation based on your comments:

Minor revisions.