Reviewer's report

Title: Cardio-metabolic risk factors in Asian adults with prehypertension

Version: 1  Date: 2 April 2013

Reviewer: Yoshitaka Murakami

Reviewer's report:

This study focused on the relationship between cardio-metabolic risk factors and pre-hypertension in Singapore. They examined the ethnic-group specific comparison, which was interesting for us. In spite of their scientific values, there are several basic issues in the manuscript. I think that the authors should check their analytic methods they applied in this paper.

Major points;
1. The definition of pre-hypertension
They showed us the definition of prehypertension in line 16-18, page5 as follows; prehypertension was defined as systolic blood pressure (BP) ranging from 120-139 mmHG and/or diastolic BP ranging from 80-89 mmHg. Despite of this difference, the prevalence of ‘prehypertension’ in this manuscript were extremely high. I suppose that the authors did not calculate the prevalence of prehypertension itself, rather than the prevalence of both pre-hypertension and hypertension all together. If it is so, the authors should fix the issue, otherwise the reader will misunderstand the context of this manuscript.

2. PAR and cross-sectional study
Basically, population attributable risk (fraction) (PAR) was calculated by using the hazard ratio (risk ratio) from cohort study, or the odds ratio from case-control study. PAR was not defined in a cross-sectional study because this study type is not suitable for investigating exposure-effects relationship. The authors should use another words (terms) instead of PAR.

3. The investigation of ethnic difference
The discussion of ethnic difference was one of the interesting topics in this study. Though such interest, the authors did not conduct further statistical analysis. I would like to encourage investigator to explain whether the difference is apparent or not.

Minor points
1. Age-adjustment are needed for the comparison of prevalence in table 1, because the mean ages are different among ethnic groups.

2. In table2, Low HDL, high triglycerides and high LDL were included in the statistical model. These three lipid measures were corrected each other and this will affect the results. The authors should consider which measure(s) are
appropriate to include in the model.

3. If the parameters come from the same model, table2 and table 4 should be combined together for proper interpretation.

**Level of interest:** An article of insufficient interest to warrant publication in a scientific/medical journal

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests