Reviewer's report

Title: Gender-specific contribution of cardiometabolic index and lipid accumulation product to left ventricular geometry change in general population of rural China

Version: 0 Date: 25 Sep 2017

Reviewer: Akiomi Yoshihisa

Reviewer's report:

Review comment BCAR-D-17-00532

The authors conducted cross sectional study regarding impact of cardiometabolic index (CMI) and lipid accumulation product (LAP) on LV geometry, and found that CMI and LAP are associated with both eccentric and concentric LVH, especially in females compared to male. This issue is somewhat interesting. However, this reviewer thinks that there are serious concerns that should be addressed.

Major

1. Clinical implications
Although CMI and LAP were associated with both each LV geometry parameter and presence of eccentric and concentric LVH (Table 2-5), unfortunately these association is seems to be smaller than those of BMI and each LV geometry parameter and presence of LVH, not only in males but also in females. BMI is simple parameters as body composition. This reviewer feels that BMI is superior than both CMI and LAP to affect LV geometry.

2. Methods, confounding factors
The authors presented medication used and history of CVD in Table 1 and analyzed these parameters as confounding factors in Tables 3-4. What were medications in this population (e.g. ACE inhibitor, ARB, MRA, beta blocker, diuretics, CCB, anti-diabetic drugs, lipid lowering drugs etc) ? In addition, what were CVD in this population (e.g. CAD, heart failure, stroke, PAD etc)? These factors might affect LV geometry. The authors should separate these medication and CVD, and re-analyze the data.

Minor

1. Table1. The authors should present HbA1c.

2. Table 2 foot note."a p<0.001" to "a p<0.01" ?
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

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Please indicate the quality of language in the manuscript:

Acceptable

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