Reviewer’s report

Title: What is the impact of metabolic syndrome and its components on reflux esophagitis? A cross-sectional study

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Reviewer: HC Lien

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comprehensive approach. They also emphasized the limitations of data quality due to the nature of a retrospective study design.

In general, I would consider that the data is valuable among Taiwanese patients with reflux esophagitis, in terms of exploring the etiology and developing future interventions.

However, some important questions remain unanswered.

1. First, being the major outcome or the sole dependent variable, reflux esophagitis was diagnosed in the majority (59.6%) of participants who underwent routine health check, which is extra-ordinarily high. Second, the vast majority of reflux esophagitis was diagnosed as Los Angeles Classification Grade A, which is well known to have poor interobservers’ agreement and may lead to the questionable prevalence rate. Third, non-erosive reflux disease is believed to be more common than reflux esophagitis in Asian. Thus, the observation is likely due to overdiagnosis or misclassification. Overall, the possible misclassification may be a major thread to the validity of the study. Therefore it is recommended to evaluate the inter-observer agreement of the diagnosis of reflux esophagitis.

2. The methods to define H. pylori infection and hiatal hernia should be described. In fact, the most epidemiological data from Asian countries including Taiwan showed a negative association between H. pylori and RE.

3. The definition of alcohol consumption and smoking should also be described.

4. In table 3 of the revised manuscript, elevated TG is significantly associated with RE after adjusting age and sex, whereas elevated TG was not associated with RE in the results and abstract. Would it be possible to explain the discrepancy between them?

5. On page 18, line 13 'Second, the individuals with RE were not evenly distributed among the groups with LA grade A, B, and C. Because our study is a cross-sectional study rather than a randomized controlled trial, bias may occur in the treatment of study population.' I do not think that the distribution of RE severity has anything to do with either a cross-sectional study or randomized control trial.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

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

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Not relevant to this manuscript

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Needs some language corrections before being published

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