Reviewer’s report

Title: Interaction of nutritional status and diabetes on active and latent tuberculosis: A cross-sectional analysis

Version: 0 Date: 19 Apr 2019

Reviewer: Anna Odone

Reviewer's report:

Reviewer's Comments:

Kubiak et al. conducted a cross-sectional study to assess the interaction between nutritional status and diabetes on active and latent TB. The paper is well structured and clear; the methodology is sound. Authors report BMI and diabetes to be associated with newly diagnosed active TB, but not LTBI in regional India and diabetes to confer greatest risk of active TB in overweight and obese adults.

The topic of the dual TB-Diabetes epidemics and their control is of great interest, especially in low and middle-income countries and this report contributes to add evidence from the Indian setting and to highlight the importance of bi-directional diabetes-active TB screening.

Part of the findings - i.e. the diabetes and low increasing the risk of TB - are already well known and do not add much. More interesting, although not conclusive, are data on LTBI. Although data interpretation is well conducted and nicely put into context, the main limit is the cross-sectional design of the study.

I have some other general and specific comments.

- I believe authors should expand a bit more both - in the introduction and in the discussion when interpreting results - on the pathogenetic mechanisms around the reported interaction between diabetes, undernutrition and TB. This can be, for instance, done including a visual representation (a graph or additional figure)

- Authors might consider stressing more the importance of the bi-directional screening and the evaluation of cost-effectiveness of these intervention (cost effectiveness of TB screening in DM patients and DM screening in TB control programmes) in order to focus on the need to allocate the limited resources

- Authors should take into consideration and comment on other relevant literature published on the specific topic of TB-BMI and diabetes interaction (i.e Lancet Diabetes Endocrinol. 2014 Sep;2(9):754-64 and PLoS One. 2011;6(6):e21161.).

- Please check age range of included participants as misleading info is provided in the methods and results section (older than 6 or 18 ?)
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.

Yes

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.

I recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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