Reviewer's report

Title: Antigen-specific assessment of the immunological status of various groups in a leprosy endemic region

Version: 1
Date: 26 February 2015

Reviewer: Itu Singh

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Major Compulsory Revisions

Research article entitled “Antigen-specific assessment of the immunological status of various groups in a leprosy endemic region” by Fabri A. et al is a well defined and well described study.

1. Is the question posed by the authors well defined?
   Ans. Question posed by authors is well defined.

2. Are the methods appropriate and well described?
   Ans. Methods are appropriate and well described.

3. Are the data sound?
   Ans. Data showed here is fine. But I have following questions:
   a. How authors have determined the cut off value? Which population (those were general population or unexposed population) and how many individuals they have taken to calculate cut off value. It should be mentioned in the manuscript.
   b. Household contacts and general population is not comparable. Both household contacts and general population could be taken from the same geographical area to detect subclinical infection as mentioned in the manuscript. Authors can not make conclusion as mentioned in manuscript at page number 3 line number 95-97 surprisingly is not the correct word on the basis of above mentioned fact. It is well known fact that in endemic population general population will be more exposed and give higher reactivity to antigens than to the population from less endemic area.

4. Do the figures appear to be genuine, i.e. without evidence of manipulation?
   Ans. Figures appear to be genuine.

5. Does the manuscript adhere to the relevant standards for reporting and data deposition?
   Ans. Authors have analysed data by using proper statistical tools. But I have some suggestions:
   a. As mentioned in Figure 1 PGL-1 is showing 100% positivity for LL patients and levels are higher than ND-O-LID or LID-1 for most of the cases but authors has not described PGL-1 in result and discussion part.
   b. Authors should do statistical comparison between all the antigens including
PGL-1 to find out which one is best among different groups of leprosy patients. Which antigen is superior for identifying LL cases?
c. What is the level of PGL-1 in general population?

6. Are the discussion and conclusions well balanced and adequately supported by the data?
Ans. Discussion is supported by published literature and authors have genuinely discussed their findings. Conclusion should be change in terms of household contacts and general population otherwise it is fine.

7. Are limitations of the work clearly stated?
Ans. Authors mentioned about the limitation of work but it could be overcome by selecting same population for household contacts and general population.

8. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
Ans. Authors have acknowledged literature upon which they built their study.

9. Do the title and abstract accurately convey what has been found?
Ans. Title and abstract conveyed the findings in this study.

10. Is the writing acceptable?
Ans. Acceptable

General comments:
1. Figure 2 legend mentioned EC group (page number 20; line number 540, 543) but in figure and manuscript authors have not mentioned about EC group.
2. Page number 17, line number 456,457 incomplete reference should be deleted.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.