Reviewer’s report

Title: Sero-epidemiology study of leptospirosis in febrile patients from Terai region of Nepal

Version: 0 Date: 30 Jul 2017

Reviewer: Liang-Yu Chen

Reviewer’s report:

This manuscript entitled "Sero-epidemiology study of leptospirosis in febrile patients from Terai region of Nepal" raised a main concern on leptospirosis diagnosis in public health issue. This manuscript had great value announcing the important differential diagnosis among febrile patients in endemic area. There are several suggestions on this manuscript. First, it was suggested to add clear information of inclusion and non-inclusion criteria. It is impossible to have all febrile cases included in this study without other infectious or non-infectious etiologies. Second, for there was no diagnostic golden standard for leptospirosis diagnosis in this study, it was suggested to add the information of diagnostic sensitivity and specificity of the IgM method. Third, the statistic method should be reviewed. Comparison between continuous variables by Student t test on age, WBC count, Hgb, and platelet count was suggested. Also take the multinomial logistic regression method into consideration to identify the most predictive variable on leptospirosis. Finally, the tables were lengthy and unnecessary, please compose to be simple table comparing the difference of each factors between seropositive and seronegative groups (not seropositive and overall) with a p value.

Abstract:

No any data was provided on Widal and Dengue test in methods and results. Thus those words should not being presented in abstract.

Methods:

1. Study population: It was stated that "…a total of 144 febrile patients… were included…" Are those patients being adequate evaluated and excluded for other infectious and non-infectious etiologies possible bacterial and viral? There should be a clear inclusion and non-inclusion criteria for those febrile patients. And it was in doubt that no any febrile cases being excluded in this study.

2. Serological study: Please specify the sensitivity and specificity of the laboratory test.

3. Serological study: Page 5, line 99-101: Please check the symbol of "<" and ">". If the author describe "…it is less than…", there was no need for a symbol "<".

4. Serological study: No information on Widal and Dengue serological test.
5. Statistical methods: Please have the data being reviewed by an experienced statistician.

Results:

1. For "fever" was the main inclusion criteria of participants, we did not know the necessary to include fever presentation in results. It should be 100% unless something wrong in the inclusion criteria.

2. For data presentation, please present baseline demographic characteristics in table 1. Then to compare the difference between "seropositive" and "seronegative" groups in table 2, followed by a p value. The presentation of so many tables is unfriendly to readers and is difficult to catch the point.

3. To present the continuous variables by mean ± standard deviation.

4. The results showed no information on Widal and Dengue serological test findings.

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

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 am able to assess the statistics

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

Acceptable
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