Reviewer’s report

Title: Evaluation of micro capillary-culture method for the isolation of Leishmania aethiopica parasites from patients with cutaneous lesions in Ethiopia

Version: 0 Date: 11 Apr 2018

Reviewer: Joseph Kamgno

Reviewer’s report:

General comments

The manuscript by Aberra and colleagues aimed at evaluating the micro capillary-culture method for the isolation of Leishmania aethiopica parasites from patients with cutaneous lesions in Ethiopia. This manuscript is a contribution to the diagnosis of Leishmaniasis in Ethiopia. This new tool (Capillary-Culture Method, CCM) they have tested appears more sensitive and cheaper than slide microscopy and traditional culture method (TCM). This diagnostic tool usable at the District level will have a significant impact on the management of cases in Ethiopia. Although this study is interesting in providing a cost effective diagnostic tool for leishmaniasis, the design of the study is unclear and there are many typos throughout the paper.

Specific comments

Materials and Methods

Study population

The study population is not given. The authors have considered the selection criteria as the study population; please revise this.

Sample size calculation

The sample size calculation is unclear; please provide details taking into account the objective of the study.

Data Processing and Statistical Analysis

This section needs to be rewritten and the objectives need to be clearly stated. There are methods for evaluation of diagnostic tests (sensitivity, specificity, NPV, PPV, Kappa statistics …) but some of these information just appear in the result section. The authors also say that they used "median tests" for comparisons; what do median test means? Do the authors wanted to say that
medians were used for descriptive stats of continuous variables? This needs to be clarified. The author should also consider "threshold for significance" rather than "level of significance"

Results

The results should be presented in a way that the objectives (evaluation of the MCM) should clearly appear. Also, the comparison of the cost was done only between MCM and TCM but the authors are also discussing about PCR and microscopy without core data.

There are no indications of the stars of the Table 1.

In table 2, the sensitivity, the specificity, the Positive Predictive values, the Negative Predictive Values are presented, but not the results of the Gold standard.

The results of the table 3 are surprising. With the value of $P < 0.001$ for the comparison of the time to positivity in days per lesion analysis, it is a surprise that comparison of the time to positivity in days per patient comparison is not significant. And even if it is that case, you would have put the P value.

In table 4 you would have been clearer, by giving the total cost per each test for better comparison.

Discussion

Delete "apparently" since you have performed the study by yourself

Conclusion

The conclusion is straightforward, don't say in Conclusion.

Level of interest

Please indicate how interesting you found the manuscript:

An article of importance in its field

Quality of written English

Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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