Author's response to reviews

Title: Cryptosporidiosis and Isosporiasis among HIV-positive individuals in South Ethiopia: a cross sectional study

Authors:

Mekonnen G Asfaw (mekbiomed2006@yahoo.com)
Wondu T Amenu (wondo_teshome@yahoo.com)
Beyene P Lodamo (abule2002@yahoo.com)
Tekola E Kassa (teko1960@yahoo.ca)

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Author's response to reviews: see over
Responses

First we would like to thank all the reviewers and the editors for their time to give us constructive comments and suggestions to improve this manuscript. We have, to our best capacity, tried to address the concerns:

Reviewer: Andargachew Mulu

1. It is well known that HAART and cotrimoxazole prophylaxis showed a tendency in reducing the overall incidence of opportunistic infections worldwide.

   This is a good point but our hypothesis was treatment outcomes are context dependent at large and also dependent on different patient characteristics (e.g. adherence to medications). This and related issues were addressed in the discussion of the manuscript.

2. Nevertheless, the report by Girma et al from the southern part of Ethiopia showed the high rate of cryptosporidium infection irrespective of HAART initiation, HAART duration and CD4 T cell count

   Thanks again. We have revised our interpretation for HAART initiation. Note that in the unadjusted analysis the OR is significant. So a crude comparison of whether ART was started or not shows a significant decrease in the overall magnitude of the disease. As you have said it correctly, it seems there are some contradictions with the reality, we have now included these sentences in the manuscript.

   Now we have discussed the role of duration on HAART on the eradication of infection with cryptosporidium.

   It could be that those patients on HAART might be having a transient infection with cryptosporidium as was pointed out by [20]. It is also reasonable to look at the point estimates of the odds ratios which indicates a decline but is not significant. Another possible explanation could be that the CD4 counts might not be functionally restoring as opposed to the number as pointed out by Yin et-al [20]. Or it could be a relapse as was noted by Andrew Carr et-al [21].

3. The conclusion of the presence of high and low burden of cryptosporidium and I. belli infection, respectively among HIV infected individuals irrespective of ART is a premature conclusion and unlike various local and regional report and clinical observation in the country.

   Thanks for this idea again. We have now included the duration of treatment with HAART.
In the discussion we have included the finding that majority (85.8%) of patients who have started ART are within their first year of their treatment. A similar idea can be retrieved from Table 1(Please look at the mean and SD of the duration on ART). We have discussed the effect of duration of treatment and time to eradication with other papers that have reported the treatment duration for clearing infection with cryptosporidium.

Our sentence was a bit over ambiguous and over-generalized the observation in the first manuscript.

4. The denominator in table one is not specified and difficult to compare the percentage.

Comment well taken and we have included (n=x) for all components in Table 1.

5. However, it is apparent that the rate of cryptosporidium infection among patients before and after the initiation of ART is similar. How it could be explained?

Please see comment above (2).

6. The time point for CD4 count determination (table 1) is not defined: Was it a baseline when the patients was enrolled in HIV/AIDS care clinic or was it during patients follow up before or after ART or during the time of stool examination?

This is clearly described in the methods part. The CD4 counts were the most recent CD4 counts found from the registers or formats (namely either from ART register or from HIV follow-up form). The possible epidemiological measurement errors that can be introduced by doing so is well discussed in the discussion part. Of course the ideal scenario could be to do the CD4 testing when the stool examination was collected but we couldn’t do that because of lack of resource to do CD4 counting at the hospital for this same reason.

7. In general the MS was not seen by the 2 senior last authors

We are always in touch with the last 2 authors. We are constantly e-mailing them but we cannot get replies from BP but we have received constructive ideas from TE and we have revised the Authors’ contribution section now.

Reviewer: Leka Thuli

8. There are many typographical and grammatical mistakes and should be corrected.

We have taken care of the errors to our best capacity.
Reviewer: Sekesai Mtapuri-Zinyowera

9. Find attached the edited document that had many English language writing errors. The paper was not flowing

We have edited the text accordingly.

10. Needs some language corrections before being published

We have taken care of the errors to our best capacity.

Reviewer: Takafira Mduluza

11. What is the Institutional difference between author 1 and 2? Advise to correct the tagging of authors institution
Comment accepted and amendments made accordingly

12. The authors need to thoroughly review the manuscript to differentiate use of whether and weather as in the Abstract : Results section and in the Conclusion
Comment accepted and amendments made accordingly

13. All other grammatical and typography errors are taken care of accordingly in the new manuscript

14. All organism names has been written in italics
15. We have decreased sentences written in passive voice!
16. All used documents and formats were explicitly named now!