Reviewer’s report

Title: Intestinal parasitic infections in relation to HIV/AIDS status, diarrhea and CD4 T-cell count

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Reviewer: Jacob Estes

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In the manuscript titled: Intestinal parasitic infections in relation to HIV/AIDS status, diarrhea and CD4 T-cell count by Shimelis Assefa et al., this group seeks to understand the prevalence of intestinal parasitic infection differences between HIV-infected and uninfected individuals living in southern Ethiopia. Although the implications of such a study are important clinically, this particular work is deficient in many important ways, from the writing down to the presentation and interpretation of the data. The current work needs increased attention prior to publication in this reviewer’s opinion. Find below specific comments.

1. I certainly understand that there are resource limitations in certain geographical regions of the world, however; simply stating that HIV infected individuals were obtained from a log book is unacceptable at any level for scientific presentation. These authors need to provide basic and important immunological and virological parameters, such as: the CD4 T cell count (at least at time of stool sample collection) clinical status; length of time infected; what clade of virus; any opportunistic infections; etc. In addition, the authors need to specify when the stool sample was taken. At entry? During acute diarrhea? During chronic diarrhea? How was the time of stool sample collection relative to diarrhea controlled?

2. Table 1 is tangential to this study and although takes up a large portion of the body of this work, is completely irrelevant to the findings.

3. Table 3 needs to have statistical analysis performed for each group (i.e. is there a statistical difference in the HIV+ and HIV- groups that had 1, 2, 3, 4, 5 or ANY parasitic infections? 60% of the HIV+ group (128/214) had 1-5 parasitic infections, while only 495 of the HIV- group (80/164). Was this significant?

4. Table 4 is in need of help. The authors need to specify and put more thought into what the parenthetical percentages are representing. This was not stated anywhere that I could see. For instance, the authors list in parentheses the percentages of HIV+/HIV- with acute/chronic/no diarrhea that either have or do not have parasitic infections. Why did they choose to partition the groups this way? More importantly one needs to know what is the percentage of HIV+-/- individuals with or without parasitic infections that have acute/chronic/no diarrhea? Was there a significant difference between the HIV+ and HIV- group for acute/chronic/no diarrhea? (54 HIV+/214 or 25.2% had chronic diarrhea, while
only 19 HIV-/164 or 11.6% had chronic diarrhea, was this significant?) Did the authors notice that about 50% more of the HIV+ individuals (29/214) with parasitic infections had chronic diarrhea compared to only 7% of the HIV- individuals (12/164) with parasitic infections? This table needs to be revisited.

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I have no competing interests'