Reviewer's report

Title: Determination of Hematological parameters among HIV positive patients taking HAART and HAART naive in ART clinic of Gondar University Hospital, Gondar, Northwest Ethiopia: Comparative cross-sectional study

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Reviewer: Heather Leitch

Reviewer's report:

In this study, Enawgaw et al examine the frequency of cytopenias in patients with HIV infection receiving HAART compared to patients not receiving HAART. Findings include a lower incidence of anemia with HAART but higher incidence of thrombocytopenia and neutropenia.

There are significant issues in this paper with content and reporting of the information. The problem that overrides these issues, however, is: what is the clinical significance of these findings? As a practicing clinician, I’m not interested in how often the neutrophils and platelets are just below the lower limit of the normal range, I’m interested in how often they’re low enough to cause clinical problems requiring intervention and/or how often they’re an indication of another underlying problem such as infiltration of the marrow by infection or malignancy, requiring investigation. In the absence of clinical significance, the authors need to clearly demonstrate that there is purpose and significance to their findings, and this is not done.

Writeup: the paper needs to be re-written by someone who is fluent in English with attention paid to detail including pronouns, lack of capitalization of words that should be capitalized, taking away capitalization that appears in the middle of the sentence, typographical errors, punctuation, clear expression of ideas, etc. For example, on the title page: the ART clinic; a comparative cross-sectional; & Immunohematology; big gap between the third and fourth author. In the rest of the manuscript, the details that need correction are too many to list here.

Of 9000 patients attending the clinic, the study population was 290. Which patients were chosen for the study? It can’t have been merely the ones that attended during the period mentioned, as there were 145 cases and 145 controls. This did not happen randomly, there was clearly some matching done. Which characteristics were matched for? What were the baseline demographic and clinical characteristics?

What medications constitute HAART in Ethiopia? What is the relative access of particular patients to HAART and did this influence the study population and therefore the results?

One would expect anemia in patients on HAART to be macrocytic, but normocytic anemia was found in nearly 20%, suggesting that there might be a second process contributing to the anemia. What investigations did the authors
do to rule out iron deficiency? Hemoglobinopathies? Inherited membrane
disorders? Other nutritional deficiencies, for that matter?
What is the OAUTHC?
The discussion is a listing of comparisons to other studies without context or
discussion of in what way the study populations might differ. The conclusions are
a repetition of the results, again without context.

**Level of interest:** An article of insufficient interest to warrant publication in a
scientific/medical journal

**Quality of written English:** Not suitable for publication unless extensively edited

**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