Reviewer's report

Title: HIV associated hypocalcaemia among diarrheic patients in northwest Ethiopia: A cross-sectional study

Version: 2 Date: 27 January 2014

Reviewer: Belaynew Wasie Taye

Reviewer's report:

The authors have worked on an important area of clinical research and practice.

Particular comments:
1. Is the question posed by the authors well defined?
   Yes.

   Background shall state the mechanism of hypocalcemia causation from scientific literature.
   The studies (including those from same facility) showed that hypercalcemia is widespread problem among HIV infected. Why this assumption is raised and studied becomes unclear.

2. Are the methods appropriate and well described?
   Why was sample size not calculated? How were the clients with hyperparathyroidism, and other calcium related disorders excluded as it may require biochemical testing to know many of these abnormalities? Why should they be ART naïve?

   What was the purpose of stool examination; to confirm which bacteria caused the diarrhea or compare the type of bacterium with calcium level?

   What is plausibility of testing the association between infectious pathogens and hypocalcemia?

   Why and how are the multiple statistical tests used in the table shall be clarified. E.g. what was the T-test used for in table 1.

   Could the association between calcium level and HIV infection be confounded by other factor such as dietary intake,…etc? please explain.

3. Are the data sound?
   Researchers used appropriate methods of data gathering. Yet analysis section
needs more explanation.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
   Yes.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
   Yes

6. Are limitations of the work clearly stated?
   No. Not addressed

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
   Yes, they have cited references properly. However the authors shall limit the references to only relevant ones to the study population.

8. Do the title and abstract accurately convey what has been found?
   Yes. They are clearly presented.

9. Is the writing acceptable?
   Writing is acceptable but requires more editorial work.

- Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

A. Ethics:

1. It is unethical to do nothing to those with hypo/hypercalcemia. What was done to them? 2. Were there identifiers of participants used or no? 3. What happened/will happen to the blood samples afterwards?

B. Editorial revisions

C. Study limitations

D. References (see 7 above)

- Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)

  A. study background and significance
  B. Methods section: ( see the comments above)

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published
**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.