Reviewer's report

Title: The effect of Tuberculosis and antiretroviral treatment on CD4+ cell count response in HIV-positive Tuberculosis patients in Mozambique

Version: 1 Date: 9 April 2012

Reviewer: Chawangwa Modongo

Reviewer's report:

1. Introduction

a. Major Compulsory Revisions
The introduction should focus more on the effect of CD4 count on anti-TB treatment and ART and its relevance. There is no clear link between the literature and the formulation of the research question, the introduction mentions two studies in regard to increase in CD4 count on ATT without ART, more literature is required in regards to quantifying CD count on ART. If there is no such evidence the researcher should state the short fall of that evidence. There is a clear objection but no clear aim.

b. Minor Essential Revisions
Please cite: The increase in TB notifications is partly driven by the Human Immunodeficiency Virus (HIV) epidemic.

2. Method

a. Major Compulsory Revisions
The research design is clearly described and appropriate including the rational of the sites, although there is no clear description of the participants, i.e. the new TB patients included were they all microbiologically confirmed cases and what TB type (pulmonary vs. extra-pulmonary) was included.

Ethics
The researcher states ethical approval was gained from each institution

3. Data collection and analysis

a. Discretionary Revisions
Data was collected by a member of the TB team within the facility, which was appropriate although it is no clear if the baseline CD4 count (CD4 count before initiation of TB treatment and ART) was also collected, microbiological results at 2 months and 5 months on TB treatment (as a monitoring tool, whilst on TB treatment) bacillary load at initiation and at monitoring, and other co-morbidity/opportunistic infection, which can be potential confounders.

b. Minor Essential Revisions
Please stipulate the period of data collection in 2007.

4. Results and discussion

a. Major Compulsory Revisions
It does not clearly state if those who were on ART at initiation of TB treatment were included or excluded in the analysis and also those with outcome of death and if these patients were on ART treatment or not. The inclusion of these individuals could have also biased the results. The graph also show that the patient on ART had a higher baseline CD4 count than those not on ART which could also be a reason for a lower and slower reconstitution.

This section needs to be reviewed by a statistician or epidemiologist

5. Conclusion

a. Discretionary Revisions
The conclusion relates to the objective and recommendations have been made from the results and discussion. The research fails to identify further research opportunities /issues arising from the study. Overall the writing is acceptable

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:
I declare that I have no competing interests.