Reviewer's report

Title: Clinical, Molecular and Drug sensitivity Pattern of Mycobacterial Isolates from extra-pulmonary tuberculosis cases in Addis Ababa, Ethiopia

Version: 2 Date: 2 December 2014

Reviewer: Barnaby Young

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Major compulsory revisions

1. Overall this study describes aspects of EP TB. However data presented is incomplete with limited analysis or interpretation. The study would be much more valuable if it attempted to compare, for example, EPTB in HIV versus non-HIV infected subjects - and carried this through the clinical, molecular and DST patterns.

2. The utility of strain typing is not fully explored beyond association with disease type. Descriptive lineage data is not of particular interest. However using strain typing to investigate epidemiologic or susceptibility characteristics could be useful (e.g. family, hospital, or disease associated clusters, RIF resistance).

In addition:

1. Line 175. Were 210 or 200 patient consented?
2. Population under study not well described. How were potential subjects identified (at admission to hospital, attendance at outpatient TB clinic or other?) – and how may the identification method change results. How many patients were approached, and how many did not agree to take part in the study.
3. It is not clear what is compared in the statistical analyses, and why only some comparisons are presented.
4. Lines 265-7 are difficult to understand, and lines 268-271 are a misinterpretation of the data.
5. It is not appropriate to analyse demographics such as alcohol and diabetes history of children and adults together
6. Very limited clinical data is provided – what was the severity of infection (e.g. proportion admitted to hospital), what were the treatments and duration, what were the outcomes? Were all suspected EPTB confirmed as such, even if culture –ve?
7. There are errors in numbers (e.g. age category sub-groups do not add to 200) and p values (24.28?) in Table 1
8. What proportion of HIV +ve and –ve patients were culture negative? How many samples were cultured, and how many were positive from each patient? What proportion of cases were EP and P TB, as considerable overlap is
expected (e.g. disseminated and pleural TB).

9. The incidence of mono-RIF resistance is surprisingly high. The reason for this should be explored. And why was DST only performed for 37/59 isolates?

10. Discussion lines 375-83 are unclear and in places incorrect. It is not possible to determine if HIV is more common in EPTB than PTB by only investigating EPTB.

11. Discussion of mycobacterial isolate diversity contains some consideration of local relevance, but duplicates a lot of data from the results.

Discretionary revision

1. Abstract line 84. Comparing EPTB rates with smear +ve or –ve is less relevant than comparison with PTB (to which it is less common)

2. Background lines 132-140. Data referenced is from a mixture of years. Providing data from one year would be clearer +/- time trends.

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

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

**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