Author's response to reviews

Title: Clinico-epidemiological profile and diagnostic procedures of pediatric tuberculosis in a tertiary care hospital of western Nepal- A case-series analysis

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Author's response to reviews: see over
Thank you for the speedy and a favorable review of the manuscript in BMC Public Health. We are submitting answers to the questions and comments raised by the reviewers. We have answered the issues raised by both reviewers. We have provided point-by-point replies (Italics and bold text) to the reviewers’ comments. We believe that we have given satisfactory replies.

Also we are submitting the revised manuscript for further consideration.

Best regards

On behalf of all the authors

Chandrashekhar T Sreeramareddy

Reviewer: Alwyn Mwinga
Reviewer's report:
Major Compulsory Revisions
1. The article provides a retrospective analysis of pediatric TB cases diagnosed between March 2003 and June 2008. The abstract does not provide adequate information on the topic under discussion. A major weakness in the article is the lack of statistical analysis though phrases such as statistical significance are used for the difference in pulmonary TB and extrapulmonary TB among the age groups. Statistical analysis is required to support the statements made in the paper.

   We have added some more details about the topic in the abstract. Statistical analysis has been mentioned in method. We have provided the test statistic and p-values in the text under results section and also as foot notes in the tables.

2. The discussion has many repetitions and is not very easy to follow. The discussion on the impact of HIV occurs in two paragraphs and these seem to contradictory.
We agree that there were some repetitions. We have suitably edited the discussion section to omit the repetitions. We have also rephrased the statements and combined discussion about HIV into same paragraph.

3. It is not clear what is meant by BCG diagnostic. The sentences describing the Mantoux and BCG are not clear.

**BCG diagnostic has been replaced by BCG test. Both sentences about Montoux and BCG test have been rephrased.**

4. The conclusions are not supported by the data presented e.g. extrapulmonary manifestations said to outnumber pulmonary, though the data presented show the opposite (75 pulmonary, 68 extrapulmonary).

**We have removed the sentence to avoid confusion. In fact the extrapulmonary sites outnumbered pulmonary when combined and miliary/disseminated forms of TB.**

Minor Essential Revisions
Abbreviations should be spelled out the first time they are used e.g. FNAC
Tables are wrongly quoted in the body of the paper – reference to figure 1 when there is no figure 1, distribution of types of TB said to be in Table 1 when it is actually table 2, the table showing investigations is Table 3 and not table 4.

**These were some major formatting and typographical errors. We have rectified them in the revised manuscript. Further we have added figure 1 as we had forgotten to add the figure in the earlier version of the manuscript.**

Figures wrongly quoted – in text 75 patients diagnosed with extrapulmonary TB but in table it is 67.

**In the table we have added isolated extrapulmonary. We think this is not wrong since we are giving number of patients diagnosed as extrapulmonary TB only in the table. When we add up isolated extrapulmonary and combined (PTB + EPTB) the number 75 in text is correct.**

- Discretionary Revisions
1. Review use of some phrases such as “gamut of investigations, battery of investigations” as only 5 investigations quoted in study.

**We have ammended as suggested in the revised manuscript.**
Reviewer: Robert R.P. Gie
Reviewer's report:
In this article the author report on the epidemiology, clinical picture and investigations of children referred to a TB treatment centre (DOTS centre) in a low income country. This is potentially an important study as there is limited data in the literature as to the number of children diagnosed with TB, the investigations used to diagnose TB and the clinical forms of childhood TB especially in low income countries with limited diagnostic facilities.

Major revisions:
1. Of the 162 children diagnosed with TB we are not given the diagnostic criteria used to diagnose TB. This makes evaluation of the special investigations used difficult to assess.

We have discussed this issue about diagnostic criteria in the discussion. We added more details in the results section about special investigations used for diagnosis of mainly extrapulmonary TB.

2. In the discussion the authors note that medical records were not available for all the cases included in the study. This is of course not unusual in retrospective studies but those cases where the data was not available should be acknowledged in the data and the authors should indicate how they managed this problem.

We have acknowledged the missing files at the beginning of results section. We have also written about how we managed the missing data in the medical case files under limitations in discussion section.

3. From my analysis of the data even in older children sputum smear microscopy was not used to diagnose pulmonary TB or did all the children older than 10 years (n=20) have their sputum examined? If this is the case then only 5/20 were smear positive which gives us some idea as to the quality of the data. This needs clarification.

For most children aged >10 years were TB suspects sputum AFB was used. We have added the following in the results section: “Sputum for AFB was not done for 13 of 58 children who were aged above 10 years”.

4. What is uncertain is how the diagnosis of abdominal TB, pleural, pericardial TB etc was made which would be valuable additional data.

As written above for Major revisions point 1 we have given details in the results and discussed about this.

5. The most common extrapulmonary TB diagnosed was lymphnode disease which is similar to other reports. The diagnosis was in the majority made by fine needle aspiration. The point of uncertainty is that it seems that there were 132 attempts at FNA of which 35 were diagnostic. In my interpretation that means on average each child had 4 attempts to make the diagnosis or is there another explanation?
The confusion was created due a typographical error. We have rectified this in the table. 32 (not 35) were positive for lymph node FNAC out 38 children who were tested.

6. In the discussion it is reported that 20% of children were tested for HIV. In the results were are not given any indication as to the number tested the number positive etc. This is an important omission.

We have already written about this in results section i.e. “Out of 162 cases reviewed HIV spot test was done for 36 (22.2%) patients and was positive in eight children”.

7. The diagnosis of disseminated TB needs to be more specific. The authors state that disseminated TB is when 2 organs are involved. Clarity is needed as to if the authors are referring to acute dissemination (miliary TB) of distant dissemination e.g. skeletal TB. Would the authors have considered cervical lymph node disease and pulmonary disease as dissemination or not? Would a red eye and pulmonary disease be regarded as dissemination? This needs clarification.

We had written the following in the end of data collection under method section.

“For the purpose of our analysis the type of tuberculosis was classified as isolated pulmonary TB, extra-pulmonary TB, pulmonary TB with extrapulmonary TB (only one extrapulmonary site) and disseminated (pathology in more than two sites) and miliary TB”.

We clarify that we considered the patient as disseminated TB only when more than two sites were involved. Therefore lymph node disease and pulmonary disease is NOT dissemination of TB.