Reviewer’s report

Title: A prospective study of socio-demographic, clinical characteristics and treatment outcomes of children with Tuberculosis in Sindh, Pakistan

Version: 4 Date: 04 Dec 2018

Reviewer: Simon Schaaf

Reviewer's report:


The authors have improved the manuscript, but several important issues remain. The reviewer's comments are as follows:

Major comments:

1. Data collection, L116-117: Suggest add definition of pulmonary and extrapulmonary TB here - see lines 156-158) - and delete "added in lines 135-136"
2. Results, page 8, L181-183: The WHO does classify patients with EPTB and PTB as PTB, but in children it is important to also know about the severity of disease. For example, if a child has miliary TB or TB meningitis with pulmonary involvement, then in this study outcome the child will be classified as "PTB" and the severity of the EPTB is ignored. Would it be possible for the authors to indicate how many of the children classified as PTB also had EPTB and then present the full extent of EPTB in the table (all EPTB types including those that had PTB)?
3. The reviewer did not see results of drug susceptibility testing of either cultures or Xpert MTB/RIF presented anywhere? Should be added in table 1: how many cultures/DSTs were done, how many Xpert MTB/RIF assays were done and results
4. Please also give numbers and denominators with the percentages in the results section, not only percentages, which does not give adequate information.
5. Table 2 remains very difficult to understand - it needs restructuring to make this clear
6. The reviewer did not find any table 3?
7. Discussion: Lines 277-288: The reviewer feels very strongly that the discussion on female children having more TB should be deleted. There is absolutely no evidence from this study that female children get more TB than male children in this setting. It seems as if the authors want to use the manuscript as a platform for advocacy rather than discussing the scientific results. The reviewer has indicated in a previous review of this manuscript what the authors could do to substantiate their claim. If they can show, according to census statistics of this study setting, that there are significantly more boys compared to girls, while girls have "more" TB, then they can make a point, but without this it is unscientific speculation and should be deleted.
Minor comments/corrections:

1. Abstract:
- L40: It is not most or majority - it is only a third of the children that are less or equal to 2 years of age
- L43: change to: had known TB contact
- L48: household contact with (delete "s" from contacts)

2. Background:
- L55: The World…
- L56: directly observed therapy, short-course (DOTS)

3. Data collection:
- L110: The socio-demographic
- L114: …and Xpert MTB/RIF (Cepheid, [add city & country of manufacture])
- L126: delete "finally"

4. Diagnosis:
- L133: a positive tuberculin skin test (TST) result
- L133-134: which scoring chart and at what score?
- L135: Mycobacterial culture…
- L136-139: Children presenting to the hospitals with …were evaluated for TB. (delete "examined")
- L143: remove closing bracket after AFB. In addition, Xpert…
- L147: CXR (as abbreviated previously)
- L149: lymph nodes
- L156-158: Move earlier - see above)
- L159: WHO guidelines (add "guidelines")

5. Results:
- L168: …childhood TB cases added up to 508 out of 2,634 (19,3%) of all…
- L169-170: All 508 patients met the inclusion criteria and were…
- L233-237: Of the 508 children in the study, [number](95.1%) achieved successful treatment outcomes; 15 (3%) were cured and 468 (92.1%) completed treatment. Of those with unfavourable outcomes, 6 (1.2%) died, 4 (0.8%) failed treatment, 9 (1.8%) were lost to follow-up and 6 (1.2%) were transferred out to other units as MDR-TB.
- L250: …retreatment cases (COR…
- L256: …and those who had known TB contact…
- L260: delete "subsequent"
- L261-262: The majority…weight gain to more or equal to the 5th percentile weight for age following…

6. Discussion:
- L270: delete "studies" to read "…one of few that…
- L273: Nineteen percent of the total number of TB cases…
- L274: …recorded in children at the study site. (delete the rest of sentence)
- L298: replace "principally" with "mainly"
- L309-310: Delete "mirroring the distractedness to the child." It seems as if women with less education don't care for their children, which is unlikely to be true.
- L314: "documented in a number of studies" - please supply the references to these studies
- L315: delete "was also justified by" and replace with "could possibly be related to"
- L317-318: Where are the studies to prove this statement? The book chapter is only an opinion - the original study or studies to show this is important
- L320: CXR
- L322 replace [29] with name of author
- L372-374: Delete the complete sentence. Also the next two sentences are not clear.
- L376: Where does the household smoking come from? No results regarding this therefore cannot include it in the discussion (or add it to the results)

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Unable to assess

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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