Reviewer’s report

Title: TB-HIV co-infection in Karnataka province, India: a descriptive epidemiology from the national program and a comparison of treatment outcomes with non-HIV tuberculosis cases treated in the program

Version: 1 Date: 27 February 2013

Reviewer: Weerawat Manosuthi

Reviewer’s report:

The study’s interesting point is that it represented treatment outcome in routine setting. However, there are several specific comments that need to be addressed as below.

Major comments:

1. I don’t think that outcomes from this study can allow to concluding as in the abstract “The benefit of early initiation of ART among co-infected patients is demonstrated by the improved TB outcomes in this population.” No study regarding early or late ART initiation was conducted in the methodology. Otherwise the authors have to show this particular data in the result section. In addition, this content in the discussion section should be revised.

2. Data on TB culture and drug resistance is still lacking in this study. This factor has a great impact on TB treatment outcomes. I understand that not all patients had this test done. The authors may show only the patients who had drug sensitivity result.

3. What proportion of patients 1. who had received ART and subsequently developed TB and 2. those who diagnosed TB first and started ART later. This data needs to be shown in the result section because survival outcomes of both groups are different.

4. Is there any DOT program implemented during the study period? If so, give the details. In addition, adherence data should be shown.

5. The timing of CD4 cell count measurement should be mentioned in the result, how many weeks or months before or after TB diagnosis.

6. In the discussion section, the authors mentioned that “While overall treatment success rates in our co-infected cohort were close to 75%, they were significantly better in the group that had been already initiated on ART compared to those who were not on ART.” It would be better if the author discuss more regarding the reason to explain and give the suggestion to improve the outcome.

7. It would be more beneficial if all risk factors for death in multivariate analysis can be shown, instead of univariate analysis only.

Minor comments

8. What is the reason that the study period was different between TB/HIV group
(April 2010-March 2011) and TB mono-infection (April 2010-December 2010)?

9. Table 1 and table 2: a sum up of number of patients “not on ART” and “on ART” is 5040 (1024+4016) patients but it was not corresponded to table 2 (5079 patients). Please clarify.

10. The authors showed in the 2nd paragraph of result section that there were 5079 patients after excluding ongoing treatment that I agree but why a total number of treatment outcome was not corresponded (3776+296+22+797=4891).

**Level of interest:** An article of importance in its field

**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.