Reviewer's report

Title: HIV prevalence in tuberculosis patients in Israel, 1999-2011: A retrospective cohort study

Version: 2
Date: 15 July 2014
Reviewer: Valeria Saraceni

Reviewer's report:

Major Compulsory Revisions

1 – Title: A prevalence study should not be called a cohort study. I’d suggest the authors another title: HIV prevalence in the Israeli Tuberculosis cohort, 1999-2011.

2 – Abstract: 4th paragraph: the authors stated; “and higher risk of dying during treatment than HIV-negative tuberculosis patient”. There’s no measure of risk performed in their study. They didn’t even tell us how many had death as outcome, as their outcome was defined as “Treatment outcomes were defined by the WHO [7], and patients who were cured or completed the treatment were considered success.”

3 – Methods:

3.1 – Line 2 in this section: TB infections should be replaced as active TB disease, as classically, TB infection refers to latent TB infection, not the actual disease.

3.2 – P.6 last paragraph: “The follow-up study period…” – I strongly suggest to take out follow-up, as nothing is this study suggests an actual follow-up.

3.3 – Same location: Line 4: “P>0.05 was considered statistically significant.” I’m positive there’s a typo here, as it should be P<0.05 to be considered statistically significant.

In this section, there’s no mention to any measures of association in the study to assess risk of death. I’d suggest a stronger analysis to asses this.

4 – Results:

4.1 -Any other number of cases (samples) should be denoted as “n”. The total population from where the cases derived would be “N”.

4.2 – Last line in the 1st paragraph: “outcomes and higher risk of dying during treatment”. Again, no measure of risk assessment was found in the paper. The phrase should be rewritten accordingly. There’s only the comparison of proportions, which is not a measure of risk.

4.3 – Figure 2 does not add to the paper. In fact, I’d suggest to take it out.

5 – Discussion:

5.1 – 3rd paragraph: Reference 14 is not recent and doesn’t assess the issue of
timing of ARV initiation in TB patients with the latest findings in this field. The reference should be replaced by a more recent, like WHO recommendations on this issue.

5.2 – Page 9, 1st paragraph: “It is possible that the lack of association between extrapulmonary TB and HIV was a result of analyzing only EPTB cases, rather than concurrent pulmonary and extra-pulmonary TB in HIV patients, resulting in reporting bias.” If the authors are in agreement that they’ve introduced a bias here, how would they treat this in their results?

5.3 - Page 9, 2nd paragraph: “TB/HIV co-infected patients are more susceptible to MDR-TB, either through nosocomial transmission, as they visit medical settings more commonly, due to malabsorption of TB medication as the ART may cause rapid gastrointestinal passage,” – I don’t understand this comment: Do patients visit medical settings because of malabsorption of TB meds? Does this increase the risk of MR-TB by visits to health centers, or does this increase because of lower serum levels of TB meds? I’d like to see a reference here, in order to make it clearer for the reader.

5.4 - Page 9, 3rd paragraph: “As TB/HIV mortality rate was higher than TB patients who were HIV-negative,...” Again, I wasn’t able to find mortality rate, which is a measure of incidence.

5.5 – Page 9: the last sentence, which continues on page 10 “This...”, is very hard to understand. It should be rephrased.

5.6 – Page 10: Last paragraph: “First, there were no accurate data regarding the proportion of TB patients who were tested for HIV.” The authors used reference #8 to assess this topic in page 6, where I thought they were quite sure of the high coverage. How do you explain that?

Minor Essential Revisions
Some misspelling found throughout the paper, as coinfection, benchmark, antiretroviral, that would benefit from a review.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**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.