Reviewer's report

Title: The presence of a booster phenomenon among contacts of active pulmonary tuberculosis cases: a retrospective cohort.

Version: 1 Date: 25 November 2006

Reviewer: Cynthia Chee

Reviewer's report:

General
This paper addresses the problem of TST interpretation in contacts from medium and high TB incidence countries where the background incidence of LTBI is expected to be substantial. Although the US CDC do not recommend two-step TST in contact screening, some centers in these settings elect to perform two-step TST to avoid the misinterpretation of a boosted reaction as a conversion. The authors found a surprisingly low incidence (6%) of boosting among contacts in a city with a high TB incidence (> 100/100,000). That the mean age of contacts who boosted was higher than those who did not was not unexpected.

The paper is well-written but rather brief. More information in the methods and results should be given. The discussion could also be expanded.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. Information regarding the time interval from cessation of exposure to the first TST, if available, should be given. Were all contacts first tested within the window period for TST conversion of 4 to 8 weeks? (Two-step testing would not have been necessary in those whose screening was initiated >= 8 weeks after cessation of exposure to the index case). The study findings should be interpreted in the light of this information.

2. The characteristics of the contacts should be shown in a table format.

3. Information regarding the BCG vaccination (and re-vaccination if any) policy in Rio de Janeiro should be provided.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

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Discretionary Revisions (which the author can choose to ignore)

1. From the results, 66% of the contacts with available information had BCG scar. Taking TST >= 5 mm as positive has resulted in a high percentage of contacts (46%) being offered LTBI treatment based on the first TST. The authors could discuss the implications of using a >= 5 mm cut-off as a positive TST in BCG-vaccinated contacts.

2. Information regarding the number of active TB cases detected from the screening, and the conversion rate of the contacts who were retested would be of interest.

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What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

Quality of written English: Acceptable
Statistical review: No

Declaration of competing interests:
I declare that I have no competing interests.