Reviewer's report

Title: Transmission of Specific Genotype Streptomycin Resistant Strains of Mycobacterium tuberculosis in the Tokyo Metropolitan Area in Japan

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Reviewer: Paula Fujiwara

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Summary of the article:
This is a descriptive study which combines epidemiologic data of AFB smear positive patients with DNA fingerprinting analysis. Using an outbreak of streptomycin resistant TB at university campus in the Tokyo Metropolitan Area (TMA) as the starting point, the spread of these strains is analyzed, using population-based or hospital-based DNA fingerprinting surveillance of M. tb in two cities also in the TMA.

The methodology to determine drug resistance, RFLP and VNTR analysis is well described, and the strongest part of this paper.

Major Essential Revisions
1. It is not clear why were the databases of Kawasaki City and Shinjuku City chosen over any other? databases in the TMA. Were they the only ones; or convenient to the researchers? Is there some link between the university in Yokohama, where the outbreak was located, and Shinjuku and Kawasaki? How comprehensive was the Kawasaki City database – was every positive culture fingerprinted, or was this done selectively? It is known from the report that Shinjuku City collects 85% of all isolates of M. tb of bacillary positive tuberculosis patients city-wide. How does the Kawasaki Hospital strains relate to the Shinjuku database?

2. The Table is not useful to the paper. It is difficult to read, and other than the loci columns headed ETR C and VNTR 4156, there seemed to be no other difference among the strains, and these data were already summarized in the text. A figure summarizing the known linkages between patients would have been more helpful.

3. I don’t think that the conclusion in both the text and the abstract, although it makes intuitive sense, is supported by the data. The authors themselves state that the higher proportion of patients with M4 substrains compared with those with M5 substrains that paid a visit to some internet cafes in the TMA was not statistically significant), yet state (in the abstract) that transmission in common places such as internet cafes has to be taken into consideration.

Minor Essential Revisions
1. It is not clear why the study period was set from September 2002 to January
2008. Had the outbreak ended? Were there no longer any matches among the databases?

2. The English is good; although sometimes “the”, “a” are missing or added when they shouldn’t be. There is some non-idiomatic use of the language, but the meaning is understood. Egs:

a. Page 5, Methods: “The design of the study is descriptive, combining to combine the epidemiological…..”

b. Page 7: “An internet-café as described in this paper is in general a type of cafeteria, being popular among youngsters for passing the time and resting having a rest, which is commonly located in buildings close to a railway or an underground station in urban settings and is usually opened for 24 hours a day. At the place, There, they can spend some time by using a computer with Internet access. It is also commonly used as a temporary residence for homeless people to stay during the night as its price is relatively inexpensive at night.”

c. Etc, etc.

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

**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.

**Declaration of competing interests:**

I declare that I have no competing interests.