Reviewer's report

Title: Recent-Transmission of Mycobacterium tuberculosis (MTB) strains among Iranian and Afghan Treatment failure Cases: Use of IS6110-Fingerprinting

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Reviewer: Maxim Filipenko

Reviewer's report:

In this manuscript the authors have selected and typed 258 isolates to evaluate the contribution of relapses or recent transmission among TB cases in Iran. This paper presents data that might be relevant to that debate. Unfortunately, there are many problems with the presentation, which makes a full critical evaluation difficult.

Specific comments:

Materials and Methods.

How were the isolates identified as being Mycobacterium tuberculosis?

Demographic data? Which health centers? Which cities?

Summarize the drug profiles of isolates tested in a table; possibly these data should appear in results section.

Chromosomal DNA was digested with restriction end nuclease PVUII and was hybridized with endonuclease PvuII

In total, out of 258 retreatment TB cases, seventy-two (72, 28%) had a multi-drug resistance in ratio and forty-two patients (42, 16.2%) had other resistant isolates, not cases.

Which of methods was used to construct the dendrogram in Figure 1.

Results.

Main result of work is presented in Figure 1 which luck numbering, reliable title and any additional information. For example, isolates 17 and 18 (left-to-right numbering) should have same pattern but they are clear different. One could see under hydrolysis of DNAs. It is difficult to trust the reliability of other pattern assignment. Work would benefit from filtering of unreliable fingerprints despite of isolates number decreasing.

Discussion.

This section is too poor. Discussion would be improved if the authors described the patient demography data, drug-resistance and molecular pattern of TB strains in this region at all published in previous papers (Masjedi, Clin Infect Dis.,
2006; Velayati, Scand J Infect Dis. 2006; Farnia, J Infect. 2006; Farnia, J Infect. 2004). It could be useful to appreciate part of isolates belonged to described TB families (Haarlem, Beijing, LAM, EAI, CAS).

On my interpretation of the presented data, it does not clear support the claim that recent transmission (25%) were contributed to the rate of recurrent tuberculosis in treatment failure cases as well as clusters are too small.

The message within this paper is not clearly presented. The manuscript would benefit from input from a native English speaker.

**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:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.