Reviewer's report

Title: Latent Tuberculosis Infection in a Malaysian Prison: Implications for a Comprehensive Integrated Control Program in Prisons

Version: 2 Date: 22 September 2013

Reviewer: Bernard Larouze

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The authors investigated, in the main prison of Malaysia, the prevalence of Latent Tuberculosis Infection (LTI) in two groups of prisoners (HIV-seropositive prisoners housed in a dedicated unit and HIV-seronegative housed in another unit randomly selected). They found an impressive 88.8% positivity rate and, using a multivariate analysis, identified as independent correlate of TST positivity “being HIV-seronegative” and “having been frequently incarcerated previously”.

Major compulsory revisions

In the background section, the authors do not mention overcrowding which may be a key factor for the transmission of TB in prisons as suggested by the mathematical modeling study by Johnston-Robertson et al (S Afr Med J. 2011; 101:809-13). They may indicate the overall occupancy level of Malaysian prisons and of the two prison units they investigated, and describe better their environmental characteristics (ventilation, illumination). They should discuss the potential contribution of differences (if any) in overcrowding and environment to the difference in LTI prevalence rates they observed in the two units investigated. What is the HIV-seroprevalence among prisoners at entry in the Kajang prison as evaluated through the mandatory testing?

How many HIV-seronegative prisoners are housed in the unit investigated and how many of them was recruited for the study? How were they selected? Was the sample investigated representative of the entire population of this HIV-seronegative prison unit? May the selection procedure have been a source of bias for the study of the relationship HIV-serostatus/TST results?

In this article, information on active TB cases is very limited. The reader has to refer to the Figure 1 to know that 26 TB cases were identified among the 189 HIV-seropositive prisoners investigated but none (?) among the HIV-seronegative. More details on these active TB cases would interestingly enlarge the scope of the study. Did any HIV-seronegative prisoner refused to participate in the study or was released within 48h after the TST? The Figure 1 seems incomplete with respect to this information.

The statistical analysis seems adequate and the results are clearly formulated. The authors dedicate the initial part of the discussion to the demonstration that their results are in conformity with results of studies previously published in the medical literature. In our opinion, they should significantly shorten this part of the discussion and develop further the part of the discussion dedicated to the
integrated strategies to be implemented to prevent and treat HIV and TB. They should better prioritize the different strategies: passive case finding, systematic screening, education or prisoners and prison staff, environmental intervention to improve ventilation and illumination, prevention of the HIV sexual risk and harm reduction programs for PLWHA… and discuss the feasibility and cost of these strategies in the specific context of the prison investigated taken as an example. Of interest would be a discussion on ethical issues related to HIV mandatory testing and segregation of HIV-seropositive prisoners.

Minor essential revisions

The bibliography should be completed by including articles published on HIV and TB in prisons of South East Asia, e.g. Chee CB et al, Contact screening and latent TB infection treatment in Singapore correctional facilities. Int J Tuberc Lung Dis. 2005; 9:1248-52 and the excellent article recently published in PLoS ONE by the authors: “The Diagnostic Performance of a Single GeneXpert MTB/RIF Assay in an Intensified Tuberculosis Case Finding Survey among HIV-Infected Prisoners in Malaysia”.

**Level of interest:** An article of limited interest

**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