Reviewer's report

**Title:** Analysis of undiagnosed tuberculosis-related deaths identified at post-mortem among HIV-infected patients in Russia: a descriptive study

**Version:** 2 **Date:** 27 June 2011

**Reviewer:** Pernille Ravn

**Reviewer's report:**

This is well written paper revealing a lack of awareness and skills diagnosing TB in HIV patients and the problems associated with marginalized populations.

To put the magnitude of the problem into perspective I suggest that you include the following information:

Total number of admissions, total number of deaths in the study period, number of patients autopsied and information on the causes of “non-TB deaths”, and on “non-HV related TB deaths”?

Would you know if any patient dying from TB was HIV tested post mortem?

Do you have information on the duration of HIV before admission/death?

Several pt did not come for their CD4 cell count. Are CD4 test and VL for free or do you patients have to pay?

Chest X-ray.

You write in p 5 that “no abnormalities consistent with TB registered”. How many X rays were described as “normal” and how many had “abnormal findings”?

The second reading of chest X-ray was this done routinely/blindely or after knowing the post mortem diagnosis? Please specify.

In all cases a sputum sample was examined for AFB. Was sputum taken from all 29 patients? Please rspecify. If all patients had a sputum examined than the pysicial must have had some suspicion for TB.

P 6 last paragraph. All patients were subjected to autopsy examination…. In 100% of cases TB was established as the cause of death…… Because post mortem diagnosis of TB was used as an inclusion criteria this cannot also be a result.

Immunological tests:

Antibody assay:

P6: 11 were tested with an antibody assay and 1 was pos and 9 neg. What about the last patient?

Could you provide manufacturer and trade names?
You write that the test have poor specificity and from your study the test also seem to have a poor sensitivity as only 1/9(10) had a positive test (p6)

TST please define the cut off for pos test

Microbiology/pathology: Other co-morbidities were found. How were those diagnosis made.
And how was it determined that the cause of death was due to TB and i.e. not due to PCP?

It would be useful to describe in more details the macroscopic findings followed by the result of the microscopy in the affected organs.

Conclusion:
It seems to me that the general physicians actually had a good suspicion of TB by ordering AFB microscopy on all patients and requesting a TB /HIV expert to review the patients in 66% of the cases. Therefore also HIV/TB specialist apparently need more training/education.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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