Reviewer's report

Title: Outcome of Tuberculosis (TB) in a low incidence area: a 4-year study in Geneva, Switzerland

Version: 1 Date: 25 May 2009

Reviewer: Einar Heldal

Reviewer's report:

This retrospective mainly descriptive study of clinical records presents data about a group of patients with TB diagnosis confirmed by either culture or histopathology. The paper presents a variety of topics: a) treatment outcome (showing excellent results), b) diagnostic confirmation (microscopy and culture in sputum vs bronchoscopy), c) socio-demographic characteristics (including smoking, alcohol abuse), d) clinical characteristics, and e) diagnostic delay. This makes the article long and not fully focused. Interesting findings include that smoking is related to cavitary disease (but retrospective data on smoking have big limitations).

Outcome and delay are probably two main challenges in TB control in this setting. If the main focus is outcome, more data on outcome related to socio-demographic and clinical variables could be presented, since they are now described very briefly. If delay is the focus, more data would be expected on factors related to delay, in addition to the interesting data on diagnostic procedures. The relative importance of patients versus health system delay would also be of interest. The authors could therefore consider if the paper should be split in two papers, if there are enough interesting findings about treatment outcome.

Major compulsory revisions:

1. The aim (p.4) includes "identify factors associated with treatment failure or relapse", but this is not included in the paper nor the abstract and should probably be deleted.

2. The relapse rate was given as 0.8% (N=2) but it is not explained in the methods section how this was found. Can observation time be assessed for each case so that relapse per 100 observation years can be assessed? If not this information is not so precise and could be omitted.

3. How representative are the patients in the study of all TB patients reported in the Geneva area? Could the total number of TB cases reported during the period be stated, and compared with the numbers in the study?

4. Only patients who started TB treatment and with diagnosis confirmed by culture or histopathology were included. How many diagnosed TB cases were not included, and why were they not included: died before treatment start, no culture/histopathology confirmation, etc
5. Inclusion criteria states that patients treated between January 1999 and January 2003 were reviewed. Does this mean patients who started treatment between 1.1.1999 and 31.12.2002?

6. It would be helpful to describe how the patients were diagnosed – by screening (entry?), or because they went to the health services because of symptoms, contact tracing etc. This makes the information abut diagnostic delay more meaningful.

7. There is no discussion of completeness and quality of data in the data base – how many missing values (hiv testing, DST results, smoking, alcohol abuse, delay)?

Minor essential revisions

8. The outcome of treatment (p.6) includes both lost to follow-up and treatment interrupted, while table 4 only includes treatment interrupted. WHO usually calls this “defaulted”.

Discretionary revisions:

9. The title does not fully cover the content of the paper.
10. The abstract should present all outcome categories, since it is the key content of the study.
11. Extra-thoracic is in WHO/Union terminology called extrapulmonary. Extrathoracic is mainly used in former Soviet Union countries with a slightly different definition.
12. Table 1: Caucasian vs non-caucasian. It is more common and interesting to distribute by continent as in table 3. Each variable (with mutually exclusive categories) should be presented separately including missing values (separate bullet point: asylum seekers, political refugees, illegal status)
13. Was HIV testing performed in all? How was 100% coverage achieved? Was it obligatory or by informed consent?
14. Table 2 were there no sm+cu-, and if there were how were they classified?
15. Table 2: last comment under table: #Smear-/culture-: diagnosis based on either positive culture (? but culture neg?)“.. and favourable radiological evolution of pulmonary involvement under treatment”. Positive culture should probably be omitted?
16. Outcome p. 10 Mortality rate – should be fatality rate. The last line: In these cases we did not identify any risk factor associated with an unfavourable outcome? What kind of analysis was done?
17. Discussion p.13: how were the new criteria to analyse outcome different?
18. Figure 1: Add number of cases in each of the two groups (N=?)

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