Reviewer's report

Title: High mortality during tuberculosis treatment does not indicate long diagnostic delays in Vietnam: a cohort study

Version: 1 Date: 3 June 2007

Reviewer: Bernt Lindtjorn

Reviewer's report:

General

The authors raise an important question. They aim to answer the question if tuberculosis patients with a long pre-treatment delay have increased mortality. They conclude that diagnostic delay is not associated with increased mortality.

Their data contradicts conventional wisdom and results from earlier studies. Although unexpected, their data are new and important. Therefore, many would be interested to have a close look at how they collectec and analysed their data.

--------------------------------- Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached) ---------------------------------

The delay data in the mortality study and from the delay study differ: In the delay study the total delay was 7.5 weeks. In the mortality study the delay for patients who died was 5.6 weeks and 7.2 weeks for those who survived. Why does the delay differ in the two studies? In Figure 1, they explain the inclusion of patients. Did the patients who were excluded have a longer delay? I have roughly calculated that their average delay is about 10 weeks. The excluded patients were also older and the male to female ratio was 4:1 and higher than among the included patients. Thus, the excluded patients differed from the included patients. Could they also have a higher mortality rate?

I question why this study has no (zero) defaulters. The authors mention in the discussion that they excluded the defaulters from their study population. This should have been written under methods. The paper should report on this category of patients. From practical tuberculosis work we know that many of the defaulters might have died. In a worst-case situation, many of the defaulting patients could have died. How would this have influenced their results? Although the national tuberculosis programme in Vietnam have lower defaulting rates than the private practitioners, reporting no defaulters is unusual, and warrants an explanation.

20 patients had treatment failure, a known problem from Vietnam.

There seems to be a discrepancy in treatment outcome results if the assessment is done by the people running the tuberculosis programme and by independent researchers [1, 2]. Similar inconsistencies have been reported from other countries [3, 4]. It seems as this is similar to what we know about reporting bias in drug trials where for example industry initiated trials report better results than from independent researchers.

In this study, they relied on reports from the tuberculosis registries. How reliable are the recordings of deaths in tuberculosis registries. A few studies from Vietnam suggest the registries report fewer deaths than independent researchers [1, 5]

How did the authors quality assure their only outcome measurement (death)?

How did the authors measure delay? As written by the authors, such information is based on patient's recall and may be more reliable for short delays than for longer delays. People with short delay may remember more accurately than those with a longer duration or delay. How did the authors validate the delay measure?

The study design is that of a cohort. I am puzzled why the authors use both logistic regression and Cox regression to analyse the data. Would it not be more appropriate to analyse all the data as a cohort study?
The authors examine patients coming to tuberculosis treatment centres. It is not a population-based study. Women are underrepresented in their data and many women are probably not treated. I suggest the authors also discuss the possibility that patients with longer delay die without being treated.

The reference list appears to be biased as they omit important and independent research on tuberculosis done in the country. For example, the authors should include a reference to a population based study from Vietnam showing that prolonged cough is associated with tuberculosis and increased mortality rates [5]. Examples of research showing an association between delay and risk of death, also from high-burden countries, should be included in their reference list [5-8]


What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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.

Declaration of competing interests:
I declare that I have no competing interests