Reviewer's report

Title: Predictors and outcome of patients with acute respiratory distress syndrome caused by miliary tuberculosis retrospective study in Chongqing, China

Version: 1 Date: 2 February 2012

Reviewer: Ronan Breen

Reviewer's report:

Major compulsory revisions:

1. I think that in the abstract and in the main text it is important that the time at which blood tests were taken is reported ie are you reporting ALT/AST at time of hospital admission or ICU admission. This is very important to know so that the reader can assess how clinically predictive these tests are

2. In "background, para 1": i am confused as to the use of term "low mobility" when you have previously discussed high mortality

3. I think it is important to state the definition used for ARDS

4. Please can you explain why you excluded HIV-infected and procalcitonin positive patients

5. Was giving glucocorticoids a protocol-based decision or at clinician discretion?

6. In Table 2 I am unclear as to the difference between "duration of misdiagnosis" and "time from diagnosis to antiTB therapy". Can you please explain

7. I think that Table 2 but even more importantly Table 3 need much clearer titles explaining what they show

8. I am not clear about the pathological connection between Hb and ARDS. A low Hb will reduce delivery of oxygen to the tissues but of course Pa02 will not later (in fact may increase). I am not aware the ARDS is caused by reduced oxygen delivery to the lung. Please explain

9. I think that the statement that steroids are forbidden in miliary TB is dangerous and wrong and needs to be removed or greatly clarified

10. I think that there needs to be more discussion of limitations

11. My interpretation of your data would be that the sicker you are and the longer the time taken to diagnose miliary TB then the more likely you are to develop ARDS. Then if you do not get steroids you do even worse. I think the latter point is most important and needs to be addressed more. For example what dose of steroids was given and by what route? When were they given in relation to anti-TB therapy? Could you recommend for example steroids when starting anti-TB therapy in specific groups based upon your data?

Minor essential revisions:
1. In Table 1 please can you be consistent about putting in percentages
2. In Table 1 I feel that under investigations there are some variables that are not actually investigations
3. Of those who received ventilation but it was not invasive, how was that given. CPAP? BiPAP?
4. Were length of stay in hospital and ICU censored at time of death and hence shorter in survivors?
5. I do not understand what "Lelieved ratio" (discussion para 6)

Discretionary revisions:
1. I think that abbreviating miliary TB to "MTB" is confusing as this usually refers to mycobacterium tuberculosis, and should be changed.
2. I would not use the term "misdiagnosis". I think it is just time to diagnosis or more correctly "time to starting anti-TB therapy"
3. I think personally that it helps the reader to have the main findings restated at the beginning of the discussion
4. Although I agree that raised AST/ALT can reflect the systemic inflammatory response I wonder whether they may also represent TB in the liver in miliary disease?

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

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.