Reviewer's report

Title: Clinical and Laboratory Findings Associated with Severe Scrub Typhus

Version: 3 Date: 15 February 2010

Reviewer: Si-Shiun Lin

Reviewer's report:

Although the author responds to my previous comments, many important changes mentioned in the response letter were not actually made in the revised manuscript! Several minor essential revisions are necessary for acceptance of this manuscript.

Minor Essential Revisions#

Abstract:

1. Result section. The words in revised manuscript is “(2) the presence of eschar (OR=0.15, P=0.03, CI=0.03-0.82)” rather than the correct one “(2) the absence of eschar (OR=6.62, P=0.03, CI=1.22-35.8)” mentioned in response letter! The author should check the whole manuscript carefully and use “absence of eschar” in text with correct statistic values in text as well as in Table 4.

2. Conclusion section. The last sentence “Close observation and intensive care for scrub typhus patients with the potential for complications can prevent serious complications with subsequent reduction in its mortality rate.” This study only identified the potential characteristics of severe scrub typhus by statistic methods, not investigated whether identification of these characteristics “can prevent” serious complications with subsequent reduction in its mortality rate. It would be better change the word “can” to “may”, or re-write this sentence.

Methods.

1. Page 4, line 5. The reviewer 3 suggests “increased titer” is enough, however, “increased four times or more in titer” is universally used gold-standard. The author also used “failure to demonstrate a fourfold or greater rise” in 5th line in Result and Discussion section.

Result and Discussion

1. Page 8, the last line. Again, “transient cranial nerve palsy” is not one of the 7 conditions of severe scrub typhus defined by the author. The same problem for Table 1.

2. Page 6, line 12-18 “There were no significant differences in…between the two groups” are redundant sentences. Only significant or important issues should be mentioned in text.

3. Page 7, line 8. The author use “the absence of eschar (OR=6.62, P=0.03, CI=1.22-35.8) here, but the referral Table 4 is “presence of eschar (OR=0.15, P=0.03, CI=0.03-0.82”. The Table 4 should be corrected because the title of table
is for severe scrub typhus.

4. Page 7, line 19. “predictive valuables” or “predictive variables”?

5. Page 8, line 6. Add “(data not shown)” following “(P=0.011)”.

6. Page 9, line 2. The author did not respond well to our previous comment: Citation of references and more clear description is needed for the statement of “Despite the fact that this study included older patients than other studies, the mortality rate was lower.” Most of the reader may not know the general age distribution or mortality rate of scrub typhus! The author neither provide information nor cite relevant references to support the statement about the patients included in their study are older than other studies. Only one report from India was used to support that their mortality rate is low, but the author did not mention about the age of the report. The authors explained many in the response letter and stated that they have changed and added the references, however, I did not see any description or cited references for this sentence in the revised manuscript! In one study from Japan (Ogawa M, et al. Am J Trop Med Hyg. 2002 Aug;67:162-5, among the 462 cases, 63% are aged 51-75 and 14% aged >75. Are patients included in this study older than cases from Japan? or just older than cases from southeast Asia?

7. Page 10, line 2. Add “(data not shown)” following “severe scrub typhus group”.

8. Page 10, line 10. Why “these three parameter”? There are four characteristics identified in this study.

Table 2 and 3

Previous comments: Important underlying disease should be included such as DM, liver cirrhosis, COPD,… etc, especially older patients were included in this study. Liver cirrhosis had been identified to be associated with mortality in recent publication (Kim et al. Scrub typhus in patients with liver cirrhosis: a preliminary study. Clin Microbiol Infect. 2009 Jul 14. [Epub ahead of print]).

Responds: As your recommendation, we assessed the underlying diseases such as diabetes, liver cirrhosis, COPD etc. except hypertension. But in our study there was no statistic significance. We added that result in our tables. However, I did not see any variables about underlying diseases such as diabetes, liver cirrhosis, COPD,…etc were added in Table 2 and 3.

Table 4.

Change the “Presence of eschar” to “Absence of eschar” as well as the statistic values.