Reviewer’s report

**Title:** Streptococcal toxic shock syndrome caused by the dissemination of an invasive emm3/ST15 strain of Streptococcus pyogenes

**Version:** 0  **Date:** 19 Sep 2017

**Reviewer:** Chuan Chiang-Ni

**Reviewer's report:**

This report described a case, the patient infected by invasive emm3/ST15 GAS strain. In addition to describe results from different medical examinations, authors claimed that the isolated strain is more similar to invasive GAS isolates from the UK but not other emm3-type isolates in Japan.

The conclusions of this report are "this case was caused by the invasive emm3/ST15 GAS strain" and "the genetic background of this invasive strain is more similar to invasive strains isolated from the UK but not isolates from Japan". The first conclusion can be achieved easily by typing this isolate by regular emm- and MLST-typing methods. Nonetheless, the results presented in this article cannot support the second conclusion. Is ST15 the frequently isolated type in Japan? If the isolate found in this report and other invasive isolates found in Japan were ST15, other analytical methods (e.g. cgMSLT used in this study) should be utilized to distinguish these isolates. In this study, the phylogenetic analysis was done. Nonetheless, was any clinical isolate other than SSI-1 from Japan included in this analysis? If the isolate found in this study is different from other invasive isolates in Japan, the phylogenetic tree should show the difference.

Other comments:

Figure 2: the ST type of selected strains should be indicated.

The format of references should be carefully checked and modified (e.g. group "a" "streptococcus").

**Are the methods appropriate and well described?**

If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**

If not, please specify which controls are required in your comments to the authors.

No
Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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