Reviewer’s report

Title: A severe case of Streptococcal pyogenes empyema following influenza A infection

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Reviewer: Milagrosa C. Montes

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Authors describe a case of empyema due to S. pyogenes in a 39-year-old woman after having a flu and being treated with oseltamivir. It is important to highlight that S. pyogenes is not so uncommon and that it can cause severe infections even in young people, previously healthy without underlying diseases.

Suggestions/comments

1.- The last sentence in the Abstract "This is the second case of S. pyogenes empyema, and the first case after influenza A reported in English" should be delete. In a search in Pubmed with "empyema AND pyogenes" come out 102 manuscripts, if instead of "pyogenes" we put "GAS" would come out many more. It is also not the first case after an influenza virus infection, and the words "reported in English" do not make sense.

At the end there are some references related to S. pyogenes, flu and empiema.

2.- The "background" and the "case presentation" in the abstract and in the manuscript are practically the same, with which the reader reads the same thing twice in a row. I would try to change something in one of the two sites.

3.- Antimicrobial treatment. Surprisingly, when identifying S. pyogenes in a severe infection, clindamycin is not added to beta-lactam. The sentence "Antibiotic therapy was switched to ampicillin 6g daily iv according to microbiological sensitivity." should be rephrasing and the last words deleted, since all S. pyogenes throughout the world are sensitive to beta-lactams.

4.- Page 4, Line 10: the patient was discharged on day 28 and in page 6, line 22, the patient was discharged on day 25.

5.- Page 6, line 35: "…often causes infections of the skin and the pharynx." I suggest to change it by "…often causes infections of the pharynx and the skin." since S. pyogenes causes much more often pharyngitis than skin infections.

6.- Page 6, line 58, I would add the word "varicella" before "vaccine".

7.- I do not understand that in the same sentence it is said that the effectiveness of the IVIG is not
conclusive and that it could be one of the most useful treatments. This phrase should be rethought.

8.- The benefits of adding clindamycin to a beta-lactam is uncontroversial. The sentence "Standardized evidence-based treatment for invasive GAS infections should be established". should be deleted. S. pyogenes infections, in the absence of allergies, should be treated with a beta-lactam and if severe, clindamycin or another or other antibiotics will be added depending on the infection and the patient.

9.- Figure 1 legend: add the word "lung" after "left"

10.- Table 1. I would write the full name instead of acronyms in the column on the left, since there is room to spare and I would delete the footnoted. This will make it easier for the reader. And a column with the reference values should be added.

Some references for authors…


**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Unable to assess
Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
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Please indicate the quality of language in the manuscript:

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