Reviewer’s report

Title: A case report of a teenager with severe hand, foot, and mouth disease with brainstem encephalitis caused by Enterovirus 71

Version: 0 Date: 23 May 2018

Reviewer: Karen C. Bloch

Reviewer’s report:

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The authors have written an interesting case report of a 16-year old patient with EV-71 encephalitis, notable in that this is an unusual cause of CNS infection in this age group. This case report would be improved with the addition of more information regarding clinical findings, diagnostic workup, and therapeutic interventions. Specifically:

1. What medication was given for "cold"? Was it over the counter, or prescription?

2. Are there any photographs of the rash or oral lesions? If so, this would be a nice supplement for the text.

3. Please provide the WBC differential on the CSF

4. Were the IgM levels quantified? If so, please provide these values. Is this a commercially available assay?

5. Please provide information on the RT-PCR--is it a commercially available assay? What gene or sequence is amplified, and is this specific to EV-71?

6. Why was RT-PCR performed only on stool and not on CSF?

7. The description of the EEG report is not clear--what does "Under a coma" mean in this context? Perhaps including the interpretation of the EEG would be more helpful

8. Why do the authors refer to this as "brain-stem" encephalitis when the CT and MRI were both without focal abnormality?

9. In the discussion, the authors specify that therapy resulted in "rapid improvement". It would be useful to discuss the specific indications and literature supporting the agents that they believe benefited this child

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

No

**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?**
If not, please explain in your comments to the authors.

Yes

**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:

Needs some language corrections before being published

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