Reviewer’s report

Title: Longitudinal brain morphology in anti-NMDA receptor encephalitis: A case report with controls

Version: 1 Date: 18 Dec 2018

Reviewer: Shekeeb Mohammad

Reviewer’s report:

The authors have submitted a case report of a young adult with anti-NMDAR encephalitis who was noted to have volume reduction in the frontal regions of the brain on analysis of follow up MR imaging though there was no difference acutely and no obvious difference on conventional appearance of MR imaging. The single case report reiterates a non specific appearance that may be apparent after an acute brain inflammatory condition. The appearance on imaging (conventional and non conventional) in patients with NMDAR encephalitis has been increasingly described. The finding from the single case report may well be due to medication effects, particularly from use of immunetherapy and the design of the controls described does not help discriminate this. The literature review and referencing is quite out of date and I would recommend that authors were to go through this in further detail particularly the following key papers:

2015 Heine et al. http://dx.doi.org/10.1016/j.neuroscience.2015.05.037
2015 Finke et al. http://dx.doi.org/10.1016/j.biopsych.2015.02.024
2018 Bacchi et al. https://doi.org/10.1016/j.jocn.2018.03.026
2018 Wang et al. https://doi.org/10.1007/s00415-017-8707-5
2018 Zhang et al. http://dx.doi.org/10.3174/ajnr.A5593

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.

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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