Reviewer’s report

Title: Cerebrospinal fluid pleocytosis level as a diagnostic predictor? A cross-sectional study.

Version: 0 Date: 21 Sep 2016

Reviewer: Anita Koshy

Reviewer's report:

This manuscript has excellent qualities to it. It fits a need, which is to correlate the CSF findings of patients with their ultimate diagnosis. The methodology is well described and Figure 1 is highly appreciated.

The major issue with the manuscript is how they identify the diagnosis. It appears that many things are lumped into "CNS infection" without clear defined organisms. This is problematic because then it is not clear how well their conclusions reflect "truth". I would recommend that they define CNS infection in the following manner:

1. Definite- organism grown or identified by PCR
2. Probable- paraclinical data/response to antibiotics
3. Possible (suspected)- none of the above, but written in discharge diagnosis

I would use such definitions for encephalitis/myelitis as well.

Smaller issues:

1. Table II- malignancy column, under % it says "7375". This makes no sense (% w/ < 10 WBCs)
2. Appendix: "other" needs to be specified for each category. For example- under "Neurologic causes" 25% of the cases are "other" and the mean CSF leukocyte count is >100. It would be useful to know what those "other" diagnoses were.
3. Appendix: the 4 cases of pleocytosis in cancer with "cancer foci elsewhere" have CSF pleocytosis mean of 500!!! This seems unlikely. How would cancer elsewhere cause a CSF pleocytosis.

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.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?  
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Yes

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I am able to assess the statistics

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