Reviewer’s report

Title: Predictors of early-onset post-ischemic stroke depression: a cross-sectional study

Version: 0 Date: 27 Sep 2017

Reviewer: Lisa Sheehy

Reviewer's report:

The manuscript is clear, well-organized and nicely explained.

Some Comments and Suggestions:

1. A brief explanation of the correlation between the blood plasma levels vs. the cerebral levels of the tested biochemical factors would be useful.

2. A HAMD score of ≥8 was defined as indicating PSD. However, the general cutoff for mild depression on the HAMD is published as 14. Please explain why you used a HAMD score of 8 as your cut-off and add references for this. Also, in Table 1 the median HAMD score for the PSD group is 8, with an IQR of 6-11. This indicates that ½ of the participants with PSD had HAMD scores of less than 8. Please explain this given that the HAMD cut-off for allocation into the PSD group was 8.

3. One of the exclusion criteria was the presence of depression within the previous 6 months. However, in the limitations section of the discussion you mention that there was a lack of information on the history of depression before stroke. Please explain this more fully as it could impact the interpretation of your results, specifically the impact of stroke as a mechanism to change the biochemical factors associated with depression.

4. The word "for" should be removed from the 3rd inclusion criterion (p6 line 112).

5. It would be interesting to include the multivariable (multivariate) logistic regression equations.

6. Table 1 shows that the stroke severity of your sample is VERY low (median of 1/42 on the NHISS for the whole sample; IQR of 0-2 for the non-PSD group). Please comment on how these results would pertain to individuals with higher stroke severities. Consider including in your discussion how your inclusion and exclusion criteria resulted in such a minimally-affected sample.

7. Table 2 shows the quantities of the biochemical factors. Are there normal reference ranges for these? Are the average results for the PSD and non-PSD groups both within the normal range? This might have implications for their use as biomarkers.
8. Do you have any thoughts on why certain individuals with stroke produced an inflammatory response that led to the development of PSD while others did not?

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.

Yes

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.

I am able to assess the statistics

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