Reviewer’s report

Title: Obsessive-compulsive disorder is a heterogeneous disorder: Evidence from diffusion tensor imaging and magnetization transfer imaging

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Reviewer: Takashi Nakamae

Reviewer’s report:

‘Obsessive-compulsive disorder is a heterogeneous disorder: Evidence from diffusion tensor imaging and magnetization transfer imaging’

The authors answered some of questions raised by the reviewers. However, there are still several issues that should be clarified.

Major Compulsory Revisions

1. Why didn’t the authors show onset of illness and symptom dimensions? These factors are absolutely important when you discuss heterogeneity of OCD.

2. The authors cannot exclude the possibilities of comorbidities because they did not perform any structured clinical interview for diagnosis.

3. I understand how the authors processed the imaging data. How did the author decide the smoothing parameter? It is known that different degrees of smoothing can affect results of VBA when using DTI (Jones DK, 2005). There are methodological problem including misregistration and smoothing when VBA is applied for DTI data.

4. Why didn’t the authors should show mean FA value of each cluster? I still doubt detected regions are actually white matter.

5. If MTR changes usually occur before structural damage that can be detected by VBM or DTI, why regions with decreased FA is much broader than the areas with increased MTR? If the authors are correct, MTR should detect broader regions than DTI.

6. Why didn’t the authors show BDI and STAI data for both groups?

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.