Reviewer's report

Title: Quantitative MRI analysis in children with multiple sclerosis: A Multicenter Feasibility Pilot Study

Version: 3 Date: 27 September 2013

Reviewer: Daichi Hayashi

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Thank you for allowing me to review this interesting manuscript. I reviewed the statistical component of this study. I believe authors have done adequate statistical analyses and I only have minor comments, mainly regarding the abstract. However, I do think authors need to address these before publication to make the abstract better.

Minor essential revisions:

Abstract:
- In Methods section, please state what statistical tests were used for your analyses.
- In Results section, quote p-values when you mention ‘differed significantly’, ‘higher T2-LV’.
- Also in Results section, the statement ‘we also found a trend toward larger mean size in males than females’ is rather vague. Do you mean to say you found a difference but not statistically significant? Please quote the actual values (mean) and p-values to show concrete evidence.
- In Conclusion, the second sentence should be deleted, since it is a statement unrelated to evidence provided by this study. It can, however, be part of the Discussion in the body of text.
- The aim of the study is rather vague, and the first sentence in the Conclusion (which is the main conclusion of this study) does not match the aim of the study. Authors need to state more specific aim of the study, and state a conclusion that is directly linked to it.

Statistical analysis:
- Authors used appropriate statistical analyses for the purpose of this study. I do not have any objections to their chosen statistical tests.
- Authors should state in the discussion that the use of different MRI scanners among multiple centers is a limitation of the study, since each scanner has slightly different MR pulse sequence parameters.

Level of interest: An article of importance in its field
Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

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