Reviewer's report

Title: Modifications of longitudinally extensive transverse myelitis and brainstem lesions in the course of neuromyelitis optica (NMO). A population-based, descriptive study.

Version: 4 Date: 24 January 2013

Reviewer: Friedemann Paul

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Major Compulsory Revisions

- clinical data are sparse, for example, disease duration is missing. It may be good to have a table with the clinical information. As there are some differences between seronegative and seropositive patients (see for example Jarius et al. J Neuroinflammation 2012) it would be of interest to know if there are differences between seronegative and seropositive patients in the cohort of the authors

- the authors must state which assay they used for AQP4 testing, the reference they give does not directly refer to the assay. did they use the Euroimmun assay in Lübeck, Germany? If so, Jarius et al. J Neurol Sci 2010 should be referenced.

Minor essential revisions

- background: there is some recent literature relevant for the topic of this article that should be cited, for example Kim et al. MSI 2012, Jarius et al. J Neuroinflammation 2012 and Cabrera-Gomez Eur J Neurol 2012 on imaging findings and Popescu et al. Neurology 2011 and Lu et al. PLoS ONE 2011 on brainstem lesions.

- please provide ref. Kurtzke Neurology 1983 for EDSS

- results: please provide clear and conclusive phrases, for example the sentence "a fair correlation was observed (r=0.88)...." does not say much to the clinical reader. Do the authors mean to say that spinal cord atrophy was associated with a higher degree of disability?

- next sentence: "...shorter myelitis lesions" shorter than what?


- interval between attack and MRI scan. Of course important, please relate to own findings, see above

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

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'