Reviewer's report

Title: Magnetic Resonance Spectroscopy of normal appearing white matter in early relapsing-remitting MS. Disability-spectroscopy correlations.

Version: 1 Date: 2 March 2004

Reviewer: Antonio Federico

Reviewer's report:

General

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1) The AA should be better clarify the correlation between MRS and clinical data. In fact it is very difficult to correlate the MRS data obtained in a definite voxel with the results of very complex and specific disability scores, some of them are related to specific functions not linked, from the anatomic point of vue, to the area where the voxel has been positioned.

2) This paper is supposed to be a longitudinal study with , as stated in the Magnetic Resonance Measurement paragraph, MRS exams at baseline, 12 months and 24 months. However i) results of the follow up study are not provided for both MRS and clinical measures; ii) it is not clear what measurements have been used for the correlation coefficients iii) it is not specified whether follow-up MRS exams have been performed also in normal controls; iv) clinical measurements have been done on MS patients every three months but the AA do not specify whether they have been done for the whole period of 24 months.

3) In the Magnetic Resonance Measurement section, MSI should be changed with MRS as this is a single voxel study. On the same paragraph, information on metabolite quantification should be provided (did they measure metabolite area?, how?). In addition as they provide metabolite ratios, the word "concentration" should be avoided when speaking of metabolites.

4) When measuring lesional metabolites in 8 cc VOIs, partial volume effects should be taken into account

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

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Discretionary Revisions (which the author can choose to ignore)

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What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable
Statistical review: No