Reviewer’s report

Title: The MRZ reaction helps to distinguish rheumatologic disorders with central nervous involvement from multiple sclerosis

Version: 0 Date: 30 Aug 2017

Reviewer: Vittorio Martinelli

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In this study the authors evaluated the sensitivity and specificity of MRZ reaction (three antibody indices against measles, rubella, and varicella zoster virus) in three different groups of patients (MS, RDwCNS or OIND). They demonstrated the high specificity of MRZR-2 for MS pts and suggested using this evaluations as an additional useful diagnostic tool for distinguishing MS from RDwCNS or OIND.

This is an interesting manuscript, anyway I have a few comments and recommendations:

The Mean age at the time of LP is quite old in the three cohorts of pts. Since the usefulness of a diagnostic test is much more relevant mainly at the time of the diagnosis, the authors should add the data about the interval between clinical onset and time of LP and comment the results on correlations between duration of this interval and MRZ data.

Usually LP is performed after or during a clinical attack, have the authors any information about this possible bias? Any differences among the 3 groups? Any longitudinal data on MRZ indeces?

Have the authors analyzed the correlation between the number of OBs and/or Link Index and MRZ indexes?

In the discussion the authors should point out the usefulness of a comprehensive evaluation in any single patient with inflammatory CNS involvement, to have an accurate and definitive differential diagnosis, after considering clinical, multiple systemic and CSF biomarkers, as well as Neurophysiological and MRI data.

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 recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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