Reviewer’s report

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

Version: 0 Date: 11 Sep 2017

Reviewer: Maria Grazia Grasso

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The study aim is to evaluate if the reaction of MRZ (three antibody indices against measles, rubella and varicella zoster virus) is able to distinguish rheumatologic disorders with CNS involvement from multiple sclerosis (MS). The topic is important and it can provide a new insight to help in the differential diagnosis.

The study is interesting and it confirms, with the use of more stringent indices, a recent review on this topic.

However, I have some concerns. The retrospective study has not evaluated the autoantibodies in the MS people and these data could be interesting to know, because, as the authors themselves state, the ANA can be found in about 30% of MS people. From a statistical point of view, have the authors evaluated the sample distribution? The contrast enhancement in MRI is performed using the sequences in T1. The text has to be modified according to this (e.g. the line 305). Another limitation of the study, as the authors recognise, is the low number of people, which means it's not possible to generalise the results.

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.

No

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

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