Reviewer’s report

Title: No sex-specific difference in disease trajectory in multiple sclerosis patients of pre- and post-menopausal ages.

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Reviewer: Judith Greer

Reviewer’s report:

In this manuscript, the authors start to address the question of whether there is an acceleration in the trajectory of decline in female multiple sclerosis (MS) patients during the post-menopausal years. This is an important question and one worth studying. As acknowledged by the authors, a major limitation of the study is the use of defined age cohorts of females who are likely to be pre- or post-menopausal, rather than following a cohort of women through individual menopausal transition.

The data for the female groups appears to be relatively robust; however, another limitation of the study is that the number of males in the older age group is very low; this may affect some of the conclusions drawn from the data in Tables 2 and 3, and contribute to the lack of concordance between the trajectories of decline (based on MRI and clinical measures) and the patient-reported outcomes.

Major Compulsory Revisions

1. The number of males in the older age group is rather low and the standard deviations for this group for many measures are large. What is the power of the study to actually detect a difference, if one exists? This should be stated.

Minor Essential Revisions

2. What proportion of the “progressive” patients in each group are PPMS? It would be useful to include SPMS and PPMS as separate rows in Table 1. It would also be helpful to split up the “age at disease onset” row by disease course.

3. The second sentence in the results section (“Most notably, in both men and women, the age at symptom onset was greater with increasing age”) needs to be reworded. Also, the analysis of age at symptom onset should take into account the disease course.

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

Quality of written English: Acceptable
**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