Author’s response to reviews

Title: Association between autonomic dysfunction and olfactory dysfunction in Parkinson’s Disease in southern Chinese

Authors:
Xin-Yi Wang (13918240242@139.com)
Ying-Ying Han (1731163@tongji.edu.cn)
Gang Li (ligang@tongji.edu.cn)
bei zhang (zhangbei0227@163.com)

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Author’s response to reviews:

Editor Comments:

1. Please include the email addresses for all authors on the title page. The corresponding author should still be indicated.

Response: Thanks for your notice. We have added the email addresses for all authors on the title page. Thanks.

2. The list of Abbreviations should be placed just before the Declarations section. All abbreviations should still be defined in the text at first use.

Response: Thanks for your notice. We have placed the list of Abbreviations just before the Declarations section. And we have checked all abbreviations. Thanks.

3. Please move the Declarations to before the References.

Response: Thanks for your notice. We have moved the Declarations part before the References. Thanks.

4. Please include an 'Acknowledgements' section in the Declarations. If you have no acknowledgements, please state 'not applicable' here.
Response: Thanks for your notice. The 'Acknowledgements' section is not applicable here. Thanks.

5. In the Funding section, please also describe the role of the funding body in the design of the study and collection, analysis, and interpretation of data and in writing the manuscript.

Response: Thanks for your notice. We made them in the Funding section in the Declarations. Thanks.

6. Please change 'Introduction' to 'Background'.

Response: Thanks for your notice. We changed that into ‘Background’. Thanks.

7. We require a ‘Conclusions’ heading before your article can be handed to our Productions department. Please include a Conclusions section in your article after the Discussion section and before the Abbreviations.

Response: Thanks for your notice. We added a “Conclusion” section in the appropriate position. Thanks.

8. Please remove the response letter from the File Inventory.

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BMC Neurology operates a policy of open peer review, which means that you will be able to see the names of the reviewers who provided the reports via the online peer review system. We
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Reviewer reports:

Jinse Park (Reviewer 1): Accept

author answer the reviewer's comments sincerely.

Jongkyu Park, M.D. (Reviewer 2): Methods Study Population

PD and MSA-P are difficult to distinguish clinically. Reducing confusion about misdiagnosis by narrowing the target group may help to get clear results. If there is no problem in drawing conclusions, It is recommended that you exclude H & Y stage IV, V patients from inclusion criteria and draw results.

Response: Thanks for your advice. We have tried to exclude H & Y stage IV and V patients. Basically, there was no change after we ruled out H-Y staging 4.0 and 5.0.

Detailed changes of results were as follows:

SS-16 and SCOPA-AUT of PD patients with olfactory dysfunction and PD patients without olfactory function:

SCOPA-AUT:

Total score: p: 0.003 → 0.009
Gastrointestinal symptoms: 0.007 → 0.026
Urinary symptoms: 0.003 → 0.010
Cardiovascular symptoms: 0.057 → 0.053

Correlations with SS-16:

Question 2: 0.013 → 0.036
Question 4: 0.078 → 0.091
Question 6: 0.006 → 0.008
Question 8: 0.025 → 0.031
Question 10: 0.005 → 0.003
Question 11: 0.022 → 0.031
Question 12: 0.064 → 0.146
Question 13: <0.001 → 0.003
Question 14: 0.038 → 0.028

Correlations with individuals (without adjustment):

Question 6: p: 0.030, OR 2.45 (1.10 - 5.60) → p: 0.048, OR 2.32 (1.02 - 5.44)
Question 10: p: 0.006, OR 4.10 (1.56, 12.21) → p: 0.006, OR 4.20 (1.58 - 12.68)
Question 14: p: 0.030, OR 2.94 (1.15, 8.26) → p: 0.047, OR 2.73 (1.04 - 7.80)

Correlations with individuals (with adjustment):

Question 6: p: 0.066, OR 2.38 (0.95 - 5.36) → p: 0.070, OR 2.27 (0.94 - 5.60)
Question 10: p: 0.006, OR 4.40 (1.61 - 13.85) → p: 0.004, OR 5.18 (1.79 - 17.58)
Question 14: p: 0.045, OR 2.80 (1.06 - 8.16) → p: 0.049, OR 2.79 (1.03 - 8.33)

However, after carefully thoughts, we decided to save them into our analysis though it did not affect results when we left them. First, the diagnosis of PD was agreed by different movement disorder specialists (Dr. Bei Zhang and Gang Li) for every patient, which could reduce the misdiagnosis of PD. Second, they were well responsive to dopaminergic drugs such as Madopar in our patient records, which is not match for MSA. Third, two patients were performed 99mTc-TRODAT SPECT from other hospital and confirmed the diagnosis of PD. So we decided to include these 5 patients. Thanks.