Reviewer’s report

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

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Reviewer: Jinse Park

Reviewer's report:

This study is for investigating association between hyposmia and non-motor symptoms in PD. This topic is novel and study design is concise, but several major concerns were existed.

Introduction

- I wonder why author would investigate the association between olfactory dysfunction and autonomic dysfunction. Is there a clinical meaning or pathological importance? Or is there a previous report that olfaction and dysautonomia are linked with each other? The more exact background and purpose of this study should be described.

Method

- In my opinion, independent t-test is not proper method to compare between two groups (with olfactory dysfunction, without olfactory dysfunction). Like correlation, Statistical adjusting confounding factors including disease duration, severity and age seems to be necessary.

- Why author set gender as the confounding factor? I think age is more important factor to olfactory dysfunction.


- How author exclude the patients with dementia? Inclusion or exclusion criteria did not consider cognition. Olfactory dysfuntion is also common in dementia including Alzheimer disease as well as Parkinson’s disease.

Discussion

- In discussion section, there are lack of explanation or hypothesis about the relation between olfaction and autonomic dysfunction. How can we interpret the correlation between olfaction and constipation, urinary function?

- How the author conclude causal relationship between olfactory dysfunction and constipation? Olfaction is particularly important in eating and nutrition. It can be possible that olfactory dysfunction cause poor oral intake and lead to constipation. Additional factor for nutrition such as Dietary habit, body mass index should be offered.

- "The strength of our study are that all PD patients enrolled in our study were from outpatient's clinic" - Why enrollment from outpatients clinic is "strength" in this study?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

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

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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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