Reviewer's report

Title: Major depressive disorder in Parkinson's disease: a cross-sectional study in Sri Lanka

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Reviewer: Oliver Riedel

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Review

“Major depressive disorder in Parkinson’s disease: a cross-sectional study in Sri Lanka” (Ketharanathan et al., submitted to BMC Psychiatry)

Summary

The authors present data on the frequency of depression in PD patients, obtained from a sample of 104 PD outpatients in Sri Lanka. All patients were assessed with established, structured interviews considering the DSM-IV TR criteria for depression as well as screened for depression with the MADRS. The authors found a mean prevalence of depression of 37.5% with higher rates in patients with progressed PD, functional impairment and concomitant diabetes.

General impression

This is a well written paper, addressing an important topic in the area of research. In addition to the brevity and clarity of the manuscript, the clear strength of the underlying study must be seen in the use of a semi-structured interview using the DSM-IV criteria for depression.

Major compulsory revisions

1. A flaw of the presented work is the lack of cognitive measures such as the MMSE or other appropriate measures, i.e. we do not have any information on whether the patients also suffered from cognitive impairment. This, however, would have been essential as cognitive impairment is a frequent complication in PD and might have limited the validity of the interviews for depression. Some of the data suggest that such a bias might have occurred. For example, the authors found an association between level of education and depression (high level – low rates of depression). This is quite an unusual finding. However, what we do observe in such studies and populations regularly is that there is a link between high educational levels and low rates of cognitive impairment/dementia (which, in turn, is positively associated with increased rates of depression).

2. The second limitation relates to the presentation of the MADRS. First, the cut-off for depression is not mentioned here. The authors only state that any score equal or less than 20 should be regarded as “mild depression” – but what
is the lower cut-off for mild depression? Second, I am not sure whether the presented cutoffs are appropriate for the population under study since Leentjens et al. (2000) have published a validation study on PD patients. Taking the higher overlaps between depressive and PD symptoms into account, they suggested a cut-off 13/14 as indicator for major depression. This cut-off has been widely used since then and should at least be introduced (if not replace) in addition to the cut-offs that have been used by the authors.

Minor essential issues

3. In the results section (manuscript page 9) the authors refer to two publications, regarding the link between ropinirole and depressive symptoms in PD. This should be transferred to the discussion section, since references should not be placed in the results.

4. In the discussion section (manuscript page 11, last paragraph), the authors state that “Prevalence of depression was higher in Hoehn&Yahr stages III, IV and above.” This is in fact wrong, since the authors found the highest rates in patients at stage III, while the rates in stages IV/V were similar to those at stage I/II. Thus the authors should reword this sentence accordingly and also add a critical discussion of this finding (as in fact, a more “linear” relationship between both variables would have been expected here).

5. Typo in same paragraph: “maybe” instead of “may be”.

Discretionary Revisions

6. Although the sample this is rather small for this, the paper might also profit from some additional results illustrating the sensitivities and specificities of the MADRS as compared to the depression diagnosis according to DSM-IV criteria (a simple small fourfold table would be sufficient).

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I have no competing interests.