CLINICAL SPECTRUM OF PARKINSON'S DISEASE

Dear Sir,

I read with interest the recently published article by Professors Khealani and Baig in your prestigious journal.[1] I have some comments because of the importance of the subject.

Firstly, if we would like to know how long it takes for patients with Parkinson's disease to develop complications, we must evaluate the interval between two events: the diagnosis of the disease and emergence of complications. In fact, the two events of interest may not occur for all the study participants during the period they were observed and the actual period of observation may not be the same for all of them. These complicating factors eliminate the possibility of simply stating that "During a mean follow-up period of 3.5 years, all the patients developed several complications in various combinations, such as on-off phenomenon, peak dyskinesias, ... " as the authors have mentioned in page 1077, 2nd column, paragraph 2). Because the first timing of diagnosis was not the same for everyone, and the second timing of emergence of complications did not necessarily happen to everyone, the study participants would be observed for different periods of time. Hence, calculating the simple mean of duration is statistically invalid and incorrect. Instead, a special statistical technique; the survival analysis,[2] is needed to look at the interval between diagnosis and complications. Besides, Cox regression could reveal the predictors of emergence of these complications.

Secondly, some inconsistencies and errors are present in the results. The authors stated that "Dysphagia, falls, depression and cognitive impairment were reported in less than 35% of the patients." However, the data in Table I were inconsistent with their respective percentages in the text, even depression was not mentioned in the table. Moreover, in Table II, the number in the cell of second row and second column should be 15 instead of 14.

Thirdly, the reader would be more interested to know the clinical picture at the onset of the disease rather than that during its course. Tremors at onset could predict cognitive impairment in Parkinson's disease.[3] Hence, it would be more informative to test the likelihood of this complication with types of onset symptoms, similarly to testing it against age of onset and disease duration in Table II. Moreover, tests of significance used in Tables II and IV were not displayed. In the methods section, the authors stated that they used chi square and Fisher's exact tests. I wonder which type of chi square test was used, since some cells in cross tabulation Tables II and IV comprised less than five observations or even none.

Fourthly, the authors mentioned some of the medications received by the patients. They could simply have added a few lines on the average levodopa intake in mg (or any other drug used),[4] and they could have compared the mean with different variables such as age, sex, disease duration, Hoehn and Yahr stage, or existing complications or comorbidities. At the end of their paragraph on drugs used, they added that "All the patients responded symptomatically to the therapy, at least early in the course." The authors did not show in their results what they really meant by "early in [patients'] course" especially in a group of patients with a mean duration of illness at the time of presentation of five years. Therefore, the reader could find their statement imprecise and ambiguous.

Fifthly, because the study showed that 47 patients (59%) had their disease onset during or after their sixth decade of life, it would be worthy if the authors compared the clinical presentation, comorbidities, progression of the disease, or treatment of Parkinson's disease in patients with old-age onset with those with middle-age onset. Previous research[5,6] has proven that, with the same disease duration, patients with old-age Parkonson's disease onset have greater motor impairment than patients with middle-age disease onset. Moreover, old-age Parkinson's disease onset patients have more rapid progression of disease than those with a younger age onset.[5,6]

Finally, apart from the "questionable" male preponderance in the current study, the authors declined the gender differences in disease severity at presentation. However, the authors did not examine the gender differences in progression of the disease, age of onset, comorbidities, or emergence of complication. Previous research has proven that male patients progress at significantly higher rate than female patients in the Unified Parkinson Disease Rating Scale parts I and II sub-scores.[6]

Yours sincerely,

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REFERENCES

1. Khealani BA, Baig SM. Clinical spectrum of Parkinson's disease from Pakistan. Singapore Med J 2006; 47:1075-9.
2. Norusis MJ. SPSS Base System User's Guide, Release 5.0. SPSS Inc, Chicago, IL, USA. 1990: 5-538.
3. Vingerhoets G, Verleden S, Santens P, Miatton M, De Reuck J. Predictors of cognitive impairment in advanced Parkinson's disease. J Neurol Neurosurg Psychiatry 2003; 74:793-6.
4. Jankovic J. An update on the treatment of Parkinson's disease. Mt Sinai J Med 2006; 73:682-9.
5. Diederich NJ, Moore CG, Leurgans SE, Chmura TA, Goetz CG. Parkinson disease with old-age onset: a comparative study with subjects with middle-age onset. Arch Neurol 2003; 60:529-33. Comment in: Arch Neurol 2003;60:1814-5.
6. Jankovic J, Kapadia AS. Functional decline in Parkinson disease. Arch Neurol 2001; 58:1611-5.