Reviewer's report

Title: Screening for Parkinson's disease with response time batteries: A pilot study

Version: 1 Date: 4 May 2004

Reviewer: Andrew Siderowf

Reviewer's report:

General

This is a well-written report describing differences in reaction time tests between patients with established Parkinson's Disease and age-matched normal controls. The authors found moderate discrimination between cases and controls.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

There are a number of screening tests available for Parkinson's disease including olfactory testing (Doty), screening questionnaires (Tanner, Louis) and motor paradigms (Montgomery). Several of these have better test characteristics than the reaction paradigm described by the authors. The authors should compare their test to the other available options and explain what their screen adds to the field.

There is an extensive literature on tasks such as the reaction-time paradigm the authors use in this study. They should cite some of this literature. I believe that very similar studies have been performed in the past.

I am not certain that this test is a very good screener for Parkinson's disease. It is not very simple to perform since it requires computer equipment, and the test characteristics, particularly the sensitivity are not very good. I would think that this task would "miss" too many cases to be a useful screen.

The authors did not test their paradigm in the most appropriate group of subjects. They should have compared patients with newly diagnosed PD, or better yet patients with uncertain diagnosis, or as yet undiagnosed PD to controls. However, these latter two options are probably not practical. They should, however, comment on the potential impact of spectrum bias on their results.

The authors may wish to comment on differences between the cued and uncued aspects of their task. Motor planning and attention may be abnormal in Parkinson's disease, and these deficits may be detected by differences in the cued and uncued tasks.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

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Discretionary Revisions (which the author can choose to ignore)
What next?: Accept after minor essential revisions

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests: None