**DIAGNOSIS**

**CAMCOG detected dementia and cognitive impairment in Parkinson’s disease**


**Question**

In community dwelling of elderly people with Parkinson’s disease (PD), how do the cognitive section of the Cambridge Examination for Mental Disorders (CAMCOG) and the Mini-Mental State Examination (MMSE) perform (compared with *DSM-IV*) in detecting dementia and cognitive impairment?

**Design**

Blinded comparison of measures on the CAMCOG and the MMSE with *DSM-IV* criteria for dementia.

**Setting**

Communities in North Wales, UK.

**Patients**

126 patients who were >60 years of age (mean age 74 y), lived at home, and met clinical diagnostic criteria for probable PD. Patients with drug induced PD or other forms of parkinsonism were excluded.

**Description of tests and diagnostic standard**

All patients were screened with the CAMCOG and the MMSE. The *DSM-IV* criteria were applied by an assessor who was blind to the results of the CAMCOG and the MMSE.

**Main outcome measures**

Sensitivity and specificity of the tests using a CAMCOG score of ≤80 and an MMSE score of ≤24 for dementia.

**Main results**

56 patients (44%) met the *DSM-IV* criteria for dementia. Both the CAMCOG and the MMSE had high sensitivity for detecting dementia; the CAMCOG had high specificity but the specificity of the MMSE was low (table). The CAMCOG showed differences between patients with and without dementia on all 8 subscales (orientation, language, memory, attention, praxis, calculation, abstract thinking, and perception). Greater age was associated with poor performance on subscales of language, memory, attention, calculation, and perception; men did better than women on the subscales of attention and calculation; and patients in professional or managerial and skilled non-manual classes did better than unskilled manual classes on the subscales of praxis and abstract thinking.

**Conclusions**

In a community dwelling of elderly people with Parkinson’s disease, the cognitive section of the CAMCOG and the MMSE had high sensitivity for detecting dementia and cognitive impairment. The CAMCOG was more specific than the MMSE.

The cognitive section of the Cambridge Examination for Mental Disorders (CAMCOG) and the Mini-Mental State Examination (MMSE) for detecting dementia in Parkinson’s disease

<table>
<thead>
<tr>
<th>Test (cut point)</th>
<th>Sensitivity (95% CI)</th>
<th>Specificity (95% CI)</th>
<th>+PV*</th>
<th>−PV*</th>
<th>+LR*</th>
<th>−LR*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAMCOG (≤80)</td>
<td>95% (86 to 98)</td>
<td>93% 96% (16.6 0.06)</td>
<td></td>
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<tr>
<td>CAMCOG (≤24)</td>
<td>98% (90 to 100)</td>
<td>77% (66 to 86) 77% 98% (4.3 0.02)</td>
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</tbody>
</table>

* PV, LR, and CI calculated from data in article and defined in the glossary.

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**Commentary**

The introduction of new specific treatments for dementia has increased the need to improve instruments that screen for cognitive impairment. Preliminary evidence exists to show that Lewy body dementia, often associated with PD, may frequently have cognitive deficits which may not be adequately assessed by the MMSE alone. The CAMCOG may be a useful additional tool to assess these patients.

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