DemTect effective in screening for mild cognitive impairment and mild dementia


Q Does the DemTect reliably detect mild dementia and mild cognitive impairment in older adults?

METHODS

Design: Prospective cohort study.

Setting: Three centres in the UK; timeframe not stated.

People: 121 people aged 45–92 years with possible mild to moderate Alzheimer’s disease (NINCDS-ADRDA criteria; Clinical Dementia Rating scale [CDR] 1 or 2), 97 people aged 45–92 years with mild cognitive impairment (Peterson criteria; CDR 0.5). 145 people aged 45–89 years with no cognitive impairment (CDR 0). Control group was divided into <60 years and ≥60 years. Alzheimer’s disease group was divided into Mini-Mental State Examination (MMSE) ≥21 and MMSE <21.

Test: The DemTect includes five short, easy to administer tasks that are sensitive for diagnosing dementia (word list; delayed recall of word list; number transcoding; semantic word fluency task; digit span reverse).

Diagnostic standard: Full clinical assessment plus CDR to assess dementia and Peterson criteria to assess mild cognitive impairment.

Outcomes: Sensitivity and specificity of DemTect and MMSE in classifying people with mild to moderate Alzheimer’s disease and mild cognitive impairment compared with full clinical assessment.

MAIN RESULTS

The transformed total DemTect score is independent of age and education and performed well when compared with MMSE. At a DemTect cut off score of 13, overall classification rate, sensitivity and specificity were high (see table 1; score of 13–18 represents appropriate cognitive power for age). Additional cut off scores were useful for predicting mild cognitive impairment and dementia (mild cognitive impairment: 9–12 points; dementia: 0–8 points; total classification rate: 85.4%).

CONCLUSIONS

The DemTect is a useful scale for identifying mild cognitive impairment and early dementia in older adults. It is easy to administer and accepted well by participants.

Table  Sensitivity and specificity of DemTect and MMSE compared with full clinical assessment

<table>
<thead>
<tr>
<th></th>
<th>MMSE</th>
<th>DemTect (cut off score of 13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild AD</td>
<td>89</td>
<td>96</td>
</tr>
<tr>
<td>MCI</td>
<td>73</td>
<td>86</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Mild AD</th>
<th>MCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of people with condition correctly identified by test</td>
<td>92</td>
<td>100</td>
</tr>
<tr>
<td>Sensitivity %</td>
<td>86</td>
<td>92</td>
</tr>
<tr>
<td>Specificity %</td>
<td>77</td>
<td>92</td>
</tr>
</tbody>
</table>

AD, Alzheimer’s disease; MCI, mild cognitive impairment; MMSE, Mini-Mental State Exam.

For correspondence: Elke Kalbe, Max-Planck-Institute for Neurological Research, Cologne, Germany; elke.kalbe@pet.mpin-koeln.mpg.de

Sources of funding: Eisai Ltd.

www.ebmentalhealth.com
DemTect effective in screening for mild cognitive impairment and mild dementia

Evid Based Mental Health 2004 7: 70
doi: 10.1136/ebmh.7.3.70

Updated information and services can be found at:
http://ebmh.bmj.com/content/7/3/70

These include:

References
This article cites 5 articles, 1 of which you can access for free at:
http://ebmh.bmj.com/content/7/3/70#BIBL

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Topic Collections
Articles on similar topics can be found in the following collections
- Neurology (1070)
- Epidemiology (1570)
- Screening (epidemiology) (167)
- Epidemiologic studies (631)

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/