Cognitive impairment in medical inpatients.
II: Do physicians miss cognitive impairment?

DANIEL M. J. HARWOOD, TONY HOPE, ROBIN JACOBY

Section of Old Age Psychiatry, University of Oxford Department of Psychiatry, Warneford Hospital, Oxford OX3 7JX, UK

Address correspondence to Dr R. Jacoby. Fax (+44) 1865 249253

Abstract

Aim: to study the recognition of cognitive impairment in elderly medical inpatients by medical staff.

Methods: 201 patients over 65 were assessed by administration of standard cognitive screening tests and an interview with relatives. We made Diagnostic and Statistical Manual (DSM) IIIR diagnoses of various causes of cognitive impairment and clinical diagnoses for those patients not fulfilling DSM IIIR criteria. Medical notes were scrutinized for any mention of cognitive impairment.

Results: 46% of the patients found to be cognitively impaired by the researcher had no record of cognitive impairment in the medical notes. However, 14 out of 15 of the patients with DSM IIIR delirium, and 22 out of the 26 patients with DSM IIIR dementia, were identified as cognitively impaired by the physicians. This suggests that the physicians were detecting the vast majority of patients with clinically significant cognitive impairment.

Keywords: cognitive impairment, detection, medical inpatients

Introduction

Hospital physicians have been repeatedly criticized for failing to detect delirium and dementia in elderly medical inpatients [e.g. 1-4]. One author has even advocated a special education programme for house staff [5]. Whilst physicians may only detect as few as half of those found to have cognitive impairment by psychiatric researchers [4], it is uncertain whether the cases missed are of clinical significance. The data we have collected from a study of cognitive impairment in elderly medical inpatients have led us to re-examine this issue.

The aims of the study were to determine: (i) the proportion of patients with cognitive impairment identified by the researcher who were not identified by the medical staff and (ii) the diagnosis and clinical significance of the cognitive impairment in these patients.

Methods

The study was performed in conjunction with an evaluation of cognitive screening in medical inpatients.
### Table 1. Detection of cognitive impairment by clinical staff

| Group | Diagnosis                                      | Number of cases | With no record of cognitive impairment
<table>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>DSM IIIR</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1</td>
<td>Delirium</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Dementia</td>
<td>21</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Delirium + dementia</td>
<td>5</td>
<td>0</td>
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<tr>
<td>4</td>
<td>Depression (with cognitive impairment)</td>
<td>5</td>
<td>3</td>
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<tr>
<td>Other cognitive impairment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Mild delirium</td>
<td>21</td>
<td>9</td>
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<tr>
<td>6</td>
<td>Mild cognitive impairment</td>
<td>29</td>
<td>26</td>
</tr>
<tr>
<td>7</td>
<td>Mild delirium and mild cognitive impairment</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>Low IQ/poor education</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>Transient global amnesia</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>112</td>
<td>51b</td>
</tr>
</tbody>
</table>

*a In medical notes.

*b 46% of patients with cognitive impairment.

### Results

Two hundred and one patients were included in the study. Of these, 102 (51%) were female. The average age of the sample was 76 years (range 65-97).

Sixty-five patients (32.5%) had the results of some form of cognitive testing recorded in the medical notes and an additional 44 (22%) had some comment on cognitive status recorded. The remaining 92 patients (46%) had no mention of cognitive function in the notes.

Table 1 displays a breakdown by diagnosis of the 112 patients (56% of total sample) with some evidence of cognitive impairment, and the number of patients in each diagnostic category for whom there was no record of cognitive impairment.

### Discussion

At first sight, the proportion of cases of cognitive impairment that the physicians failed to detect (46%) seems high, and is consistent with previous studies [2, 4]. However, this figure may be misleading because the majority of these cases had cognitive impairment of limited or no clinical significance.

Poor performance on cognitive testing in three patients appeared to reflect long-standing low intellectual level. In five patients cognitive impairment appeared to be a consequence of depression rather than organic disease. The relationship between cognitive impairment and depression in older people is complex. Cognitive impairment associated with depression may herald future dementia [11] and there is an increased rate of depression in patients with mild dementia [12]. The significance of the cognitive impairment in the five depressed patients in our study could therefore only be truly ascertained by follow-up and re-assessment.

The detection of ‘mild delirium’ on its own may be of limited importance, given that it is likely to resolve with treatment of the underlying illness. The significance of the ‘mild cognitive impairment’ of groups 6 and 7 in Table 1, who did not fulfil DSM IIIR criteria for dementia, is uncertain. This is likely to be a heterogeneous group, with some patients showing symptoms of early dementia and others scoring poorly on cognitive tests because of tiredness or poor concentration due to physical discomfort. We intend to carry out a follow-up study to clarify the significance of the cognitive impairment in this group. A large proportion of this group had very mild impairment (20 out of 29 had MMSE scores greater than 23), and the lack of recognition of these patients’ impairment seems understandable.

The physicians correctly identified 14 out of 15 of the patients with DSM IIIR delirium and 22 of the 26 patients with dementia. This leaves only five patients with DSM IIIR diagnoses of delirium or dementia who were not recorded as impaired by the physicians.

Our results suggest that the physicians in the study hospital detected the majority of patients with cognitive impairment of clinical significance. Previous reports suggesting that physicians are failing to identify cognitive impairment in a large proportion of elderly patients are misleading. But is there scope for further improvement?

Three out of the four cases of dementia not detected by the medical staff were correctly identified as impaired in the nursing notes, suggesting that better interdisciplinary communication may improve recognition of dementia. Other researchers have also noted
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this [see, e.g., 4]. Routine cognitive screening with instruments such as the Abbreviated Mental Test may improve detection of delirium and dementia. The IQCODE, a brief standardized history of cognitive function, has great potential as a screening tool for dementia and can be administered by any trained health care professional. The use of this tool is evaluated in the companion paper [6].

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Key point

- Although almost half the patients found to be cognitively impaired by the researcher had no record of impairment in the medical notes, physicians do appear to detect the vast majority of patients with clinically significant impairment.

References


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Photograph: Sam Tanner.