

## False Recognition Helps to Distinguish Patients with Alzheimer's Disease and Amnesic MCI from Patients with Other Kinds of Dementia

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### Key Words

Normal pressure hydrocephalus · Alzheimer's disease · Fronto-subcortical dementia · Vascular dementia · Mild cognitive impairment · Memory performance · False recognition

### Abstract

Two recent reviews on neuropsychological assessment argue that Alzheimer's disease (AD) is characterized by deficits in delayed recall and that this allows differentiating AD from other types of dementia. We attempted to differentiate patients with AD and amnesic mild cognitive impairment (MCI) from patients with fronto-subcortical dementia, normal pressure hydrocephalus and vascular dementia using a simple picture recognition task. We examined 130 patients, 89 with dementia and 41 with MCI. The combination of the CERAD-NP savings score and the number of false recognitions yielded a sensitivity of 100% for identifying AD patients. Moreover, adding the score for false recognitions to that of delayed recall improved the specificity of the diagnosis from 50% to 90%. After matching the groups on memory performance, the AD group still produced more false recognitions. The results suggest that delayed recall impairment

and recognition errors stem from different sources. We also found that the number of false recognitions differs between amnesic and non-amnesic MCI patients. The quality of the differential diagnosis may therefore be enhanced significantly by taking into account both delayed recall and false recognitions provoked by a picture recognition task.

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Two recent reviews on neuropsychological assessment in dementia argue that Alzheimer's disease (AD) is characterized especially by deficits in delayed free recall and that this deficit allows differentiation between AD and other types of dementia [1, 2]. Both reviews discuss the differences between AD patients and patients with other kinds of dementia in cognitive domains other than memory that can enhance the sensitivity and specificity of neuropsychological assessment. Neither of these reviews refers to the *qualitative* differences in memory impairments between patients with AD and patients with other aetiologies of dementia. This is somewhat surprising because the analysis of memory errors has been a major topic in neuropsychological research on AD for some time now. Starting with the seminal study by Fuld et al.