A Quick Test for Cognitive Speed: A Measure of Cognitive Speed in Dementia With Lewy Bodies

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The purpose of this article is to investigate how patients with dementia with Lewy bodies (DLB) perform on A Quick Test for Cognitive Speed (AQT) compared with patients with Alzheimer’s disease (AD) and age- and sex-matched controls and to see whether this test might be helpful in distinguishing DLB from AD at comparable cognitive levels. Twenty-three patients with DLB, 18 patients with AD, and 24 controls were included. The time in seconds to complete the AQT was recorded for the 3 independent study groups according to standard directives. The DLB patients had significantly longer reading times than the AD patients at equivalent and relatively high Mini-Mental State Examination levels. We suggest that slow performance on the AQT at relatively high Mini-Mental State Examination levels could be one way of distinguishing DLB from AD. This may have clinical implications for treatment as well as for understanding the neuropathological properties of the disease.

Keywords: A Quick Test for Cognitive Speed; dementia; Lewy bodies; cognitive speed; subcortical

Introduction

Dementia with Lewy bodies (DLB) is claimed to be the second most prevalent neurodegenerative dementia after Alzheimer’s disease (AD). A systematic review of 6 studies has found prevalence estimates for clinical DLB ranging up to 30.5% of all dementia cases. At autopsy, DLB comprises approximately 20% of cases. The central feature of DLB is progressive cognitive decline accompanied by fluctuating cognition, visual hallucinations, and parkinsonism. Suggestive features are rapid eye movement sleep behavior disorder, severe neuroleptic sensitivity, and low dopamine transporter uptake in basal ganglia. Some of the supportive features are falls, syncope, loss of consciousness, systematized delusions, hallucinations of other modalities, depression, autonomic failure, and abnormal metaiodobenzyl guanidine uptake in myocardial scintigraphy. DLB patients often show psychomotor slowness, which is described in status evaluation but is rarely measured in a standardized manner. Several studies of visuospatial function, including form and object size discrimination and figure copying, have shown much more severe debility in DLB than in AD, although episodic memory is relatively spared in patients with DLB.

DLB has clinical, neuropathological, and neurochemical features of both AD and Parkinson’s disease (PD). The consensus guidelines for a clinical diagnosis of DLB suggests that PD patients who develop dementia more than 12 months after the initial motor symptoms should be diagnosed as PD dementia (PDD) rather than DLB. In PD, the usual focus is motor slowness and bradykinesia, but cognitive impairment such as psychomotor slowness is also an important feature. Prominent executive, attentional, and visuospatial dysfunctions with relatively preserved memory functions are characteristic neuropsychological findings in both DLB and PDD.

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