

Impact of Vascular Dementia on Cognitive, Psychiatric and Daily Living

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About the Study

Vascular Dementia refers to cognitive impairment secondary to compromise of cerebral perfusion. Although some reports document dementia with lewy bodies as the second most prevalent neurodegenerative cause of Alzheimer's disease, others suggest that vascular dementia is the second leading cause of dementia in major parts of the globe. Vascular Dementia has been estimated to account for 15%-25% of cognitive impairment among the elderly. Interestingly, the extant literature has not emphasized descriptions of the cognitive profile of vascular dementia in the same way it has for Alzheimer's disease.

There has longstanding theoretical and empirical interest in the link between cognition and cerebrovascular disease. However, the historic focus of such investigations emphasized cognitive syndromes associated with large-vessel territory ischemic and hemorrhagic strokes. With the advent and evolving sophistication of neuroimaging techniques, focus has begun to include small-vessel disease, because such techniques increase sensitivity permit both qualitative and quantitative measurement of small-vessel diseases. This development has led to studies like neuroimaging markers of small-vessel disease and cognitive performance. More recently, latest research has established a relationship between white matter disease and functional impairment among patients with vascular dementia.

Unfortunately, vascular dementia reflects a heterogeneous condition that is defined by disparate diagnostic schemes. This in some way parallels the heterogeneity seen in the frontotemporal dementia literature, because there are multiple subtypes that are frequently amalgamated when summarizing patients cognitive profiles. The diagnostic criteria heterogeneity reflects a major limitation of vascular dementia studies because there is poor consensus regarding casual

factors, disease course and more importantly, for the purpose of the neuropsychological profile of vascular dementia.

Perhaps the most relevant circuit to vascular dementia is that involving the dorsolateral prefrontal cortex, as the dysexecutive syndrome that emerges from damage to this pathway is the most common clinical presentation in vascular dementia. Indeed, there is some evidence that white matter disease in subcortical structures involved in this pathway is associated with executive dysfunction noted in both the preclinical phase and the early stage of vascular dementia may be secondary to disruption of this circuitry. Citing functional and structural neuroimaging studies that have implicated significant frontal and striatal abnormalities underlying executive functioning deficits in vascular dementia. Recent studies also proposed that these frontal-subcortical circuitry abnormalities and associated cognitive deficits should be considered the most salient disturbance in vascular dementia

The present synthesis focuses on the effect of diffuse small-vessel disease on cognitive functioning. It is also worth noting that possibility that some impaired neuropsychological skills are deleteriously affected by executive deficits. A better understanding of the cognitive decline associated with small-vessel disease is warranted, because it may be the most common presentation of cerebrovascular disease. Particular importance is placed on the executive functioning and learning memory summaries, because these two domains reflect those most relevant to the differential diagnosis between vascular dementia and other common dementias. The core clinical picture of vascular dementia is summarized, followed by a discussion of common thread theory characterizing the cognitive profile associated with vascular dementia.