Diagnostic Criteria for Vascular Cognitive Disorders
A VASCOG Statement

Perminder Sachdev, MD, PhD,†† Raj Kalaria, PhD, FRCPath,‡ John O’Brien, DM,§ Ingmar Skoog, PhD,||
Suvanna Alladi, DM,● Sandra E. Black, MD, FRCPath(C),● Deborah Blacker, MD, ScD,**
Dan G. Blazer, MD,‡‡ Christopher Chen, FRCPath,‡‡ Helena Chui, MD,§§ Mary Ganguli, MD,|||
Kurt Jellinger, MD,●● Dilip V. Jeste, MD,●●● Florence Pasquier, MD, PhD,***
Jane Paulsen, PhD,●●● Niels Prins, MD,●●● Kenneth Rockwood, MD,●●●
Gustavo Roman, MD,●●●● and Philip Scheltens, MD,●●●●

Background: Several sets of diagnostic criteria have been published for vascular dementia since the 1960s. The continuing ambiguity in vascular dementia definition warrants a critical reexamination.

Methods: Participants at a special symposium of the International Society for Vascular Behavioral and Cognitive Disorders (VASCOG) in 2009 critiqued the current criteria. They drafted a proposal for a new set of criteria, later reviewed through multiple drafts by the group, including additional experts and the members of the Neurocognitive Disorders Work Group of the fifth revision of Diagnostic and Statistical Manual (DSM-5) Task Force.

Results: Cognitive disorders of vascular etiology are a heterogeneous group of disorders with diverse pathologies and clinical manifestations, discussed broadly under the rubric of vascular cognitive disorders (VCD). The continuum of vascular cognitive impairment is recognized by the categories of Mild Vascular Cognitive Disorder, and Vascular Dementia or Major Vascular Cognitive Disorder. Diagnostic thresholds are defined. Clinical and neuroimaging criteria are proposed for establishing vascular etiology. Subtypes of VCD are described, and the frequent cooccurrence of Alzheimer disease pathology emphasized.

Conclusions: The proposed criteria for VCD provide a coherent approach to the diagnosis of this diverse group of disorders, with a view to stimulating clinical and pathologic validation studies. These criteria can be harmonized with the DSM-5 criteria such that an international consensus on the criteria for VCD may be achieved.

Key Words: vascular dementia, vascular cognitive disorder, vascular cognitive impairment, diagnostic criteria, cerebrovascular disease, multi-infarct dementia, poststroke dementia, subcortical dementia

Alzheimer Dis Assoc Disord 2014;28:206–218

Cerebrovascular disease (CVD) has long been recognized as an important cause of cognitive impairment, but the conceptualization of the consequent disorder has had a chequered history. The long-standing concept of “hardening of the arteries” or cerebral atherosclerosis as a cause of “senility” was challenged in the 1960s by the neuropathologic studies from Newcastle-Upon-Tyne, England which suggested that vascular dementia (VaD) was related to multiple brain infarctions exceeding a certain threshold, and distinct from Alzheimer disease (AD). The concept was further elaborated in a 1974 paper which stated that “...when vascular disease is responsible for dementia it is through the occurrence of multiple small or large cerebral infarcts.” This led to the widespread use of the term multi-infarct dementia as being synonymous with VaD. The last 2 decades have witnessed a major challenge to this narrow conceptualization of VaD, with the publication of several sets of criteria for VaD which expanded the concept to include not only multiple cortical and/or subcortical infarcts, but also strategic single infarcts, noninfarction white matter lesions (WMIs), hemorrhages, and hypoperfusion as possible causes of VaD. Much ambiguity in the definition of VaD continues to beset the field, which warrants a critical examination and updating of the extant criteria.

LIMITATIONS OF CURRENT CRITERIA SETS FOR VaD

The 4 commonly used sets of criteria for VaD are: the National Institute of Neurological Disorders and Stroke...