

key points

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Vascular dementia describes chronic progressive

impairment of cognitive function arising from cerebrovascular injury. Although overlap exists with Alzheimer's disease (AD) (around 20% of dementia patients have a mixed form) vascular dementia is regarded as the second most common cause of dementia in the UK, a reasonably pure form constituting 15-20% of dementia cases in Europe and North America.

Vascular cognitive impairment (VCI) refers to the full

spectrum from mild cognitive impairment to dementia associated with, and presumed to be caused by, cerebrovascular disease. The most common cause of VCI is cerebral small vessel disease. Arteriolosclerosis predominantly affects subcortical brain regions: patients typically have multiple lacunar infarcts or extensive, confluent white matter lesions. Cerebral amyloid angiopathy is caused by beta-amyloid deposition in small arteries.

Most commonly the presentation of vascular dementia

is insidious, with disorganisation, loss of drive, irritability, mental rigidity, difficulties with planning and problem solving, emotional lability and other mood changes, and sometimes inappropriate or disinhibited social behaviour. Slowed gait is common in those with advanced disease.

Physical examination may identify gait impairment,

bradykinesia, rigidity, and focal neurological signs. Screening tools are insensitive in vascular dementia, in which memory can be relatively preserved. There is data to support the use of the Montreal Cognitive Assessment but normal performance does not exclude vascular dementia. All patients should have their BP checked. Vascular risk factors are not essential for the diagnosis but should be identified, as should any reversible medical causes.

Young patients (aged under 65), atypical or rapidly

progressive cases will likely be referred to neurology. Cases arising after a clear stroke will likely be under the care of stroke services. Patients with impairment of sufficient severity to classify as dementia will require input from a dedicated dementia service or community mental health team. Objective evidence of cognitive impairment is required for diagnosis: the cognitive profile is dominated by executive dysfunction, slowed processing speed and impaired retrieval. Imaging is a prerequisite for diagnosis. However, vascular brain changes are common in people with other dementias such as AD as well as in older people without dementia.

Expert consensus suggests treating hypertension in

overt VCI but it is important to be vigilant for orthostatic hypotension. Statins have not been shown to prevent cognitive decline or dementia in people at risk of vascular disease. The effects of cholinesterase inhibitors and memantine are small and of uncertain clinical benefit in dementia of solely vascular aetiology. Many patients have a mixed dementia, with coexisting AD, and are more likely to benefit.