



VASCULAR DEMENTIA – FACTSHEET

What is vascular dementia?

Vascular dementia is the second most common cause of dementia after Alzheimer's disease, accounting for up to a third of all dementias. Up to a third of people diagnosed as having Alzheimer's disease show significant vascular disease in their brains at post mortem.

Vascular dementia is thought to be due to impaired blood supply to the brain and is divided into different types, depending on the nature of the vascular disease:

- vascular dementia of acute onset following a stroke sometimes called post-stroke dementia;
- multi-infarct dementia: sub-acute onset with step-wise decline following a number of mini strokes or transient ischaemic attacks (TIA) in the outer parts of the brain called cerebral cortex;
- subcortical vascular dementia (affecting inner parts of the brain consisting of deep white matter made up of nerve cell fibres): The person may have a history of high blood pressure and appear slow in thinking and actions, and may walk with a widely spaced gait. This ischaemic damage results in loss of the covering sheath of nerve fibres in the brain (demyelination). The term 'Binswagner's disease' is used when such demyelination is widespread;
- mixed cortical and subcortical vascular dementia.

What are the signs and symptoms of vascular dementia?

Similar to Alzheimer's disease, vascular dementia results in progressive impairment of the higher functions of the brain, such as memory, new learning, recognition, fine motor

movements, and planning. It may be difficult to separate Alzheimer's disease from vascular dementia in an individual patient, as mixed dementia is common.

The following signs and symptoms point towards vascular dementia or the significant contribution of vascular disease to dementia:

- abrupt onset (for example, following stroke);
- stepwise decline (sudden worsening, followed by a period of stability, then further sudden worsening);
- patchy cognitive deficits (deficits in one area; for example, memory, may far exceed deficits in other areas, for example, language);
- executive dysfunction (inability to weigh different options and planning) may be more prominent than memory problems;
- focal neurological signs and symptoms; (for example, weakness or loss of sensation in part of the body);
- emotional lability (mood swings and severe emotional response to trivial situations);
- fluctuations in functioning (described by relatives as 'good and bad days');
- evening or nocturnal confusion;
- depressive symptoms are more common than in Alzheimer's disease;
- hallucinations and delusions are more common than in Alzheimer's disease but less common than in Lewy body dementia;
- insight into memory problems is retained until the later stages, compared to Alzheimer's disease where it is lost early;

What are the risk factors for vascular dementia?

The risk factors for vascular dementia are somewhat similar to those for stroke and heart disease.

- high blood pressure;
- narrowing and furring of main arteries in the neck supplying blood to the brain (atherosclerosis);
- raised cholesterol (LDL - low density lipoprotein cholesterol);
- diabetes;
- heart attacks (myocardial infarction and ischaemic heart disease);
- irregular heartbeat (atrial fibrillation);
- smoking (leads to increased risk of heart disease and atherosclerosis).

What can be done to prevent or treat vascular dementia?

There is no cure for vascular dementia, and the focus is currently on preventing further brain damage by improving blood circulation. As initial clinical trials of anti-dementia drugs (anticholinesterase drugs) were carried out on patients with Alzheimer's disease, these drugs are currently licensed only for that disorder.

At present, blood-thinning agents (dispersible aspirin 75-150mg and related drugs) form the mainstay of treatment to reduce risk of further strokes and improve circulation. They can cause slightly increased risk of bleeding, especially in high-risk patients (for example, those with duodenal or stomach ulcers) and a doctor's advice should be sought before starting them.

All the vascular risk factors mentioned above are potentially controllable by good compliance with prescribed medications (for example, tablets to reduce blood pressure) and by improving lifestyle, i.e. cessation of smoking, balanced diet and regular exercise.

There is some evidence that the modest (equivalent to 1-2 small glasses of wine) daily intake of alcohol and reducing homocysteine levels by taking vitamin tablets (folic acid and B12) may reduce the overall vascular risk, but it is advisable to consult your doctor first.

What is the course and prognosis for people with vascular dementia?

The course of vascular dementia varies considerably. In the early stages, only memory problems and some difficulties with level functioning (for example, problem solving and planning) may be evident. The illness is associated with long periods of stability, interrupted by intermittent worsening. The progression of the illness depends on the number, severity and control of the underlying vascular risk factors. Overall, the duration of survival is the same as that for Alzheimer's disease, i.e. around eight years. The cause of death is usually related to the vascular risk factors; for example, stroke or heart attack, often leading to a chest infection.

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The views expressed in this factsheet are those of the author, not necessarily those of the NWDC.

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