

Vascular dementia

What is vascular dementia?

Vascular dementia is the second most common type of dementia after Alzheimer's disease. The word dementia describes a group of symptoms that may include memory loss, difficulties with planning, problem-solving or language and sometimes changes in mood or behaviour. Vascular dementia is caused by a reduced blood supply to the brain, due to conditions such as: high blood pressure (hypertension), irregular heart rhythms (arrhythmias) and diseases which cause damage to the arteries in the brain. It usually affects people between the ages of 60–75 years old and is more common in men than women.

Vascular dementia is unique in that these changes will generally occur in a stepwise pattern due to the sudden occurrence of strokes. The person will usually lose some cognitive ability at the point that they have a stroke, but they may improve or remain stable for a while before the next stroke occurs, when they will lose more cognitive ability.

Causes of vascular dementia

In order for them to work properly, brain cells need a constant supply of blood to provide oxygen and nutrients. The network of vessels in the brain is known as the vascular system. If the vascular system becomes damaged blood is unable to reach the brain cells, causing them to die. The death of brain cells can cause problems with memory, new learning, recognition, fine motor movement and planning.

Types of vascular dementia

There are several types of vascular dementia, dependant on the areas of the brain affected. There are some overlapping symptoms between the different types, but the symptoms tend to progress differently.

Arteriosclerotic dementia: reduced oxygen supply to the brain (chronic ischaemia).

Vascular dementia following a stroke: major strokes can be fatal or may lead to physical disability or vascular dementia due to damage to the brain.

vascular dementia can be caused in several different ways, the most common cause is a blockage of small blood vessels (arteries) deep within the brain. When any part of the body is deprived of blood it dies and this is called an 'infarct'; when this happens in the brain it's known as a stroke. Depending on where the stroke occurs in the brain different functions of the brain will be affected. Each side of the brain controls the movement of the other side of the body, so strokes on the left side of the brain can cause problems in moving the limbs on the right side of the body and vice versa. Strokes on the left side are also especially associated with problems in language and memory. Strokes on either side can cause problems with recognition of objects and coordination of complex tasks. Strokes in certain areas of the brain can also cause changes in the person's mood and personality.

Multi-infarct dementia (MID): develops gradually following a number of mini-strokes or transient ischaemic attacks (TIAs – see below), which the person may not realise they are having. MID affects the

cerebral cortex, which is the outer part of the brain.

Subcortical vascular dementia

(Binswanger's disease): involves vascular damage to the nerve cell fibres of the inner parts of the brain (deep white matter) by affecting the sheath which insulates nerve fibres in the brain (demyelination).

There is also a vascular dementia which involves both cortical and subcortical damage to the brain.

There are rarer causes of vascular dementia which may affect some people with auto-immune inflammatory diseases that affect the arteries such as **systemic lupus erythematosus (SLE or lupus)** and **temporal arteritis**.

Transient ischaemic attacks (TIAs)

Transient ischaemic attacks (TIAs) are temporary interruptions of blood flow to the brain, (a stroke is a permanent cut off of blood to part of the brain). TIA warning signs include:

- numbness, weakness, or paralysis of the face, arm or leg, especially on one side of the body
- sudden blurred, decreased or complete loss of vision in one or both eyes
- difficulty speaking or understanding simple statements
- loss of balance, dizziness or loss of co-ordination especially when combined with another warning sign
- sudden severe headache in one part of the head

These warning signs can last for a few hours but never last longer than 24 hours. They should not be ignored, as diagnosis and treatment may well prevent a serious stroke. Contact a doctor immediately if these symptoms occur.

Strokes

Strokes occur when brain cells are deprived of their blood supply and then die. They can be caused by damage to the brain or neck arteries. The damage may be a blockage or bleeding into the brain caused by:

- **Thrombosis:** A gradual narrowing and eventual blockage of an artery, usually because of a build-up of cholesterol and fatty deposits. Approximately 60% of strokes are caused by thrombosis.
- **Embolism:** A blockage of a brain or neck artery by a clot, either a blood clot elsewhere in the body (often the heart) which travels to the brain, or a piece of fatty deposit broken away from the lining of the arteries. Approximately 20% of strokes are caused by embolism.
- **Haemorrhage:** A burst in a brain artery causing bleeding in the brain. Approximately 20% of all strokes are caused by haemorrhage.

Symptoms and diagnosis

Serious forgetfulness, mood swings and other behavioural changes are not a normal part of ageing. They could be caused by poor diet, a malfunctioning thyroid, a lack of sleep or too many medicines. Feelings of loneliness and boredom or depression can also cause forgetfulness. These conditions can often be helped and medical advice should be sought. Sometimes, however, mental changes are caused by diseases that permanently damage the brain cells.

Diagnosis and tests

Anyone who is worried about dementia and has a history of strokes should contact their GP. Being diagnosed with vascular dementia early has the benefit of not only giving the person a reason for their symptoms but could also give them access to treatments. There is some evidence that treatment and lifestyle changes may slow down the progression of the underlying disease.

There is no single test for vascular dementia. The GP must first rule out other conditions, like depression, vitamin and thyroid deficiency and side-effects of medication, which can present with similar symptoms.

The GP will go on to do a thorough evaluation of past medical history, including family medical history, ask about their

current symptoms; a physical examination and an assessment of the person's mental abilities. This can give them an idea of any changes in the person and how they are coping with their day-to-day activities. It can be helpful for a friend or family member to go to this appointment, as they may have noticed changes that the person themselves has not noticed.

Some GPs will make a diagnosis of vascular dementia following these investigations; however, they may choose to send the person to a specialist, either a psychiatrist or a geriatrician. The specialists are able to perform further in-depth tests that may lead to a diagnosis of vascular dementia or identify the underlying cause.

Control and treatment

There is no cure for vascular dementia and the damage caused cannot be reversed, however, people who have vascular dementia can live well with the condition using various support methods.

Strokes can be caused by high blood pressure, high cholesterol and heart disease. Medication can be used to control these conditions, which will reduce the risk of further strokes.

Giving up smoking, reducing alcohol intake, having a healthy diet and regular exercise can also lessen the risk of strokes. Speak to your GP who will be able to help with advice and information.

Support

Supporting someone with vascular dementia can be difficult. In order for them to live well with vascular dementia they may need treatment for symptoms, rehabilitation after a stroke and support during daily activities.

For information on helping someone live well with dementia see the information sheet 'Healthy living with dementia'.

Caring for someone with vascular dementia

Information and support

If you need help with a particular problem, specific information, or access to a service, it is essential that you ask for it. Speak to your GP, social worker or Alzheimer Scotland for information and advice.

The Dementia Helpline, Freephone 0808 808 3000, is open 24 hours a day for information and emotional support. Information is also available on the website at www.alzscot.org

Contact a local carers group to find out more about other people who are caring or has cared for someone with vascular dementia. They will often be a vital source of information and support.

Looking after someone with vascular dementia can be lonely, difficult and exhausting. There are ways you can find help and support.

Look after yourself

Being aware that changes will occur and having support systems in place will help you cope with caring for a person with vascular dementia.

Make sure you have some time to yourself. This might mean having a member of your family, a friend or another carer look after the person with dementia while you take time to do the things you would like to do. Perhaps if the person goes to a day care centre you can use the time to catch up on errands or enjoy an activity you would otherwise be unable to do. Respite breaks could give you a few days or even a couple of weeks to go on holiday yourself or catch up things you might not have time to do. Having a break from caring is very important as it will enable you to care effectively without becoming exhausted or ill.

For difficult situations and times when you do not know how to cope, for instance with continence problems or dealing with delusions, seek help from your social worker, your GP, a consultant, a health visitor,



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