

ALDERFER & TRAVIS CARDIOLOGY, PC
670 Lawn Ave., Suite 3A Sellersville, PA 18960
Tel (215)257-9500 FAX (215) 257-9500

Arteriovenous malformation (cerebral) Disease (AVM)

What is AVM?

AVM is an abnormal connection between the arteries and veins of the brain. AVM is a "congenital" condition, which means that it is present at birth.

What causes AVM?

The cause of AVM is unknown.

Who is at risk for AVM?

AVMs occur more frequently in males than in females. Cerebral arteriovenous malformations occur in approximately 3 out of 10,000 people. Since the condition is present at birth, symptoms can occur at any time, but they usually occur before the age of 30.

What are the risks of AVM?

The size of the "lesion" or malformation, and the number of blood vessels involved, is directly related to the severity of the condition. The larger the lesion and the more vessels involved, the more severe the condition. Large malformations may have enough blood flow through them to stress the pumping ability of the heart.

There are often no symptoms until complications occur. Symptoms can be caused by bleeding from the vessels involved. The vessels involved are usually fragile, and can bleed at the malformation. Up to 70% of persons with AVM will experience this type of bleeding at some point. This type of bleeding is the leading cause of symptoms for people with AVM.

Other problems caused by AVM can create symptoms that can occur. They include:

- ischemia (a lack of blood flow to an area of the brain)
- compression or distortion of brain tissue by large AVMs
- loss of nerve cells in the brain
- Hydrocephalus

What are the symptoms of AVM?

Symptoms might include:

- headache
- vomiting
- vision changes
- seizures
- muscle weakness, any part of the body
- decreased sensation, any part of the body
- mental status change

- stiff neck
- fainting
- facial paralysis
- eyelid drooping
- ear noise/buzzing
- dizziness

How is AVM diagnosed?

Bleeding in the brain can be detected by muscular and/or neurologic examinations. Your doctor might listen to your carotid arteries for abnormal sounds.

Certain imaging procedures can be used to detect AVMs. They include:

- CT scan
- cerebral angiography
- MRI
- spinal tap and CSF cell count
- EEG (electroencephalogram)

How is AVM treated?

Symptoms don't usually occur until serious complications are present. This means that AVM is often an emergency condition that requires immediate treatment.

Surgical treatment is focused on fixing the malformation. This might involve removing the malformed portion of the vessel, clipping the vessel or other methods to fix the malformation.

If surgery isn't possible or the expected outcome is poor, "embolization" might be used. This involves injecting a substance to clot the blood and "occlude" or plug the abnormal connection between the arteries and veins. Proton beam therapy might also be used for lesions that can't be operated on. Medications, including anticonvulsants, might be prescribed to address symptoms that occur because of AVM.