Arteriovenous Malformation

Clusters of Tangled Blood Vessels in Your Brain

Tangled Blood Vessels

An arteriovenous malformation (known as AVM) is a cluster of tangled blood vessels in your brain or spine.

Arteries carry oxygen-rich blood from your heart to your brain, flowing through small vessels called capillaries. Capillaries connect the arteries and veins. Veins carry the blood from your brain to your heart and lungs.

The tangle of blood vessels with AVM means that blood flows directly from arteries to veins instead of going through the capillaries.

AVM can cause the blood vessel walls to weaken and bleed into your brain.

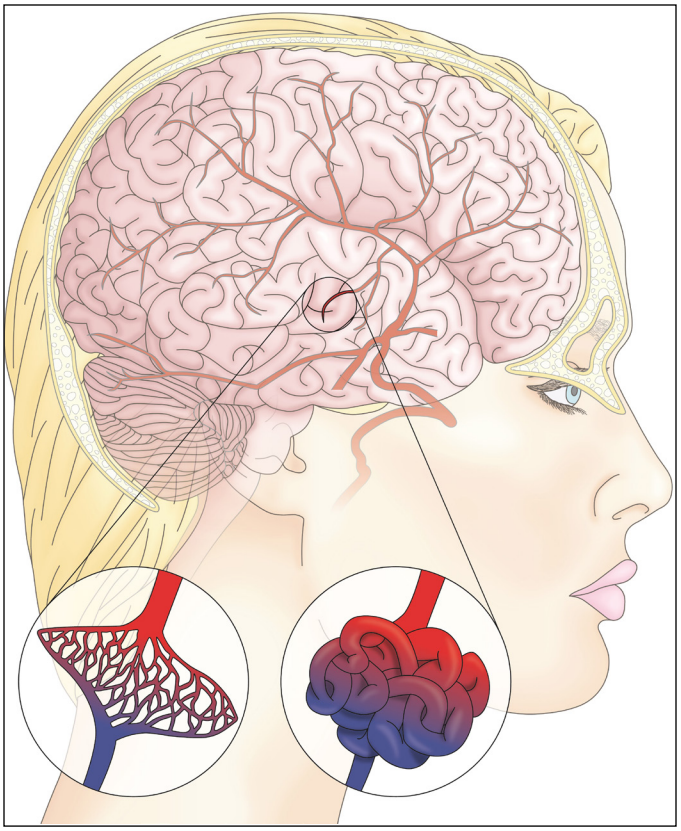
Causes of AVM

The cause of AVM is not known.

Symptoms of AVM

You may not have symptoms. If you do, you may have symptoms such as:

- headache
- dizziness
- changes with your vision (eyesight)
- seizure
- weakness, loss of movement, numbness or tingling in one part of your body
- being unable to speak
- being confused or having memory loss
- seeing things that aren't there.



(Left circle) Arteries carry oxygen-rich blood to veins through capillaries, small vessels. (Right circle) With AVM, blood vessels become tangled and blood goes directly from arteries to veins. AVM can cause blood vessels to become weak and bleed.

When to Call 911

Call 911 or have someone call 911 if you have any of the listed symptoms. An AVM is life-threatening and you need medical help right away.

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Tests for AVM

Your health care provider may want you to have a:

- ❑ **CT (computed tomography) scan or MRI (magnetic resonance imaging)**
  - — A CT scan uses X-ray and a computer to get an in-depth look at your brain. The result is an image that provides a clear and detailed picture. The scan usually takes less than 5 minutes.
  - — An MRI is a painless way to look at your blood vessels without using X-rays. MRI does not use radiation. MRI uses a magnetic field to make 3-dimensional (3-D) images of your brain.
  - — You will be awake during the test.
- ❑ **cerebral angiogram**
  - — An angiogram uses X-ray to see your blood vessels. A radiologist (doctor of X-ray) inserts a tube (catheter) into an artery in your groin and threads it to the arteries in your neck and head.
  - — The radiologist injects contrast into your blood vessels to help them show up on the X-ray.
  - — You will be awake during the test.

Treatment Options

Your health care provider may offer many treatment options. They may include:

- ❑ **medicines to control symptoms**
- ❑ **watching (monitoring) the AVM with imaging tests (CT, MRI)**
- ❑ **embolization**
  - — This procedure helps prevent bleeding in your brain by closing off the AVM.
  - — A long narrow tube (catheter) is inserted through an artery in your groin and guided to the AVM in your brain.
  - — The doctor places a glue-like substance or small coils through the catheter into the AVM. It fills part of the AVM to help prevent it from bleeding. The substance or coils stay in place.
  - — You will be not be awake during the procedure.
- ❑ **craniotomy**
  - — This surgery removes part of your skull (the bone flap) to reach your brain. The location and size of the craniotomy will depend on your AVM. The tangled vessels are taken out.
  - — You will not be awake during surgery.
- ❑ **radiosurgery**
  - — This treatment uses laser beams of high-dose radiation to slowly close the AVM. It does not harm the normal brain tissue around the AVM.
  - — Treatment occurs over 1 to 5 days at an outpatient or specialty clinic.
  - — Each treatment lasts about 30 minutes.
  - — You will be awake during the treatment.

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