

Vascular Conditions of the Brain

Arteriovenous Malformation (AVM)

An **arteriovenous malformation**, or **AVM**, is a congenital (born with) abnormality of the brain (or spinal cord) characterized by a tangle (nidus) of arteries and veins (Figure 5). The nidus lacks the capillary network of normal tissues that separates the arterial side of the circulation from the venous side, such that there exists a high-flow shunt or fistula from the arterial to the venous side through the nidus. Arteriovenous malformations can hemorrhage into the brain or ventricles, or they can harbor aneurysms on the feeding arteries which can rupture causing subarachnoid hemorrhage. Arteriovenous malformations can also cause seizures, headaches and other neurologic symptoms.

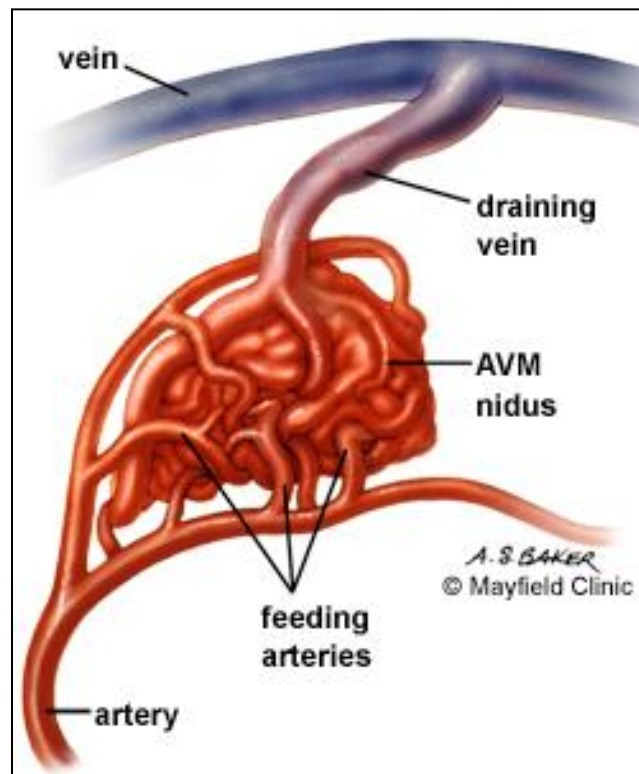


Figure 5: Drawing of a Brain AVM.

Treatment of large AVMs involves surgical removal, usually preceded by one or more embolizations of the feeding arteries. The embolizations are performed by an interventional neuroradiologist or a neurosurgeon, using coils, glues, gelfoam, silk and other embolic materials. Smaller AVMs are frequently treated with focused (stereotactic) radiation.