

Dural arteriovenous fistula

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Dural [arteriovenous fistulas](#) (DAVFs) are pathologic vascular connections that shunt dural arterial flow directly to dural venous drainage.

Epidemiology

DAVFs comprise 10–15% of all intracranial AVMs ¹⁾. 61–66% occur in females, and patients are usually in their 40 s or 50 s. They occur rarely in children, and when they do they tend to be complex, bilateral dural sinus malformations ²⁾

Dural arteriovenous fistulas can occur at any dural sinus but are found most frequently at the cavernous or transverse sinus.

Classification

[Intracranial dural arteriovenous fistula.](#)

[Spinal dural arteriovenous fistula.](#)

Etiology

The etiology and pathophysiology of DAVFs is not fully understood. Several hypotheses for development of DAVF and classifications for predicting risk of hemorrhage and neurological deficit have been proposed to help clinical decision making according to its natural history ³⁾.

see [Dural arteriovenous fistula formation.](#)

Treatment

Radical [treatment](#) is to obliterate the [draining veins](#) in any treatment modalities including endovascular treatment or surgical treatment. Radiosurgery is the last choice. Transvenous embolization plays the main role in the DAVF of the cavernous sinus and anterior condylar confluence. Transarterial embolization with Onyx has dramatically improved the obliteration rate of the transverse-sigmoid, superior sagittal sinuses, and other non-sinus lesions. Transarterial NBCA injection is still the gold standard in the endovascular treatment of the spinal dural and epidural AVFs. Understanding of the functional microvascular anatomy is mandatory, especially in the transarterial liquid injection (Onyx and NBCA). Surgical treatment in the DAVF of the anterior cranial base, craniocervical junction, tentorial region, and spine is a safe and radical treatment. Postoperative follow-up is necessary from the viewpoint of chronological and spacial multi-occurrence of this disease

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1)

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Last update: **2025/06/19 21:42**

