

## Intracranial Dural Arteriovenous Shunts

1. All patients with suspected intracranial dural arteriovenous shunts (DAVS) based on clinical presentation and/or non-invasive imaging findings should receive complete and high quality digital subtraction angiography (DSA) in order to confirm and risk stratify their disease. (Class I; level of evidence C)
2. DAVS with high risk features (eg, CVR) should be treated promptly to reduce the potential risk of intracerebral hemorrhage, venous hypertensive encephalopathy, or other neurologic events. Endovascular treatment is considered as the preferred first-line treatment option with favorable anatomy. Open surgical treatment alone or combined endovascular and open surgical treatment should be considered for high risk fistulas not curable by endovascular means alone. Stereotactic radiosurgery (SRS) should be reserved as an adjunctive and/or complementary option for aggressive and symptomatic DAVS. (Class I; level of evidence C)
3. Non-aggressive but symptomatic DAVS can be considered for definitive treatment. Endovascular treatment, open surgery, and SRS can be considered for this type of DAVS, but only if associated with very low treatment-related risk in view of the benign natural history of these lesions. (Class IIb; level of evidence C)
4. Non-aggressive asymptomatic (ie, incidental) DAVS lesions without CVR do not warrant active intervention and, if treatment is considered, treatment-related risk versus the natural history of the disease should be thoroughly discussed between the practitioner and patient. Nonetheless, these patients should be followed both clinically and with noninvasive imaging studies in regular fashion. An exception to this recommendation would be a patient who has become asymptomatic who was previously symptomatic, as a change in symptoms can portend a venous outflow thrombosis and, hence, potential change in fistula angioarchitecture and venous drainage pattern that would warrant re-evaluation with DSA. (Class I; level of evidence C)
5. SRS is a reasonably effective and safe treatment option. Thus, it could be considered as a viable option for DAVS that have a small compact shunt zone in patients who are not good candidates for endovascular or open surgical treatment or those who prefer a less invasive approach. (Class I; Level of Evidence C)
6. As a rare and incompletely understood disease, intracranial DAVS warrants further scientific investigation both with regard to natural history and clinical course following treatment. Standardized reporting of angiographic and clinical features and development of multi-institutional data collection consortia would benefit our understanding and may improve clinical and surgical outcomes in the future.

### [REFERENCE LINK:](#)

Lee SK et al. "Standards and Guidelines: Intracranial Dural Arteriovenous Shunts." *Journal of NeuroInterventional Surgery*. 2017 May; 9(5): 516-23. Epub 2015 Nov 27.

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