Dural arteriovenous fistulas (dAVFs) are acquired dural shunts between an artery and a vein without parenchymal nidus. DAVFs represent 10%-15% of intracranial arteriovenous malformations, and their manifestations vary from asymptomatic to devastating intracranial hemorrhage. They are classified according to their drainage and presence/absence of cortical venous reflux (CVR). The junction between transverse and sigmoid sinus (SS) is the most common location, and their treatment in case of CVR can involve the sacrifice of the sinus. DAVF occlusion may be achieved with both endovascular and surgical technique and frequently with combined techniques.

This video demonstrates the management of a left dAVF of the SS in a 54-yr-old male with recent onset of diplopia and imbalance with venous congestion seen in the left cerebellum on T2 sequence MRI. Angiography revealed a Borden grade 2, Cognard grade Ila + b left SS dAVF supplied by the jugular and hypoglossal branches of the neuromeningeal trunk with retrograde filling of the partially thrombosed SS and drainage to the superior petrosal sinus and multiple cerebellar veins. Endovascular repair was not feasible due to high risk of postoperative cranial neuropathy. The patient consented to surgery. A left retrosigmoid craniotomy was performed to achieve intradural ligation of the fistula at the dural edge along the inferior aspect of the tentorium. After drainage occlusion and cauterization of the transmastoid extradural feeders (via mastoidectomy), the SS was entirely exposed and clipped to prevent any further retrograde arteriovenous shunting. The postoperative course was without complication and angiography showed complete occlusion of the dAVF.

**Key Words:** dural arteriovenous fistula, sigmoid sinus, retrosigmoid approach, intradural, extradural, ligation

**Disclosure**

The authors have no personal, financial, or institutional interest in any of the drugs, materials, or devices described in this article.

**References**


The authors present an excellent technical depiction of the management of a dAVF involving the sigmoid sinus and petrosal region. They illustrate an uncommon management scheme in the era of endovascular methods. The case nicely illustrates the ligation of the intradural connections via a retrosigmoid approach followed by obliteration of the arterialized sinus via the extradural exposure. The video will serve as an excellent resource in the management of these difficult lesions.

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