

Surgical treatment of an anterior cranial fossa dural fistula

Tratamento cirúrgico de uma fístula dural da fossa craniana anterior

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A 48-year-old man presented headaches in the last two months, and no neurological deficits.

The computed tomography (CT) scan revealed an intraparenchymal hemorrhage localized in right frontal lobe¹.

The magnetic resonance (MR) showed the lesion included middle frontal gyrus, fronto-orbital region and gyrus rectus (Fig 1).

Diagnostic cerebral angiography (DCA) demonstrated intracranial dural arteriovenous fistulas (DAVF) classified as Borden IA²⁻⁵, a single fistula with venous drainage directly into dural venous sinus or meningeal vein and antegrade flow (Fig 1).

The DAVF was occluded after a right frontotemporoparietal craniotomy, and a DCA, one year after the procedure, showed no residual fistula (Fig 2).

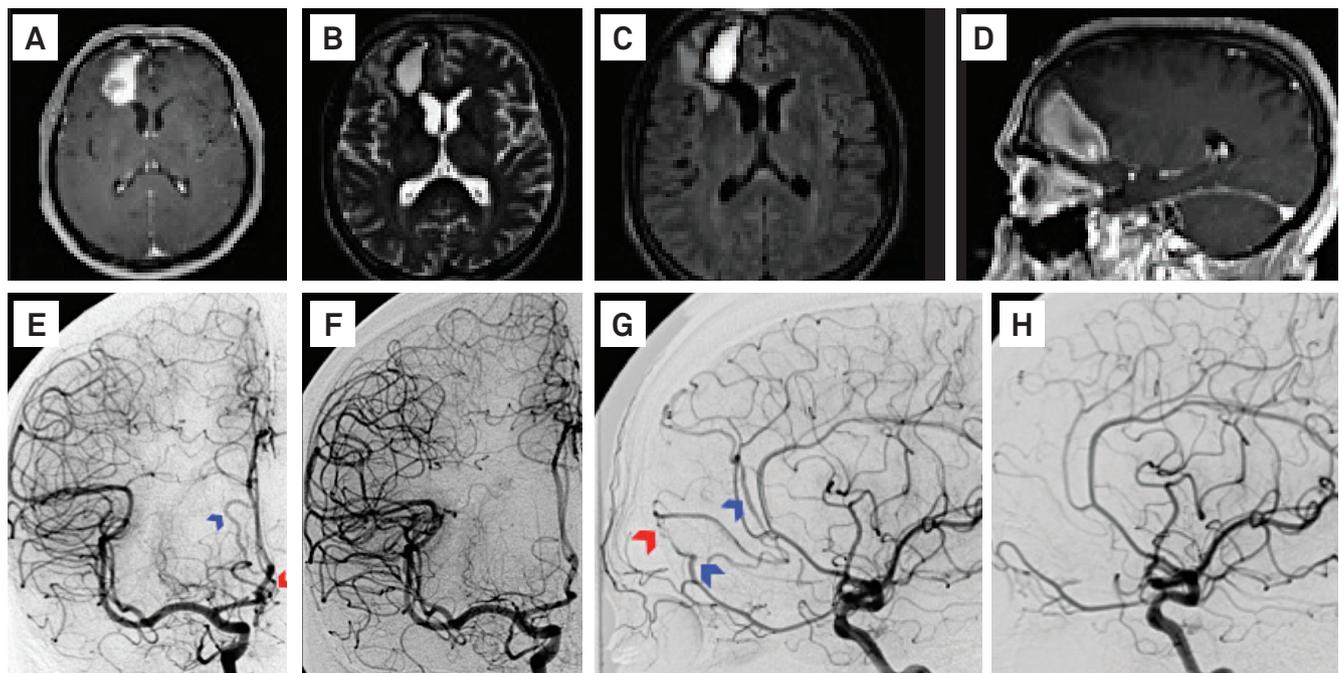


Fig 1. (A – C) Magnetic Resonance (MR) images axial view; T1, T2 and Flair sequences respectively. The image presents a hyperintense lesion in both T1 and T2 images, and a hypointense peripheral halo in T2, suggesting a subacute evolution. T2 and FLAIR images had a peripheral hypersignal due to edema, contributing to the mass effect and a discrete compression of the frontal horn of the lateral ventricle. (D) T1 sequence, sagittal view. (E – H) Digital Angiography. The DAVF involves the right frontopolar artery and a dural vein of the anterior fossa. There is drainage to the falcine parasagittal vein and from this to the superior sagittal sinus. (E and G) Right Internal Carotid Angiography: note red arrow pointing the anomalous shunt and blue arrow showing anomalous drainage vessels. (F and H) Angiography post-surgery: no shunt or anomalous draining vessels.

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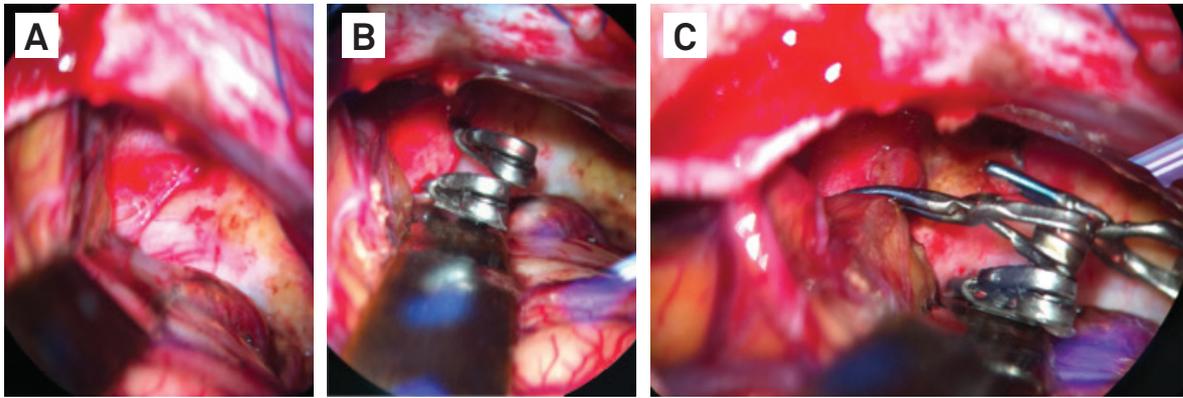


Fig 2. Intraoperative pictures. (A) shows the drainage vein, (B) shows its ligation with two aneurysm clips and (C) the arterial component being ligated also with an aneurysm clip and after the coagulation and cut of the venous component.

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