The high versatility and efficacy of the contralateral interhemispheric approach is demonstrated in this resection of an arteriovenous malformation (AVM). This patient had a large AVM along the medial frontal lobe amenable to approach via the contralateral interhemispheric approach. The head was rotated to permit gravity retraction of the ipsilateral hemisphere to the AVM, avoiding the use of rigid retractors. Under the guidance of neuronavigation, the falx was opened to permit visualization of the AVM. Circumdissection with a disconnection of the nidus was performed in a standard fashion. Postoperative angiography confirmed complete removal of the AVM. The patient gave informed consent for surgery and video recording. Institutional review board approval was deemed unnecessary. Used with permission from Barrow Neurological Institute, Phoenix, Arizona.

KEYWORDS: Arteriovenous malformation (AVM), Contralateral interhemispheric approach, Paramedian

DISCLOSURES

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

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COMMENT

The authors present a case of a medial frontal lobe AVM approached via a contralateral interhemispheric transfalcine approach. This enables gravity dependent retraction of the ipsilateral frontal lobe to open the operative corridor up (in a horizontal fashion), and gravity dependent retraction of the actual AVM into the interhemispheric fissure to facilitate circumferential dissection and resection. Although alluded to previously in the literature, it was really Dr Spetzler in 1985 who
specifically highlighted the utility of this “crossed approach” in the setting of a transcavernous approach to a ventricular AVM. The authors iterate important operative nuances for AVM resection including identification of the correct plane for resection and feeding artery coagulation/ligation. This video is useful to trainees and students aspiring to grasp the tenants of AVM microsurgery, and further advocates for the useful concept of gravity dependent retraction.

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