
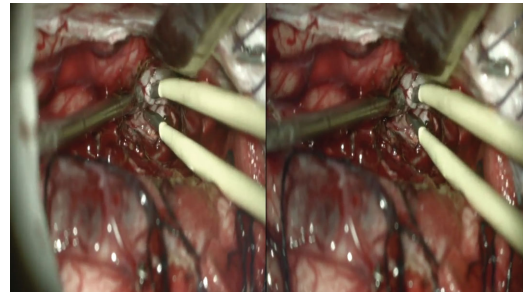


# Interhemispheric Contralateral Transfalcine Approach for Subparacentral Arteriovenous Malformation: 3-Dimensional Operative Video

Matías Baldoncini, MD <sup>\*,‡</sup>, Alvaro Campero, MD, PhD<sup>§,¶</sup>,  
Sabino Luzzi, MD, PhD<sup>||,‡</sup>, Juan F. Villalonga, MD<sup>§,¶</sup>

\*Laboratory of Microsurgical Neuroanatomy, School of Medicine, University of Buenos Aires, Buenos Aires, Argentina; <sup>‡</sup>Department of Neurological Surgery, Hospital San Fernando, Buenos Aires, Argentina; <sup>§</sup>LINT, Facultad de Medicina, Universidad Nacional de Tucumán, Tucumán, Argentina; <sup>¶</sup>Department of Neurological Surgery, Hospital Padilla, Tucumán, Argentina; <sup>||</sup>Neurosurgery Unit, Department of Clinical-Surgical, Diagnostic and Pediatric Sciences, University of Pavia, Pavia, Italy; <sup>‡</sup>Neurosurgery Unit, Department of Surgical Sciences, Fondazione IRCCS Policlinico San Matteo, Pavia, Italy



Watch now at <https://academic.oup.com/ons/article-lookup/doi/10.1093/ons/opab198>

**Correspondence:** Matías Baldoncini, MD, Department of Neurological Surgery, Jorge Luis Borges 2240, Floor 4, Buenos Aires 1425, Argentina. Email: [drbaldoncini@matias@gmail.com](mailto:drbaldoncini@matias@gmail.com)

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Neurovascular procedures along the interhemispheric fissure harbor unique features differentiating them from those arteriovenous malformations (AVMs) located at the lateral surface of the brain.<sup>1-4</sup>

The aim of this 3-dimensional operative video is to present a microsurgical resection of an AVM in a subparacentral location, operated through an interhemispheric contralateral transfalcine approach.<sup>1,3,5</sup>

This is a case of a 29-yr-old female, with headaches and history of seizures. The patient presented an interhemispheric bleeding 6 mo before the surgery. The magnetic resonance imaging (MRI) showed a vascular lesion located on the medial surface of the right hemisphere at the confluence between the cingulate sulcus and its ascending sulcus. In the cerebral angiography, a right medial AVM was observed, receiving afference from the right anterior cerebral artery and draining to the superior

longitudinal sinus. The patient signed an informed consent for the procedure and agreed with the use of her images and surgical video for research and academic purposes.

The patient was in a supine position, and a left interhemispheric contralateral transfalcine approach was performed,<sup>1-3</sup> a circumferential dissection of the nidus, and, finally, the AVM was resected in one piece.

The patient evolved without neurological deficits after the surgery. The postoperative MRI and angiography showed a complete resection of the AVM.

In the case presented, to avoid exposing the drainage vein first and to use the gravity of the exposure, the contralateral transfalcine interhemispheric approach was used,<sup>1,2</sup> which finally accomplished the proposed objectives.

**KEY WORDS:** Interhemispheric contralateral, AVM surgery, Microsurgery, Transfalcine corridor

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## Disclosures

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## COMMENT

This very interesting video article illustrates a well-known strategy for approaching parafalcine lesions including arteriovenous malformations (AVMs). Some concepts are important to understand in order to employ this approach for an AVM. A contralateral transfalcine trajectory is best utilized when the AVM is parafalcine, presenting to the arachnoid,

and with feeder arteries arising mostly from branches of the anterior cerebral artery since the nidus and the feeders will be more easily visualized. It may particularly be preferred when superficial dilated draining veins could render the exposure of the nidus from the ipsilateral route difficult.

The positioning of the head is very important in order to obtain an adequate corridor to the lesion. We favor a lateral position with a lateral flexion so as to put the side of the AVM superiorly so that we can use gravity to retract the contralateral hemisphere away from the falx.

Although videos showing similar cases have already been published,<sup>1,2</sup> this video article represents another great example of this technique which will hopefully help vascular neurosurgeons considering using it to more safely resect such lesions.

**Roland Jabre**

**Peter Nakaji**

*Phoenix, Arizona, USA*

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