



Video Abstract

Multimodality resection of Oliveira Type IIIC* cerebellar AVM: A distinct entity

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Received : 02 March 2022

Accepted : 01 April 2022

Published : 22 April 2022

DOI

10.25259/SNI_217_2022

Videos available on:

https://doi.org/10.25259/SNI_217_2022

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ABSTRACT

Background: Posterior fossa AVMs constitute about 10% of AVMs and are associated with a higher rate of hemorrhage and increased morbidity and mortality rates necessitating treatment with rare exception. Cerebellar AVMs differ markedly from their supratentorial counterparts in that there are no perforating vessels involvement, drainage into the deep cerebral venous system, or presence of eloquent functional area except for the dentate nucleus. While Yaşargil has classified cerebellar AVMs into seven subtypes according to their location, de Oliveira *et al.* have classified them using a more impactful grading system based on the size, location, and involvement of the dentate nucleus with the highest risk being III (size over 4 cm) C (mixed superficial and deep location) * (dentate involvement). In this extensive AVM with multiple arterial feeders from the SCA, AICA, and PICAs, preoperative embolization facilitates the safe surgical removal.

Case Description: We present the case of resection of de Oliveira *et al.* IIIC* cerebellar AVM highlighting the tenets of preoperative embolization, wide surgical exposure with an extended retrosigmoid approach, arachnoid dissection of the SAC, AICA, and PICA feeders, parenchymal dissection with preservation of the dentate nucleus, and preservation of venous drainage until complete disconnection. The patient consented to surgery after presenting with hemorrhage and developed hydrocephalus and CSF leak, managed successfully.

Conclusion: de Oliveira *et al.* classification is highly impactful in grading posterior fossa AVMs.

Keywords: Arteriovenous malformation, AVM embolization, Cerebellum, Microsurgery, Retrosigmoid craniotomy

[Video 1]-Available on:

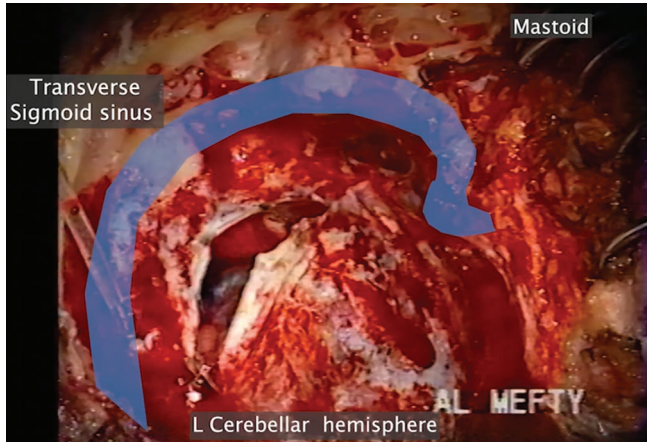
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Annotations^[1-5]

- 1) 00:14 – Preamble
- 2) 01:03 – Clinical presentation
- 3) 01:09 – Neuroimaging
- 4) 01:40 – Embolization
- 5) 02:38 – Surgical setup
- 6) 02:57 – Key surgical steps
- 7) 03:46 – PICA
- 8) 03:58 – Superficial draining veins

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Video 1: Resection of an Oliveira type IIIC* cerebellar AVM.

- 9) 06:20 – Draining vein clipping
- 10) 07:51 – SCA
- 11) 09:23 – Outcomes.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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How to cite this article: Almefty R, Essayed WI, Al-Mefty O. Multimodality resection of Oliveira Type IIIC* cerebellar AVM: A distinct entity. *Surg Neurol Int* 2022;13:163.