

Microsurgical Resection of Cerebellopontine Angle Meningioma

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Abstract

Meningiomas of the cerebellopontine angle (CPA) are the second most frequent lesions related to this region (around 10–15%),¹ being the vestibular schwannomas the first (around 85%). These lesions arise from the dura of the petrosal surface of the temporal bone, lateral to the trigeminal nerve (► **Fig. 1**). Variable attachment sites and directions of growth make different clinical presentations and operative challenges. These pathologies can be classified accordingly to their extension related to the internal acoustic meatus in: postmeatal, premeatal, and large meningiomas with pre- and postmeatal extension (► **Fig. 2**). We present an operative video performed by the senior author (L.A.B.B.). A 64-year-old woman with 3 months of complaint of left facial pain on the V2 territory of the trigeminal nerve and diplopia secondary to VI nerve paresis. Magnetic resonance imaging (MRI) scans demonstrated a large homogeneous enhancing lesion at the left CPA, extending pre- and postmeatal and from the tentorium cerebelli to the jugular foramen region, highly suggestive of CPA meningioma. Surgery was offered to the patient as a first option. In our point of view, neurophysiological monitoring with somatosensory and motor evoked potentials is mandatory while dealing with such large tumors around the CPA. The surgery was performed after a standard retrosigmoid craniotomy, with careful dissection and debulking while devascularizing the tumor from its petrosal attachment. Near-total resection was achieved and the patient had a remarkable postoperative outcome with improvement of the diplopia and facial pain with preservation of VII and VIII nerves function. The pathology demonstrated a grade 1 meningioma.

The link to the video can be found at: <https://youtu.be/UVVvYehq8Fu0>.

Keywords

- cerebellopontine angle
- meningioma
- skull base
- tumor



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Conflict of Interest

None declared.

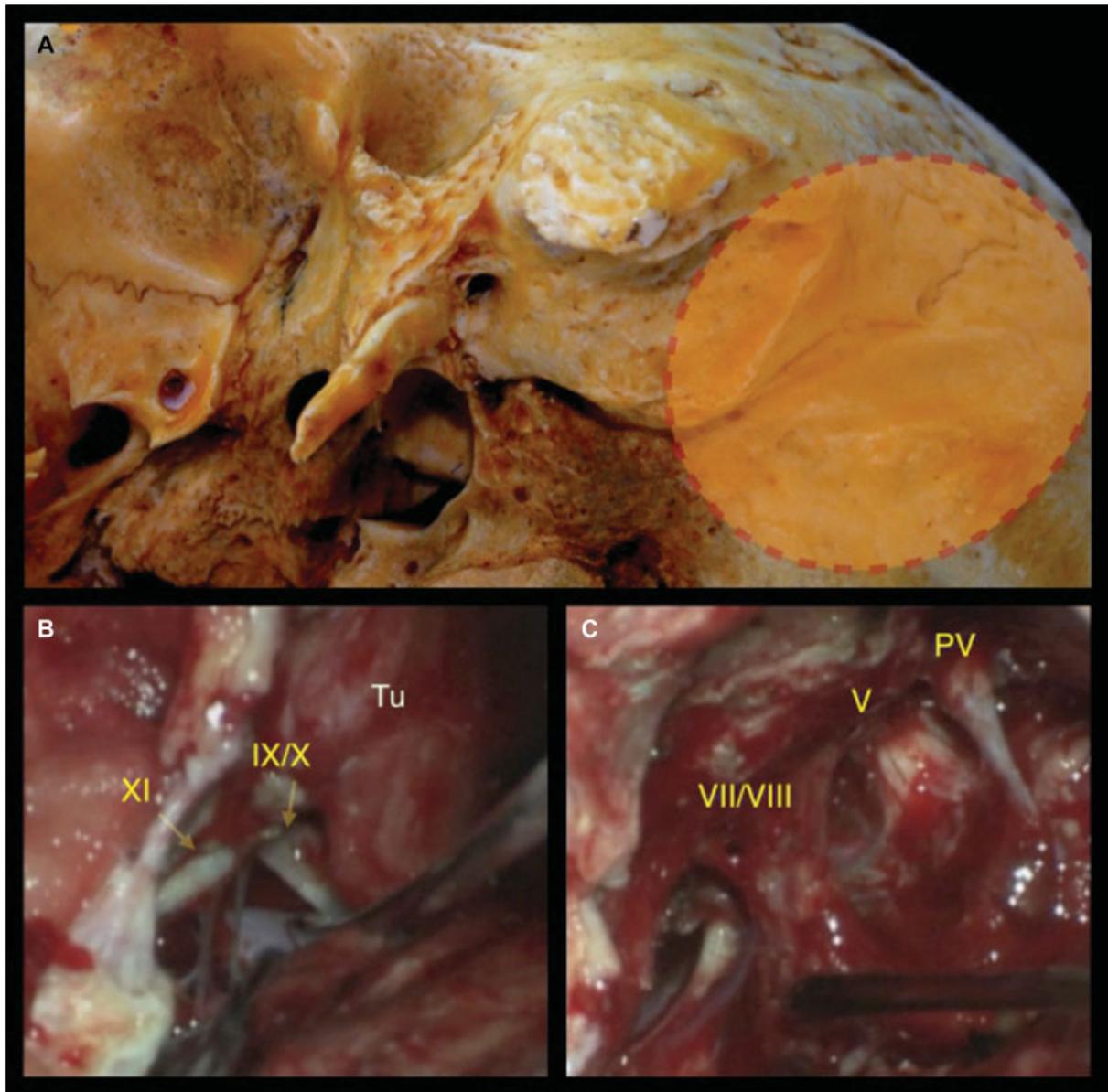


Fig. 1 (A) Osseous demonstration of the region involved in the retrosigmoid approach; (B) identification of the lower cranial nerves; (C) preservation of the VII/VIII nerves complex, V nerves and Petrosal Vein (PV) after tumor resection. Tu, tumor.

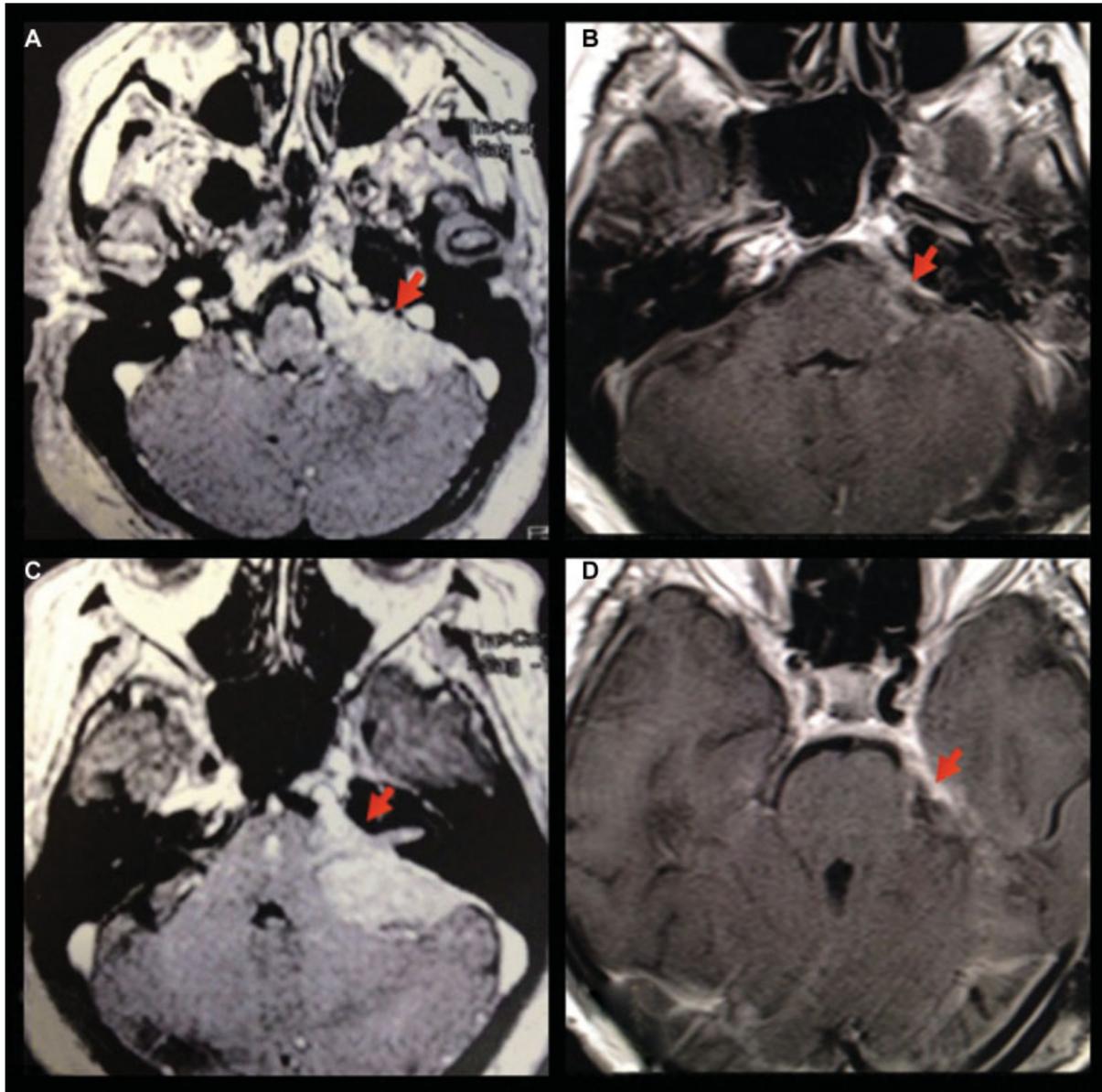


Fig. 2 (A and B) Preoperative MRI demonstrating the tumor extension to the pre- and postmeatal region of the left cerebellopontine angle; (C and D) postoperative MRI with complete tumor removal. MRI, magnetic resonance imaging.

Reference

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