



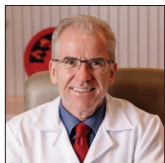
## Video Abstract

# Posterior petrosal approach for microsurgical resection of petroclival meningioma: 3-Dimensional operative video

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## ABSTRACT

**Background:** Petroclival meningiomas are challenging lesions considering their deep location and close relationship with many vital neurovascular structures.<sup>[1-8]</sup>

**Case Description:** We present the case of a 54-year-old male presenting a history of headache, dizziness, and tinnitus on the left side, associated with left facial hypoesthesia. Preoperative imaging depicted a lesion highly suggestive of a petroclival meningioma with important compression of the brainstem. Considering worsening of symptoms, size, and location of this lesion, microsurgical resection was indicated. A left posterior petrosal approach was employed with aid of neurophysiological monitoring. The patient was placed in a true lateral position and an arciform incision was done. First, the mastoidectomy was performed and then the craniotomy around encompassing both posterior and middle cranial fossae. Middle and posterior fossa dural incisions were connected through coagulation of the superior petrosal sinus. Then tentorium was all the way cut to the incisura. After that, sigmoid sinus can be mobilized posteriorly, increasing exposure of presigmoid space. The area since jugular foramen up to the supratentorial region was fully exposed, allowing safe total resection of the lesion. Postoperative imaging demonstrated complete tumor removal. Patient presented improvement of symptoms, with no new neurological deficits on follow-up.

**Conclusion:** The posterior petrosal approach provided a shorter pathway and direct angle of attack to the tumor attachment, allowing successful resection.<sup>[1,6]</sup> Extensive laboratory training is essential to get familiarized with the complex anatomical relationships in that area. Informed consent was obtained from the patient for the procedure and publication of this operative video.

**Keywords:** Meningioma, Petroclival, Posterior petrosal, Skull base, Tumor

### [Video 1]-Available on:

[www.surgicalneurologyint.com](http://www.surgicalneurologyint.com)

### Annotations<sup>[1-8]</sup>

- 1) 0:07 - Clinical Presentation
- 2) 0:21 - Neuro-imaging Findings

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- 3) 0:59 - Tumor 3D Model
- 4) 1:11 - Rationale for the Procedure
- 5) 1:33 - Approach 3D Model
- 6) 2:25 - Risks of the Procedure and its Potential Benefits
- 7) 2:30 - Alternatives and Why They Were not Chosen
- 8) 2:36 - Anatomy
- 9) 4:27 - Description of the Setup
- 10) 4:34 - Procedure
- 11) 8:37 - Disease Background
- 12) 8:44 - Postoperative Imaging
- 13) 9:24 - Outcome

#### Declaration of patient consent

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

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Nil.

#### Conflicts of interest

There are no conflicts of interest.

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