

# Extended Retrosigmoid Approach in the Sitting Position for Resection of a Petroclival Meningioma

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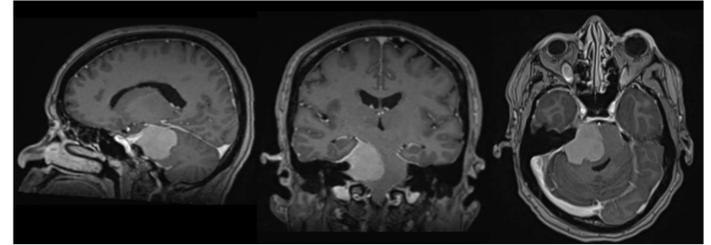
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## Clinical Background

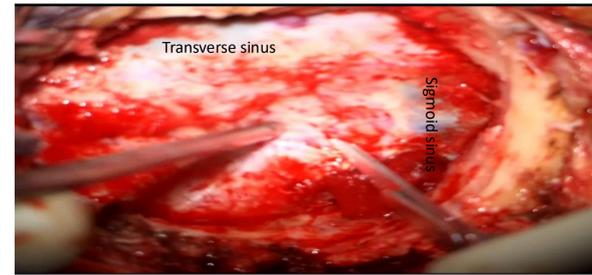
- 51-year-old woman with progressive left-sided weakness, numbness, vertigo, diplopia, and left-sided hearing loss
- MRI demonstrated a large right petroclival meningioma (3.2 cm) causing brainstem compression
- Surgical resection indicated due to mass effect and progressive neurological symptoms

## Imaging & Surgical Planning

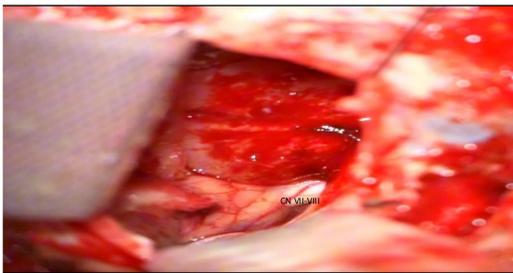
- Large right petroclival meningioma with significant pontine and brainstem compression
- Mass effect on the fourth ventricle without hydrocephalus
- Extension into the internal auditory canal and Meckel's cave
- Extended retrosigmoid approach selected to achieve brainstem decompression while preserving cranial nerves



## Key Operative Steps



Extended retrosigmoid craniotomy in the sitting position



Gravity-assisted cerebellar relaxation and wide CPA exposure



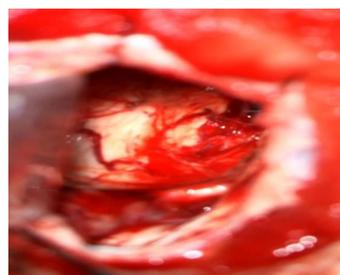
Internal debulking followed by piecemeal tumor resection



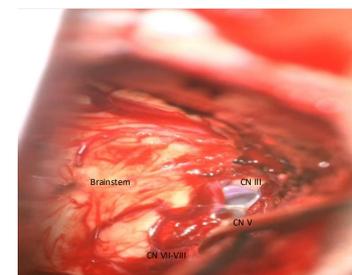
Progressive mobilization of the dorsal capsule from the brainstem



Sitting position enables bimanual dissection

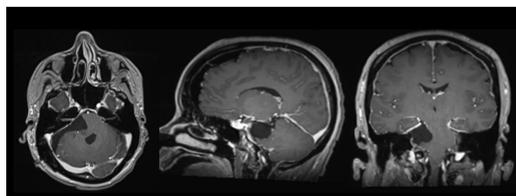


Final inspection



## Outcome

- Postoperative MRI confirmed excellent brainstem decompression
- Small residual tumor confined to the internal auditory canal
- Uneventful postoperative course
- No new neurological deficits



## Take-Home Points

- The sitting position improves gravity-assisted exposure, venous drainage, and visualization in posterior fossa surgery when used in experienced centers.
- An extended retrosigmoid approach allows direct access to the petroclival and anteropetrosal regions, facilitating brainstem decompression and cranial nerve preservation.
- In complex cases at high cranial nerve risk, function-preserving resection with limited residual tumor is reasonable.

## Contact

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## References

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3. Ganslandt O, Merkel A, Schmitt H, Tzabazis A, Buchfelder M, Eyupoglu I, Muenster T. The sitting position in neurosurgery: indications, complications and results. a single institution experience of 600 cases. *Acta Neurochir (Wien)*. 2013 Oct;155(10):1887-93. doi: 10.1007/s00701-013-1822-x. Epub 2013 Aug 8. PMID: 23925859.