



Extended Middle Fossa Approach for Trigeminal Schwannoma Resection

Baha'eddin A. Muhsen^{1,*} Edinson Najera¹ Hamid Borghei-Razavi¹ Badih Adada¹

¹Department of Neurosurgery, Braathen Center, Cleveland Clinic Florida, Weston, Florida, United States

Address for correspondence Badih Adada, MD, 3121 Cleveland Clinic Blvd, Weston, FL 33331 (e-mail: ADADAB@ccf.org).

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Abstract

Trigeminal schwannomas are rare benign tumors, it is second most common intracranial schwannomas after vestibular schwannomas. The management includes not limited to observation, stereotactic radiosurgery/radiotherapy, and/or surgical resection. Tumor size and patient clinical status are the most important factors in management.

In this video, we describe the technical nuances of an extended middle fossa approach for large trigeminal schwannoma with cavernous sinus extension resection. A 44-year-old right-handed female with several months' history of progressive right facial paresthesia and pain in the distribution of V3 mainly. On physical examination, she had decreased sensation to light touch over the right V1 to V3 distribution with loss of corneal reflex. The brain MRI showed 3.5 cm bilobed mass extends from the pontine root entry zone to the cavernous sinus. Craniotomy was performed and followed by middle fossa dural peeling, peeling of temporal lobe dura away from the wall of the cavernous sinus, extradurally anterior clinoidectomy, drilling of the petrous apex, coagulation of superior petrosal sinus followed incision of the tentorium up to the tentorial notch with preservation the fourth cranial nerve, and tumor dissected away from V1 and then gradually removed from the superior wall of the cavernous sinus.

The technique presented here allows for complete tumor resection, safe navigation through the relative cavernous sinus compartments, and minimizes the possibility of inadvertent injury to the cranial nerves.

The postoperative course was uneventful except for right eye incomplete ptosis from the swelling. Her facial pain subsided after the surgery without any extra ocular movement impairment.

The link to the video can be found at: <https://youtu.be/zxi2XK2R9QU>.

Keywords

- ▶ trigeminal schwannoma
- ▶ cavernous sinus
- ▶ extended middle fossa approach
- ▶ peeling of middle cranial fossa
- ▶ anterior petrosectomy



Conflict of Interest

None declared.

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* Current affiliation: Division of Neurosurgery, Department of Surgery, King Hussein Cancer Center, Amman, Jordan.

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