

Anterior cranial fossa meningioma treatment

see [Olfactory groove meningioma treatment](#)

[Planum sphenoidale meningioma treatment.](#)

Tuberculum Sellae meningioma are middle cranial fossa meningiomas.

Several approaches are described for giant meningiomas of the anterior skull base. Recently, endonasal endoscopic approaches have been described as a minimally invasive (MI) alternative. However, the extension of dissection of the nose cavity and the risks of CSF leak do not fit in the MI prerogatives. We present an operative video illustrating a MI transcortical approach through a nummular craniotomy for a giant meningioma of the anterior fossa.

Case description: We report an 83-year-old female patient. On neurological examination, she was drowsy and hemiparetic on the left side. MRI scan demonstrated a giant anterior fossa lesion (7.6 × 6.2 × 6 cm). An 1.5 diameter craniotomy was placed in the right frontal region after MRI 3D reconstruction analysis. The first step was to debulk the core of the tumor with the ultrasonic aspirator. An important aspect is that the surgeon needs to rotate its positions around the patient in a 360° fashion for a total resection. The final step was to inspect the surgical cavity with the endoscope to check for any remaining tumor. The patient was discharged home 1 day after the surgery with no new deficits.

Conclusion: Giant meningiomas of the anterior fossa are a different entity. When they reach the cortical surface, the surgical approach can be different from the common skull base meningiomas. We demonstrate that a MI transcortical approach can be a safe alternative for giant meningiomas, especially for high-risk patients, as the elderly ones ¹⁾.

The large size of these lesions at the time of diagnosis, as well as their close relation with important neurovascular structures, often makes their resection challenging. This group of tumors represents an exemplar of the evolution of craniotomy for surgical approaches to the skull base.

The first surgical procedures to treat these tumors were performed in the late 19th century and were carried out by prominent and pioneering neurosurgeons. Subsequent technical advances have allowed better surgical outcomes, and presently these tumors can be treated safely using a plethora of surgical approaches. Furthermore, adjuvant therapies not available at the outset of surgical treatment of anterior fossa meningiomas, such as stereotactic radiation and intensity modulated radiation therapies, have provided options for treating surgeons ²⁾.

¹⁾

Mandel M, Correa Bastianon Santiago RA, da Silva IAF. Minimally invasive nummular approach to a giant meningioma of the anterior fossa. Surg Neurol Int. 2022 May 6;13:187. doi: 10.25259/SNI_1246_2021. PMID: 35673653; PMCID: PMC9168338.

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<http://thejns.org/doi/pdf/10.3171/2014.1.FOCUS13569>

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