Planum sphenoidale meningioma surgery

- Impact of Tumor Characteristics on Endoscopic Endonasal Approach to Tuberculum Sellae and Planum Sphenoidale Meningiomas: Single Center Experience
- Clinical and radiological presentation of meningiomas
- Characteristics of optic canal invasion in the large midline non-tuberculum sellae anterior skull base meningiomas and the surgical outcomes
- A Successful Control of the Intraoperative Bleeding from McConnell's Artery during Fully Endoscopic Resection of Planum Sphenoidale Meningioma Using Bone Chip and Bioglue : A Case Report
- Transophthalmic Artery Embolization of Anterior Skull Base Meningiomas: Technical Case Series
- The Endoscopic L-Shape Approach for Anterior Skull Base Meningiomas with Olfactory Preservation: A Technical Note
- Endonasal Route for Tuberculum and Planum Meningiomas
- Outcomes of Endoscopic Endonasal Surgery for Tuberculum Sellae and Planum Sphenoidale Meningiomas: A Retrospective Study

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see Endoscope-assisted supraorbital approach

see Suprasellar meningioma surgery.

see Tuberculum sellae meningioma surgery.

see also Anterior skull base meningioma surgery.

Chopra et al. included a total number of five patients with skull base tumors (one case of planum sphenoidale meningioma, two cases of sellar tumor with suprasellar extension, and two cases of cerebellopontine angle tumor) and 3D-printed tumor model of each of them. These models were used for preoperative simulation and served as a very true-to-life training tool. These help in increasing the efficacy of the surgeon and improves surgical safety and ergonomics. They were also used for patient counseling, educating about the disease, the surgical procedure, and associated risks [1].

Midline anterior skull base lesions are becoming amenable for total surgical excision with minimal morbidities and mortalities. Most preferred surgical routes are the subfrontal approach and the pterional approach [2].

Small and midsize olfactory groove, planum sphenoidale meningioma, and tuberculum sellae meningiomas can be removed via an endonasal endoscopic approach, an alternative option to the transcranial microsurgical approach. The choice of approach depends on tumor size and location, involvement of important neurovascular structures, and, most importantly, the surgeon's preference and experience. In most meningiomas, the endonasal approach has no advantage compared with the transcranial approach. Disadvantages of the endonasal approach are the discomfort after surgery and the prolonged recovery phase because of the nasal morbidity, which requires intensive nasal care. Compared with the eyebrow approach, the trauma to the nasal cavity, paranasal sinuses, and skull base is greater, and the risk of cerebrospinal fluid leak is higher [3].

A combination of different surgical and endovascular techniques before resection of hypervascular giant planum sphenoidale meningiomas should always be considered. Microsurgical extracranial ligation of anterior and sometimes posterior ethmoidal arteries provides a safe and feasible option to limit blood loss during anterior skull base surgery [4].

1)
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2)
Refaat MI, Eissa EM, Ali MH. Surgical management of midline anterior skull base meningiomas: experience of 30 cases. Turk Neurosurg. 2015;25(3):432-7. doi: 10.5137/1019-5149.JTN.11632-14.2. PubMed PMID: 26037184.
3)
Schroeder HW. Indications and limitations of the endoscopic endonasal approach for anterior cranial base meningiomas. World Neurosurg. 2014 Dec;82(6 Suppl):S81-5. doi: 10.1016/j.wneu.2014.07.030. Review. PubMed PMID: 25496640.
4)
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