

Frontobasal approach

Types

see [frontobasal interhemispheric approach](#)

Indications

There are a number of frontobasal approaches used in anterior craniofacial surgery. The osteoplastic flap approach to the posterior wall of the frontal sinus to repair small cerebrospinal fluid leaks and manage posterior wall fractures saves the patient a larger anterior craniotomy and brain retraction. Cranialization of the frontal sinus in comminuted through-and-through fractures allows for removal of devitalized brain, dural repair, and safe management of the frontal sinus. The lateral rhinotomy medial maxillectomy-ethmoidectomy approach coupled with either an osteoplastic flap of the frontal sinus or a low limited craniotomy is an excellent approach for resection of tumors encroaching on the anterior skull base. Even malignancies of this region can be completely excised with adequate margins, yet produce minimal to no facial aesthetic distortion. Moreover, larger tumors requiring a more extensive lip-splitting incision and total maxillectomy with orbital exenteration can often anticipate minimal deformity, especially with good prosthetic rehabilitation. In the resection of aggressive malignancies, techniques of ocular preservation and facial bone sparing have been developed with encouraging cosmetic results ¹⁾.

Olfactory groove meningioma

The frontobasal approach remains a workhorse for removing large [olfactory groove meningiomas](#). Removal of the [orbital bar](#) in addition to standard [bifrontal craniotomy](#) allows for additional basal exposure, minimising brain retraction and allowing early and direct access to both the vascular supply and dural origin of this tumour.

Patel et al. describe a simple yet effective modification to the standard orbital bar osteotomy. It has the benefit of being simpler and faster with improved cosmesis compared with an osteotomy of the entire orbital bar. It also has the advantage of not requiring manipulation of the [supraorbital nerves](#) or intraorbital or periorbital dissection ²⁾.

¹⁾

Donald PJ. Frontobasal approach for trauma and tumor. Minim Invasive Neurosurg. 1994 Dec;37(2):37-41. Review. PubMed PMID: 7882073.

²⁾

Patel K, Kolias AG, Kirollos RW. Bicoronal frontobasal approach with a limited, midline orbital bar osteotomy - a technical note. Br J Neurosurg. 2015 Aug 27;1-2. [Epub ahead of print] PubMed PMID: 26313570.

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