

APPROACH STRATEGY IN ANTERIOR FOSSA AND PARASELLAR MENINGIOMAS

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Aim: Skull base tumors that originate or extend into parasellar area are challenging lesions due to the fact that they often surround vital nerves and vessels. Even large intracranial pathology such as anterior fossa tumors can be accessed successfully via minimal invasive corridors such as supraorbital keyhole route, but other approaches are particularly valuable for larger or technically more demanding cases. We report our experience and analyze the effectiveness of different approaches for safe and complete removal of anterior fossa and parasellar meningiomas.

Methods: We analyzed our series of patients operated on for anterior skull base meningiomas, or meningiomas that extend into sellar and parasellar region via different approaches. Clinical and radiological parameters, tumor location and size, extent of surgical resection, pre- and postoperative results are presented and discussed. We report the technical nuances of the procedures based on our experience which are of fundamental value for the safety and efficacy of those approaches.

Results: Although most of the meningiomas are approachable using pterional approach, in some tumor locations other approaches are selected as better options regarding invasiveness, complication rate and safety. Huge number of meningiomas were treated through keyhole craniotomy, but other approaches gives different perspectives and easier protection of vital structures. Eventhough radical surgery to the at least Simpson 2 grade were achieved, new technology such as gamma knife surgery is an adjunct which can reduce the morbidity and mortality.

Conclusion: Different approaches are available for skull base meningiomas and the selection of the approaches depends on the location, tumor spread, encasement of vital structures and size of tumors. Eventhough small and middle sized tumors could be approached through small supraorbital route, other approaches are used in tumors that spread out of selected area of anterior skull base fossa, specially where there is a chance to provide better functional results and better protection of vital structures.

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