

Endoscope-assisted supraorbital approach

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The [endoscopic-assisted supraorbital approach](#) (eSOA) constitutes a [minimally invasive strategy](#) for [anterior skull base meningioma surgerys](#) (ASBM).

Serrano Sponton et al. present the largest [retrospective](#) single-[institution](#) and long-term follow-up study of eSOA for ASBM resection, providing further insight regarding indication, surgical considerations, complications, and outcome. They evaluated data of 176 patients operated on ASBM via the eSOA over 22 years.

Sixty-five [tuberculum sellae meningioma](#) (TS), 36 anterior [clinoid meningioma](#) (AC), 28 [olfactory groove meningioma](#) (OG), 27 [planum sphenoidale meningioma](#), 11 lesser [sphenoid wing meningioma](#), seven [optic nerve sheath meningioma](#), and two lateral orbitary roof meningiomas were assessed. Median surgery duration was 3.35 ± 1.42 hours, being significantly longer for OG and AC meningiomas ($p < 0.05$). Complete resection was achieved in 91%. Complications included hyposmia (7.4%), supraorbital hypoesthesia (5.1%), cerebrospinal fluid fistula (5%), orbicularis oculi paresis (2.8%), visual disturbances (2.2%), meningitis (1.7%) and hematoma and wound infection (1.1%). One patient died due to intraoperative carotid injury, and another due to pulmonary embolism. Median follow-up was 4.8 years with a tumor recurrence rate of 10.8%. A second surgery was chosen in 12 cases (10 via the previous SOA and two via the [pterional approach](#)), whereas two patients received radiotherapy and in five patients a wait-and-see strategy was adopted. Conclusion The eSOA represents an effective option for ASBM resection, enabling high complete resection rates and long-term disease control. Neuroendoscopy is fundamental for improving tumor resection while reducing brain and optic nerve retraction. Potential limitations and prolonged surgical duration may arise from the small craniotomy and reduced maneuverability, especially for large or strongly adherent lesions ¹⁾.

¹⁾

Serrano Sponton L, Oehlschlaegel F, Nimer A, Schwandt E, Glaser M, Archavlis E, Conrad J, Kantelhardt S, Ayyad A. The Endoscopic-Assisted Supraorbital Approach for Resection of Anterior Skull Base Meningiomas: A Large Single-Center Retrospective Surgical Study. J Neurol Surg B Skull Base. 2022 Jun 29;84(4):349-360. doi: 10.1055/s-0042-1751000. PMID: 37405235; PMCID: PMC10317572.

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