

# Retrochiasmatic

Traditional microsurgical [approaches](#) for addressing [intraventricular craniopharyngioma](#) pose limited access to the retrochiasmatic [area](#) and tumors with significant lateral or rostrocaudal extensions. [Extended endoscopic endonasal approaches](#) can effectively overcome many limitations. Yet, they require a favorable angle between the optic chiasm and pituitary gland, as well as the involvement of the third ventricle floor by the tumor.

Khaleghi et al. describe the surgical nuances of a [keyhole](#) technique for resecting third ventricle craniopharyngiomas via a fully endoscopic minimally-invasive trans-eyebrow supraorbital translaminar approach (ESOTLA). A case description detailing the approach's application is provided, along with a series of cadaveric photographs to highlight the relevant anatomy and step-by-step dissection process.

**Results:** The patient is a 44-year-old man who presented with polyuria, low urine specific gravity, hypogonadism, and hypopituitarism. Brain MRI revealed a solid-cystic heterogeneous-enhanced retrochiasmatic mass within the third ventricle, consistent with craniopharyngioma. A one-stage ESOTLA was indicated based on the narrow corridor between the pituitary gland and optic chiasm and the high functional status of the patient. Near-total resection was achieved, and no new postoperative neurologic or endocrine deficit was observed. Targeted therapy was implemented based on the histologic result, and the most recent surveillance MRI showed no evidence of the residual tumor.

**Conclusions:** By combining a keyhole approach with variable-angle endoscopic visualization through a smaller bony and soft tissue exposure, ESOTLA can provide enhanced illumination within the third ventricle, potentially addressing cosmetic concerns and limited exposure area and angle of freedom associated with its conventional microsurgical counterpart.

**Keywords:** endoscopic endonasal approach; endoscopic translaminar approach; hypothalamus; intraventricular craniopharyngioma; lamina terminalis; minimally invasive trans-eyebrow supraorbital approach; suprasellar tumors; third ventricle <sup>1)</sup>.

<sup>1)</sup>

Khaleghi M, Wu KC, Prevedello DM. Fully endoscopic minimally-invasive trans-eyebrow supraorbital translaminar approach to third ventricle craniopharyngiomas: Technical nuances and stepwise illustrative description. *World Neurosurg.* 2024 Mar 22;S1878-8750(24)00480-7. doi: 10.1016/j.wneu.2024.03.095. Epub ahead of print. PMID: 38522791.

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