

Endoscopic Endonasal Approach for Resection of a Pediatric Craniopharyngioma: Operative Video and Technical Nuances

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Abstract

We present a pediatric case of a retrochiasmatic craniopharyngioma in the suprasellar region with third ventricular extension that was resected through a purely endoscopic endonasal approach (EEA) via the transplanum transtuberculum corridor. The patient is a 12-year-old boy who presented with progressive visual loss and panhypopituitarism. The EEA allows direct visualization of the undersurface of the optic chiasm and hypothalamus so that safe and meticulous tumor dissection can be performed to preserve these critical neurovascular structures. This video atlas demonstrates the operative technique and surgical nuances of the endoscopic skull base approach, microdissection of the tumor from the critical neurovascular structures, and multi-layered reconstruction of the skull base defect with a nasoseptal flap. A gross total resection was achieved, and the patient was neurologically intact with improved visual acuity and visual fields. In summary, the EEA via the transplanum transtuberculum corridor is an important strategy in the armamentarium for surgical management of pediatric craniopharyngiomas.

The link to the video can be found at: https://youtu.be/bmgO_PMRHPk.

Keywords

- endoscopic endonasal approach
- craniopharyngioma
- pediatric skull base surgery
- suprasellar tumor



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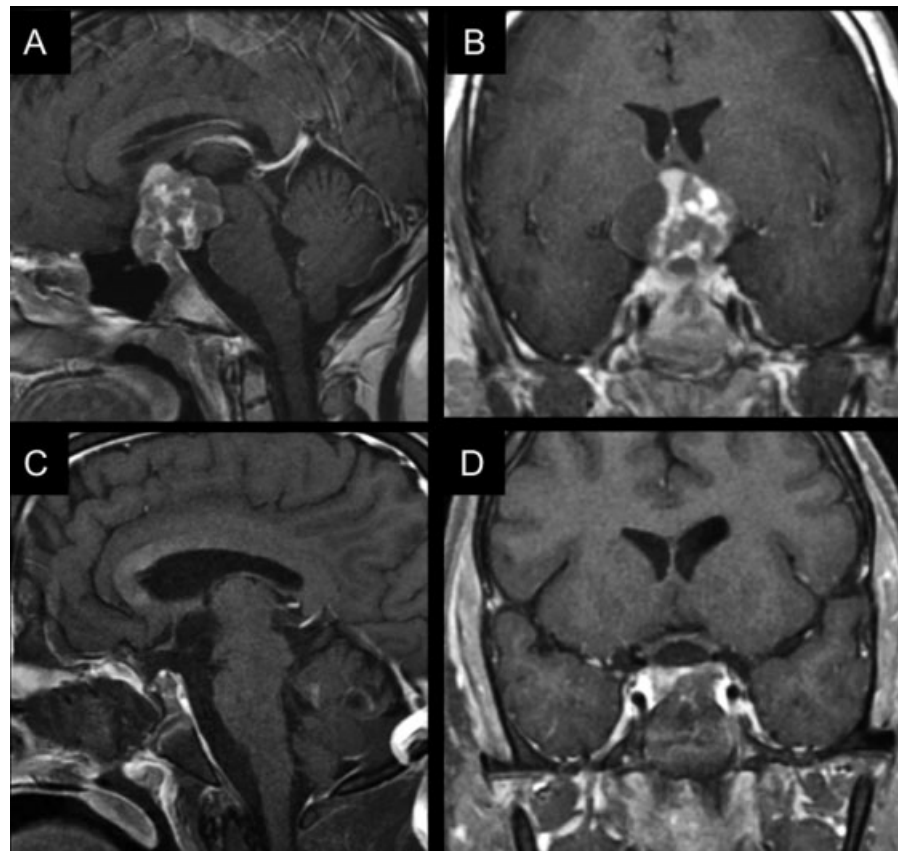


Fig. 1 Preoperative (A: sagittal, B: coronal) and postoperative (C: sagittal, D: coronal) postgadolinium T1-weighted MRI of a retrochiasmatic craniopharyngioma removed via an endoscopic endonasal approach. Gross total resection was achieved. MRI, magnetic resonance imaging.

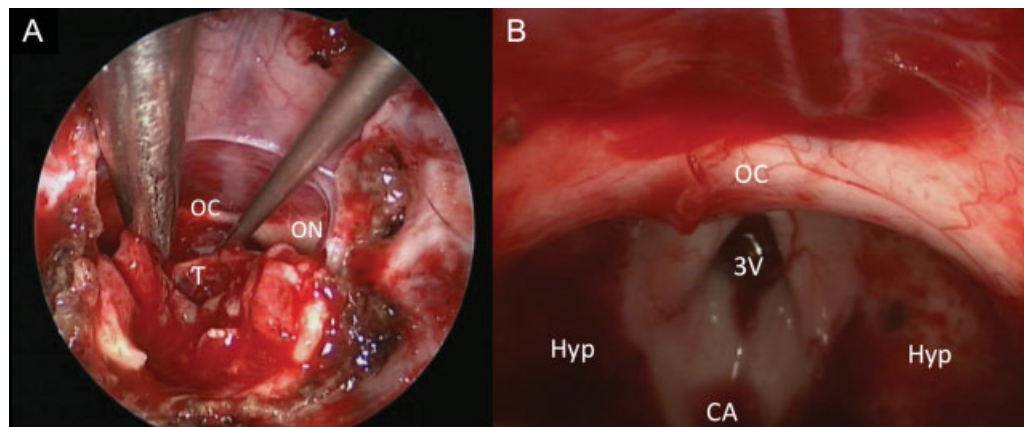


Fig. 2 (A) Intraoperative endoscopic view of the tumor (T) being dissected from the undersurface of the optic chiasm (OC) and left optic nerve (ON). (B) View of the resection bed after total removal of the tumor. 3V, third ventricle; CA, cerebral aqueduct; Hyp, hypothalamus.