## Retroinfundibular craniopharyngioma

The management of retroinfundibular craniopharyngioma (CP) remains the ultimate challenge for both transsphenoidal and open transcranial surgery because of their anatomical location and proximity to vital neurovascular structures.

## **Case reports**

Bai et al. aimed to describe the technique and feasibility of a novel approach, the purely endoscopic extreme lateral supracerebellar infratentorial approach (EF-SCITA), for resection of retroinfundibular CP. A 63-year-old woman presented with progressive visual disturbance, polyuria, and spiritlessness of a 3-month duration. Imaging studies revealed a typical retroinfundibular CP containing solid and cystic components with calcification, which extended inferiorly in front of the brainstem and upward into the third ventricle. The EF-SCITA approach was attempted for resection of the tumor. During surgery, lateral prone positioning with upper flexion of the head and early CSF release allowed for download retraction of the cerebellum. This, in combination with tentorium incision, created a working corridor toward retrosellar and suprasellar spaces. This approach required working between neurovascular structures in the crural cistern, with tumor removal permitted in supra-oculomotor and infra-oculomotor spaces. After aspiration of the fluid contents through the supra-oculomotor triangle, the solid lesion was found tightly adhering to the distal part of the pituitary stalk, and subtotal resection was achieved for maintaining the integrity of pituitary function. In the immediate postoperative period, the patients exhibited oculomotor paralysis and was discharged with hormonal replacement therapy three weeks after operation. At her three-month follow-up appointment, she reported obvious vision improvement. Physical examinations showed partial alleviation of oculomotor paralysis. Pathological analyses confirmed the diagnosis of papillary CP.

The purely EF-SCITA approach combines the advantages of both the posterolateral approach and endoscopic technique, which offers access to retrosellar and suprasellar spaces with seemingly low risks of postoperative morbidity. It would be a safe and effective alternative for the treatment of retroinfundibular CP, especially for those with lateral extension to the temporal lobe or posterolateral extension to the petroclival region. Further observational studies in a larger cohort are urgently needed to assess the long-term efficacy of this minimal access approach <sup>1)</sup>.

Bai Y, Sun X, Li X, Han S, Liang G, Feng S, Yu C. Case report and literature review: Resection of retroinfundibular craniopharyngioma via endoscopic far-lateral supracerebellar infratentorial approach. Front Oncol. 2022 Oct 28;12:976737. doi: 10.3389/fonc.2022.976737. PMID: 36387228; PMCID: PMC9650989.

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