Contralateral Minimum Anterior and Posterior Combined Petrosal Approach for Retrochiasmatic Craniopharyngiomas: An Alternative Technique

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Abstract

Retrochiasmatic craniopharyngiomas (RC) are a challenge for the neurosurgeon to treat surgically, restrained by their location in the interpeduncular fossa, surrounded by vital neurovascular structures, narrow corridor and poor visibility. Many approaches are possible and elucidated in the literature, which the surgeon chooses, based on multiple factors, such as the size of tumor, calcification, laterality, preoperative neurological deficits and the endocrine function status, recurrence, postradiotherapy status, or significant superior and/or posterior extension.1,2

We describe a contralateral minimum anterior and posterior (CL-MAPC) petrosal approach for a case of recurrent RC, in a 37-year-old female patient operated before using a pterional approach, now presented with left homonymous hemianopia and panhypopituitarism (Fig. 1). We preferred a contralateral approach to protect the ipsilateral optic tract (OT) from retraction injury, which formed an obstacle to the tumor from ipsilateral side. Apart from various benefits described by the author previously for RC, using MAPC petrosal approach, the CL-MAPC offers a safe corridor, protecting the ipsilateral OT, visualization of tumor origin usually posterior to chiasm,

Keywords

► retrochiasmatic craniopharyngioma
► petrosal approach
► interpeduncular fossa
► optic tract

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Conflict of Interest
None.
Fig. 2 Intraoperative images showing the retrochiasmatic area with tumor and vital neurovascular bundle around (A) and the tumor bed visualized after the complete tumor removal, showing the left optic tract (B). T, tumor; III, right oculomotor nerve; PCA, right posterior cerebral artery; SCA, right superior cerebellar artery; IV, right trochlear nerve; BS, brain stem; OT, left optic tract; *, clipped right hypoplastic PCoM.

References