Childs Nerv Syst. 2023 Jul 11. doi: 10.1007/s00381-023-06073-1. Online ahead of print.

A rare tumor in the sellar region: ganglioglioma, a case report and a general overview

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PMID: 37432397 DOI: 10.1007/s00381-023-06073-1

Abstract

Background: Gangliogliomas are rare mixed neuronal-glial tumors of the central nervous system, accounting for less than 2% of intracranial tumors.

Case description: This report presents a rare case of ganglioglioma in the sellar region of a 3-year-old and 5-month-old pediatric patient. The patient underwent surgical intervention initially through a transnasal transsphenoidal approach and subsequently through a transcranial pterional craniotomy approach. Subsequently, radiotherapy and chemotherapy were administered for residual tumor tissue. The purpose of this report is to highlight the presence of ganglioglioma as a distinct diagnosis in sellar region tumors, discuss the surgical, radiotherapy, and/or chemotherapy treatment options for sellar region gangliogliomas based on the literature, and contribute the patient's follow-up and treatment outcomes to the existing literature.

Conclusion: Complete tumor resection may not be feasible in sellar region gangliogliomas, especially in pediatric cases, due to endocrinological and vision-related complications. In cases where complete resection is not possible, radiotherapy and/or chemotherapy may be considered. However, the optimal treatment approach has not yet been established, and further research is needed.

Keywords: Childhood brain tumor; Endoscopic skull base surgery; Glioneuronal neoplasm; Pediatric neurosurgery.