Pediatric supratentorial ependymoma

- Optimizing outcomes in intracranial ependymoma: a contemporary review
- Recurrent parietal lobe supratentorial ependymoma, ZFTA fusion-positive, CNS WHO grade 3, with new dural and calvarial reactive changes in a child: illustrative case
- Assessment of Clinical and Neurological Alterations Before Radiation Therapy in Children With Malignant Brain Tumours
- The Molecular Basis of Pediatric Brain Tumors: A Review with Clinical Implications
- Pediatric CNS tumors: Overview and treatment paradigms
- Beyond the expected: a supratentorial ependymoma imitating a meningioma
- Recurrence patterns in pediatric intracranial ependymal neoplasm: a systematic imaging work-up
- A novel TEAD1::NCOA2 fusion that potentially expands the concept of supratentorial ependymoma, YAP1 fusion-positive

Pediatric supratentorial ependymoma is very rare.

Previous findings in primary pediatric ependymoma support a role for NOTCH signaling pathway in glial oncogenesis.

Treatment

Surgery alone may be an acceptable treatment when postoperative imaging confirms a gross total resection. Surgical resection is the standard and the most important treatment for ependymoma. The role of radiation therapy and/or chemotherapy following a gross total resection of supratentorial ependymoma has been uncertain.

Tanaka et al, report 2 cases of pediatric supratentorial ependymomas treated by gross total resection without postoperative adjuvant therapy. The first patient was a 7-year-old girl who presented with motor weakness and a hemiconvulsion of the right leg. Magnetic resonance imaging (MRI) revealed a large heterogeneously enhanced tumor in the left frontal lobe. The second patient was an 8-year-old girl who presented with headache. MRI revealed a huge heterogeneously enhanced tumor in the left frontal lobe. Gross total resection was achieved in both patients. Postoperative radiotherapy and chemotherapy were avoided following gross total resection. Histologically, the lesions demonstrated grade II ependymoma and anaplastic ependymoma, respectively. After follow-up of 120 months, neither patient had recurrence or dissemination. These results suggest that patients with pediatric supratentorial ependymoma treated by gross total resection alone have a favorable outcome, and postoperative radiotherapy and chemotherapy may be avoided [1].

1)
Tanaka T, Kato N, Hasegawa Y, Nonaka Y, Abe T. Long-term survival following gross total resection of pediatric supratentorial ependymomas without adjuvant therapy. Pediatr Neurosurg. 2012;48(6):379-84. doi: 10.1159/000353685. Epub 2013 Aug 16. PubMed PMID: 23948802.