Third Ventricle Germ Cell Tumor

Case reports

A rapidly expanding third ventricle germ cell tumor (GCT). A 14-year-old boy suffered from gradualonset central diabetes insipidus (DI) and received desmopressin treatment. Magnetic resonance imaging (MRI) showed nonspecific findings of the pituitary-hypothalamic axis. Nine months after the initial DI diagnosis, he developed progressively worsening headache. MRI demonstrated a third ventricle tumor causing noncommunicating hydrocephalus, although an MRI 16 weeks before admission did not show the lesion.

They performed gross total resection (GTR) of the tumor in 2 stages: a translamina terminalis approach and an extended transsphenoidal approach. The lesion was histologically diagnosed as immature teratoma with some germinoma. His noncommunicating hydrocephalus resolved after surgery. Through postoperative radiochemotherapy (whole ventricle: 23.4 Gy/13 fractions, tumor bed: 27.0 Gy/15 fractions, and 3 courses of carboplatin-etoposide), he has was in complete remission at the 3-year follow-up and has continued his high school program. This case suggests the following: (1) a mixed GCT originating from the neurohypophysis/infundibulum can show rapidly expansive growth in a child with central DI; (2) GTR and adjuvant radiochemotherapy can result in a good therapeutic outcome in rapidly expanding GCT; and (3) the extended transsphenoidal approach is a complementary approach to transcranial resection of anterior third ventricle GCTs¹⁾.

1)

Yoneoka Y, Yoshimura J, Sano M, Okada M, Kakita A, Fujii Y. Third Ventricle Germ Cell Tumor Originating from the Infundibulum with Rapidly Expansive Enlargement. Pediatr Neurosurg. 2017 Sep 26. doi: 10.1159/000480021. [Epub ahead of print] PubMed PMID: 28946146.

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