Case Report

Choroid plexus papilloma of bilateral lateral ventricle

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Summary

Background. Choroid plexus papillomas are rare, accounting for less than 1% of all intracranial tumours in adults. However, they are relatively more common in childhood and constitute 1.5 to 4% of intracranial tumours. They are most often located in the lateral ventricle, followed by the fourth and third ventricles and, rarely, in the cerebellopontine angle. Bilateral lateral ventricle choroid plexus papilloma is very rare and only a few cases have been reported.

Clinical presentation. A 3-year-old boy was admitted to our hospital with a history of irritability and vomiting. Neurological examination on admission was normal. Contrast and noncontrast head computed tomographic (CT) scan demonstrated bilateral tumour in the lateral ventricles, hydrocephalus and a left temporal arachnoid cyst. Magnetic resonance imaging (MRI) disclosed a bilateral intraventricular tumour centred around the ventricular trigone and hydrocephalus. The bilateral intraventricular mass enhanced densely and homogeneously. A presumptive diagnosis of choroid plexus papillomas was made.

Intervention. The initial surgery was performed for removal of the lesion in the right lateral ventricle, and 20 days later removal of the left lateral ventricle tumour was carried out. Bilateral temporoparietal craniotomy and total removal of tumours was performed. Hydrocephalus was controlled by total tumour resection from both sides. The histology of these tumours was the same and revealed choroid plexus papilloma.

Interpretation. Bilateral choroid plexus papilloma is extremely rare and distinct from diffuse villous hypertrophy and their surgical approaches are different from each other. Differential diagnosis should be made by MRI preoperatively. If bilateral choroid plexus papilloma is detected, total surgical resection should be performed. Total surgical removal of the neoplasm not only cures the tumour but also may lead to complete resolution of the hydrocephalus.

Keywords: Children; choroid plexus papilloma; lateral ventricular tumour.

Introduction

Intraventricular lesions in children may arise from a variety of pathologies, including subependymal giant cell astrocytoma, astrocytoma, meningioma, ependymoma, metastases, choroid plexus carcinoma (CPC), choroid plexus papilloma (CPP), colloid cyst or others [10, 12, 30, 33]. Of these, choroid plexus tumours account for approximately 3% of all primary brain tumours in children, with the majority of cases (up to 90%) having a diagnosis of CPP [10, 12, 30]. The literature for paediatric populations indicates that 67 to 75% of all choroid plexus tumours are located in the lateral ventricles, 15% in the fourth ventricle, and 8% in the third ventricle [10, 12, 16, 28–30].

We present a rare case of bilateral lateral ventricle choroid plexus papilloma and review the literature on this topic.
the first operation. After left temporoparietal craniotomy the dura was opened, a linear incision in the superior temporal gyrus was made. Firstly, the vascular pedicle of the tumour was coagulated and greyish-red lobulated vascular lesion in the left lateral ventricle was exposed and total removal of tumour was achieved (Fig. 4). The patient was discharged 1 week after surgery without neurological deficit.

Histologically typical CPP’s were identified. The microscopic examination of both tumours showed arborizing papillae lined with a single layer of columnar epithelium. There were no mitotic figures. The nuclei were basally located and there was no hyperchromasia. No invasion into the surrounding brain was seen (Fig. 5a–c).

One month after surgery, neurological examination was normal. Three months after surgery, neurological examination was normal and MRI scans demonstrated no residual or recurrent tumour and no hydrocephalus (Fig. 6a,b). The patient’s hydrocephalus was cured by the bilateral tumour removal.

Discussion

CPP’s are rare, accounting for less than 1% of all intracranial tumours in adults [10, 12, 16, 26, 30]. However, they are relatively more common in childhood and constitute 1.5 to 4% of intracranial tumours