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(CASE REPORT)

Choroid plexus papilloma: A case report of a 15-year-old adolescent girl

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Abstract

Choroid plexus papilloma is a rare tumor, approximately 5% of which are located in the third ventricle, generally affecting children. Often located at the level of the fourth ventricle in adults and at the level of the lateral ventricles in children. An adolescent presents a cystic-looking lesion on imaging, located at the level of the third ventricle, associated with convulsive seizures, loss of consciousness and helmet headaches. The surgical procedure performed is external ventricular bypass (EVD) first, then stereotactic biopsy (BSTX). The diagnosis of WHO grade I choroid plexus papillomas is made after the histological examination.

Keywords: Third; Ventricle; Choroid; Plexus; Papilloma

1. Introduction

At the level of the ventricles of the brain is the choroid plexus producing the cerebrospinal fluid (CSF). Consisting of a network of capillaries surrounded by a single layer of epithelial cells. These cells play a central role in limiting the passage of molecules and ions between the brain and the CSF.

Choroid plexus tumors (CPT) are rare tumors of the CNS representing 0.5 to 0.6% of all intracranial neoplasms [1,2,3]. Approximately 5% are located in the third ventricle [4]. In adults, they are more often found in the fourth ventricle and in the lateral ventricles in children. (5,6,7,8). These tumors (Is) are classified as grade I choroid plexus papilloma (CPP), grade II atypical choroid plexus papilloma (aCPP) and grade III choroid plexus carcinoma (CPC) according to the WHO [9]

There is still no consensus on the optimal approach in the management of CPT, it is generally accepted that surgical resection alone, followed by a close monitoring and observation approach, remains the cornerstone of treatment for these tumors, generally with good long-term results. (6,10,11,12)

We will present a case of a 15-year-old adolescent girl admitted to the Neurosurgery department for two convulsive seizures, helmet headaches and postictal loss of consciousness.

2. Observation

This is a 15-year-old patient admitted to the Neurosurgery department for a history of the disease that dates back a few months with the onset of helmet headaches, the evolution was marked by the occurrence of two convulsive seizures with post-critical loss of consciousness motivating the family to consult, all in a context of apyrexia and preservation of

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the general condition. On neurological examination: patient conscious GCS15/15, stable on the hemodynamic and respiratory level. Walking: possible without assistance. Brain CT image shows hydrocephalus on a colloid cyst of V3 Fig: 1. The surgical indication is retained for external ventricular shunt (EVS) first, then stereotaxic biopsy (BSTX) Fig: 2. Histological analysis shows a tumor proliferation of papillary architecture bordered by regular non-atypical cells, without necrosis or mitosis. The diagnosis was WHO grade I choroid plexus papillomas Fig: 3.

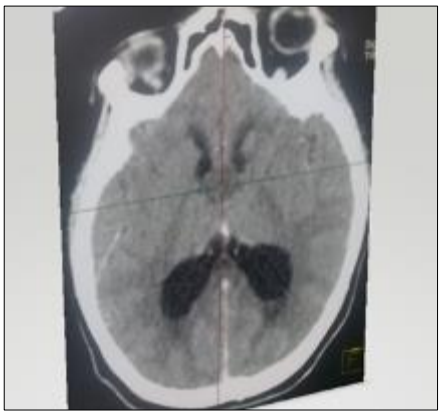

Figure 1 Hydrocephalus on a colloid cyst

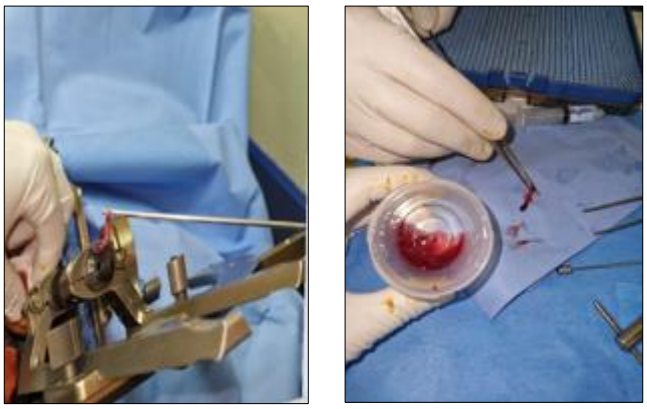

Figure 2 Stereotaxic biopsy

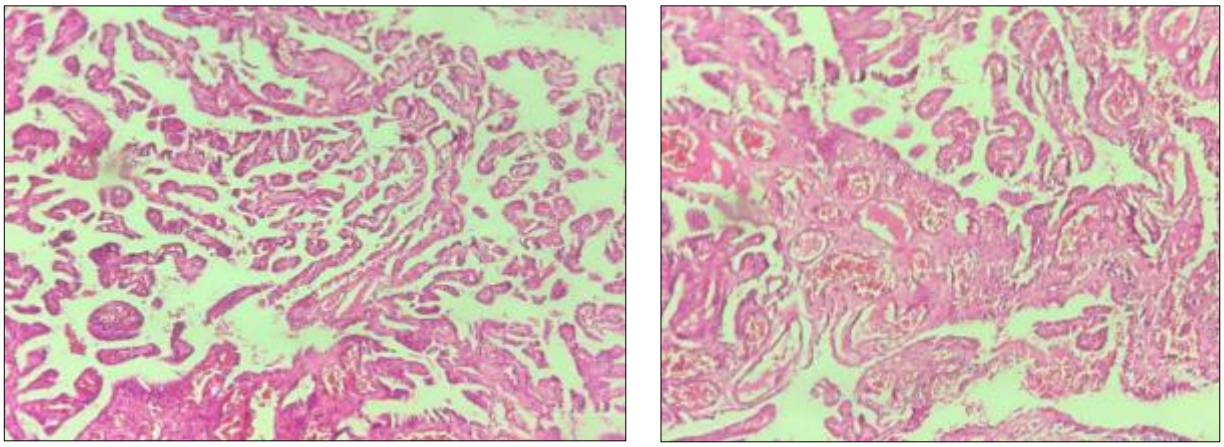

Figure 3 Tumor proliferation of papillary architecture, 40x

3. Discussion

Choroid plexus tumors (CPTs) are rare CNS tumors arising from the epithelium lining the wall of this structure, representing 0.5 to 0.6% of all intracranial neoplasms [1,2,3]. These tumors (IIs) are classified into grade I choroid plexus papilloma (CPP), grade II atypical choroid plexus papilloma (aCPP), and grade III choroid plexus carcinoma (CPC) according to the WHO [13,14]. It is more common in men and can present at any age, with a higher predilection towards children [15]. In addition, it is very important to mention that the location of the tumor varies with the age of the patient, since in children it tends to occur mainly in the lateral ventricles (supratentorial area), while in adults it is more common in the fourth ventricle (infratentorial area) [5,6,7,8,14,15]. Our case is of a female patient, 15 years old, whose lesion is located at the level of the third ventricle. She was judged hydrocephalus on a colloid cyst by radiology. It should be noted that, due to obstruction of the CSF flow, either due to overproduction from the tumor can result in dilation of the ventricular canal, giving the image a cystic appearance.

Regarding the symptomatology, our patient presented helmet headaches, convulsive seizures, loss of postictal consciousness. Vomiting was not referred, the ophthalmological examination without particularities.

Symptoms of intracranial hypertension and hydrocephalus remain frequently encountered, refractory headaches and episodes of vomiting [13, 15,16].

4. Conclusion

Choroid plexus papilloma is a rare tumor that generally affects children, often located at the level of the fourth ventricle in adults, the lateral ventricles in children and more rarely at the level of the third ventricle. Our patient presents a lesion with a cystic appearance on imaging, located at the level of the third ventricle, associated with convulsive seizures, loss of consciousness and helmet headaches. The anatomopathological examination shows a tumor lesion of papillary architecture covered by regular cells without atypia, without necrosis and without mitosis, the diagnosis of which is WHO grade I choroid plexus papilloma.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest was declared.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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