



Lateral Ventricle Choroid Plexus Papilloma : A case report

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INTRODUCTION

One tenth of the cranial neoplasms involve the Ventricles. Most tumors are found in the lateral ventricles⁵. In the true sense, lateral ventricle tumors are only the choroid plexus papilloma (CPP), the extremely rare meningioma and the ependymoma⁶. Diagnosis of lesions in the lateral ventricles varies significantly with age and location within the ventricle itself³.

CPPs account for fewer than 1% of all primary brain tumors representing 0.5%-0.6% in adults and 2%-5% in children⁷. Despite their relative overall rarity, CPPs are one of the most common brain tumors in children under 2 years of age. 86% of CPPs in children occur in the first 5yrs of life⁸.

CASE REPORT

Patient BL, 4 years boy, presented to the OPD with a history of progressive enlargement of head (*Fig 1*) since 2 years with associated vomiting, irritability since 2months. There was no apparent symptom of visual deterioration and child was feeding moderately well. He had an enlarged head for age (54cm). The anterior fontanellae was open and tense. He was able to hold his head. There was no 'sunset eye' sign and no sensory/motor deficit.

Initially investigated with a CT scan which showed a hyper-



FIG 1

dense irregular mass within the occipital horn of the right lateral ventricle that was brilliantly taking up contrast uniformly. There was significant communicating hydrocephalus.

The MR images showed a lobulated, well demarcated intraventricular lesion in the region of the trigone of the right lateral ventricle extending mainly to the occipital horn. The lesion was isointense on T1WI and hyperintense on T2WI (*Fig 2 a,b,c*) and intensely taking up contrast (*Fig 3 a,b,c*).

SURGICAL APPROACH



FIG 2 (A)

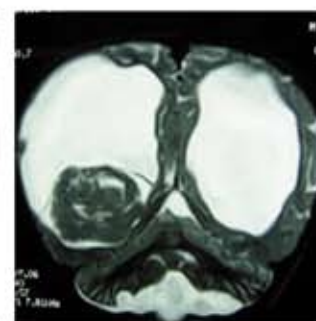


FIG 2 (B)

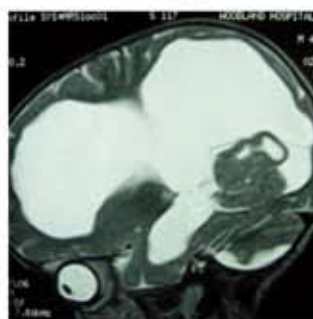


FIG 2 (C)



FIG 3 (A)



FIG 3 (B)



FIG 3 (C)

Microsurgically, using the operating microscope the tumor was completely excised via a trans cortical intraventricular approach. The approach was through the right middle tem-



poral gyrus. Per operatively, the lesion was found to be a cauliflower like growth, pinkish-red in colour. This was excised piece-meal upto its attachment to the choroidal vessels. The enlarged ventricles secondary to the growth facilitated the excision by providing space to work.

The child had an uneventful post operative period and was discharged on the 7th post operative day. At one and a half year follow up the child is doing well with no further head enlargement.

DISCUSSION

CPP is usually a childhood tumor occurring in the pre-pubescent age group as it was seen in the child presented here⁸. There is no sex predilection. They are benign potentially curable neoplasm; long term survival is the rule. Only 10% are cancerous where complete resection has a favorable long term survival⁷. The lesion in the present case was arising from the trigone of the right lateral ventricle which is the commonest site of origin⁷. Rarely are these tumors bilateral (3%-4%)².

Our patient presented with progressive enlargement of the head occurring due to the bilateral uniform enlargement of the ventricular system (Fig 1). However these tumors are typically characterized by asymmetrical ventricular enlargement. In 80% cases, the hydrocephalus is non-obstructive caused by excessive CSF production by the tumor³.

On Imaging studies, the tumor encountered was similar to those described in literature, being hyperdense in plain CT scans, iso intense on T1WI with a mottled appearance, iso to hyper intense on T2WI (Fig 2 a,b,c), enhancing intensely with contrast (Fig 3 a,b,c), irregular, lobulated but well defined lesions.

Morbidity and mortality from operating such lesions has significantly reduced in the present times with the use of the operating microscope and precise micro neurosurgical techniques. There is minimal neuronal damage and blood loss⁴.

Lesions located at the trigone can be approached either from the frontal or the temporal lobe⁴. Choice of approach depends on which side the lesion is located and site within the ventricle. Temporal lobe approach is usually avoided if

the lesion is on the left side. Dilated ventricles facilitate tumor removal as it gives space⁴. We used a middle temporal gyrus approach as the tumor, though situated at the trigone, was extending more to the occipital horn. Significant hydrocephalus was also present making ample room for dissection. Using the operating microscope, gross total excision was achieved.

With complete excision, long term survival is a rule however recurrences following resection is not uncommon¹. Our patient at one and a half years follow-up is doing well.

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