

Catastrophic Presentation of a Case of Colloid Cyst

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Abstract

Colloid cysts are benign tumor arising from third ventricle, very rare in children. Unlike in adults they present with aggressive behavior due to their rapid growth of tumor, late detection, and rapid development of the manifestations in children. Clinical features vary from asymptomatic to acute obstruction of third ventricle, leading to sudden death.

Keywords: Colloid Cyst; Third Ventricle; Acute Hydrocephalus; Sudden Death.

Introduction

Colloid cysts of the third ventricle are rare tumors comprising 0.5–1% of primary brain tumors [1]. Most reported cases occur in adults and rarely presented in pediatric age group. We present a case where choroid cyst in a well grown 11 yr old. He did not survive long enough for an emergency surgery.

Case Report

A 11 yr old boy admitted in emergency room with altered sensorium. He had been referred from a PHC where he was treated symptomatically with IVF and antiemetics for intermittent headache and vomiting of 2 days duration.

On Admission: GCS scale of E0M2V0, unresponsive to painful stimuli, had occasional decerebrate posturing. Left pupil dilated and the right was normally reacting. Vitals: PR: 62/mt, BP of 130/90. Fundus showing bilateral papilledema. Also having bilateral extensor plantar response.

Considering the possibility of ICSOL the child was started on IV Mannitol. His emergency CT scan showed cerebral oedema and hydrocephalus with a normal fourth ventricle (Figure 1). MRI showed a

colloid cyst which was protruding into the 3rd ventricle, obstructing the flow of CSF (Figure 2) and features of raised intra cerebral pressure. Child succumbed to death while planned for an emergency

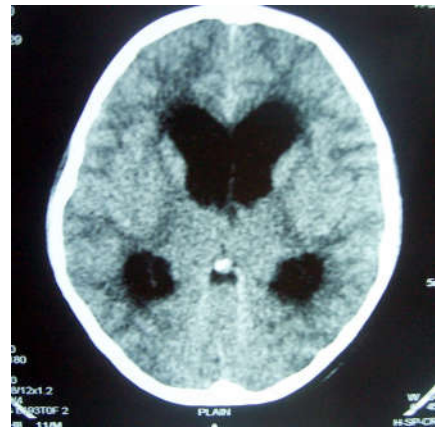


Fig. 1: CT scan showing cerebral oedema and hydrocephalus. Fourth ventricle is normal.



Fig. 2: MRI showing colloid cyst in 3rd ventricle causing hydrocephalus.

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surgery

Case Discussion

Colloid cyst (CC) was first described by Wallmann and constitute 0.2-2.0% of all brain tumors(2). CC are benign congenital tumors in children. They usually arise from the anterior third ventricle. CC are nonneoplastic true epithelium lined cysts of the central neuraxis [1]. They can cause serious morbidity and occasional mortality. They are very rarely seen in pediatric age group but more aggressive and varied behavior in children.

Clinical features: Majority of CC are detected incidentally. If symptomatic, CC are associated with the classic symptoms of intermittent obstructive hydrocephalus and paroxysmal headache associated with changing head position [3]. Other symptoms like vertigo, decreased memory, behavioral changes and sudden weakness in the lower limbs are also described [4].

Rarely a colloid cyst may obstruct the foramen of Monro irreversibly, leading to sudden loss of consciousness and, if patients are not treated immediately, coma and subsequent death (as in our case). Sudden death due CC described earlier also [5,6]. The mechanism of sudden death in CC could be due to acute block at the foramen of Monro leading to development of acute hydrocephalus or at times due to hemorrhage into the cyst cavity [7], or possibly initiated by sudden increase in sagittal sinus pressure, provoking acute brain swelling and ultimately a series of events leading to death [8] or due to prominent cerebral edema [9]. Ryder *et al.* postulated that the reflex effects involving the cardiovascular centers near the third ventricle might also contribute to the sudden death [10].

In a review of 155 cases of CC [3] and found 4 factors that were associated with colloid cyst-related clinical symptoms: (1) younger patient age (2) increased cyst size (average of 13 mm in symptomatic patients vs 8 mm in asymptomatic patients) (3) ventricular dilatation and (4) increased signal intensity on T2-weighted MRIs. These findings suggest that slowly growing colloid cysts may allow for compensation by the brain, thus avoiding symptoms

Treatment: Children with small cysts and normal-sized ventricles are not likely to deteriorate and do

not need surgery. Most common indication for surgery is hydrocephalus associated with a CC. This usually occurs in the setting of a large cyst that obstructs the foramen of Monro [11].

Summary: Colloid cysts are very rare benign tumor in children. They may be detected incidentally, with chronic non specific symptoms or may present in a serious condition. Our case points towards importance of timely intervention, otherwise may lead to bad prognosis

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