



## **CASE REPORT**

# **COLLOID CYST OF THIRD VENTRICLE IN PREGNANCY MIMICKING IMMINENT ECLAMPSIA – A RARE CASE REPORT**

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### **ABSTRACT:**

Colloid cyst is a rare, benign intracranial lesion containing mucous fluid arising from embryological remnants in the roof of third ventricle . They are usually detected as incidental findings , though can be occasionally symptomatic due to obstruction of foramen of monro . Neurological symptoms may range from headache , vertigo , memory deficits , diplopia , behavioral disturbances and in extreme cases sudden death . In this case report we describe the case of a term pregnant female, referred as a case of imminent eclampsia with severe intermittent headache with no other associated features and no aggravating or relieving factors. With due diligence, she was promptly subjected to caesarean section . Post operatively, further evaluation showed colloid cyst of third ventricle with obstructive hydrocephalus . Recognition of this rare but important diagnosis should be thought of in any obstetric patient with headache . Colloid cyst can have protean manifestations and be asymptomatic till the very last moment. A concise review of pathophysiology , diagnosis and management is discussed in this case report for the benefit of practising obstetricians.

**KEYWORDS:** Headache, Papilledema, Hydrocephalus , stereotactic aspiration, neuroendoscopy

### **INTRODUCTION**

Colloid cysts are benign, slow growing tumours contributing to 0.5-1 % of primary brain tumours and 15-20 % of intraventricular masses 1. The incidence of colloid cysts in population studies is estimated to be about 3 per million per year with female preponderance. It is usually diagnosed within second to fifth decades of life. Colloid cysts can be entirely asymptomatic or may have manifestations as varied as headache(68%),gait disturbance(47%)and short term



memory disturbances(37%) to rarely causing drop attacks, seizures and incontinence. The most common signs are papillaedema (47%),ataxia(32%),nystagmus and cranial nerve palsies.<sup>7-9</sup>

The proposed origin of colloid cyst is primitive neuroepithelial cells(paraphysis cerebri) trapped within developing brain during involution and organogenesis <sup>2</sup>. They contain mucin, blood(hemosiderin),cholesterol accounting for the wide range of imaging appearance. These cysts are lined by a single layer of columnar epithelium which produces mucin which appears as thick yellow green fluid.

CT imaging is more useful for colloid cysts than MRI. They appear as hyperdense lesions on CT, although isodense and hypodense lesions may be noted. Calcification of colloid cysts may show enhancement with contrast <sup>3,4</sup>.

Familial cases of colloid cyst are rare . It occurs in age range of 14-73 years. There is a role of genetic factors in the familial occurrence of this lesion, although specific chromosomal abnormalities are yet to be isolated. The pattern of inheritance is autosomal dominant and there may be an association with other congenital defects<sup>5,6</sup>

Colloid cyst is a rare interesting pathological entity that has the potential to take a life in spite of the fact that if diagnosed early has a very good prognosis by surgical means.

## **CASE REPORT**

31 yrs female with history of 9 months amenorrhoea who conceived after ovulation induction was referred as a case of imminent eclampsia with headache. She was on Alphadopa-500mg thrice daily for 2 weeks prior to referral. She presented with history of head ache on & off for past one month , partially relieved with paracetamol . Patient was admitted and thoroughly evaluated for preeclampsia . Excepting 1(+) albuminuria rest of the investigations were normal. Ophthalmological examination of both optic fundi revealed grade 4 Hypertensive retinopathy with papilledema as opined by ophthalmologist . Hence a decision was made for emergency caesarean section in view of imminent eclampsia with unfavourable cervix.

LSCS was done and a live healthy male child of weight 2.3 kg was delivered. Intra operative period was uneventful. Post operatively patient continue to have headache despite control of hypertension with anti hypertensives. Hence neuro physician opinion was obtained and MRI brain scans were done. MRI brain revealed colloid cyst of third ventricle 1.8 \* 1.5 cm with obstructive hydrocephalus of bilateral ventricles with normal sized third & fourth ventricle. Neuro surgeon opinion was obtained and patient was advised Endoscopic Transventricular Excision of Colloid cyst.



Figure:1 MRI BRAIN SHOWING HYPERINTENSE COLLOID CYST OF THIRD VENTRICLE IN AXIAL FLAIR IMAGE



Figure : 2 MRI BRAIN SHOWING COLLOID CYST WITH BIVENTRICULAR HYDROCEPHALUS

## DISCUSSION

Clinical presentation of colloid cysts is heterogenous. In symptomatic patients, headache is the most consistent complaint and is usually related to accompanying hydrocephalus. Headache in colloid cyst may have postural component, usually worse with bending forward. It is often transient, but increases with Valsalva manoeuvre. Headache associated with colloid cyst may resolve or reduce in supine position unlike other brain tumours.

Symptoms may be intermittent and are thought to be related to the movement of colloid cyst on its pedicle from the roof of third ventricle causing episodic obstruction of foramen of Monro and intermittent intracranial hypertension. Acute obstructive hydrocephalus and resultant cerebellar herniation can result in sudden loss of consciousness or death.

Headache is a common neurological complaint among pregnant women. The prevalence of headache in pregnant women has been reported to be as high as 35% [11]. Neuroimaging studies have revealed an underlying etiology in 27% of pregnant women with headache. Neuroimaging studies on pregnant women is often considered as an issue of concern. The amount of fetal radiation exposure from a normal 10 section CT scan is less than 0.001 Gy which is well below 0.05 Gy associated with fetal abnormalities.

Nearly half of symptomatic patients with colloid cysts present with papilloedema. Diagnosis and



management of papilledema during pregnancy is a challenging issue. The goal is to urgently determine the cause of papilledema and appropriate management .

The optimal treatment of colloid cyst is controversial . Detection at an early stage and total excision carries an excellent prognosis. The management of asymptomatic cases is usually influenced by the size of lesion, age of patient, preference and associated medical conditions.<sup>4,10</sup> Surgical intervention is considered if cyst size is more than 10mm in diameter.

Emergency drainage is required for acute hydrocephalus associated with colloid cyst. Surgical management can be through open craniotomy or by endoscopy. Stereotactic aspiration of cyst can also be done although there is a high incidence of recurrence.

In familial cases though most patients have been treated surgically, conservative management with regular clinical and radiological follow up is also reported.

## CONCLUSION

In conclusion , we propose that any patient with headache during pregnancy associated with vomiting , blurring of vision with papilledema should undergo neuro imaging to rule out intracranial pathology . Colloid cyst though exceedingly rare can be a treatable cause of headache in pregnancy as exemplified by this case.

Consent of patient - Obtained

Conflict of interest – None

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