

## Physician's Dilemma: Colloid Cyst of Third Ventricle

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### Abstract

Colloid cyst of the third ventricle is a rare condition to present to a physician. But it presents with varied physical symptoms like headache, nausea, frequent falls, difficulty with gait, intellectual failure and memory loss or frank psychosis. As physicians come across such symptoms day in day out, it may be mistaken for an innocuous disease. Colloid cyst of the third ventricle is known for sudden deterioration and cardiac arrest hence documentation of an early diagnosis is of paramount importance to the clinician. Early CT Scanning even on the slightest suspicion and early referral to neurosurgeon avoids difficulties. Medical treatment of symptomatic cyst is not appropriate. Transcortical Transventricular removal of the cyst is usually therapeutic.

**Keywords:** Colloid cyst- third ventricle- intellectual deterioration-memory loss-sudden death

### Introduction

Colloid cysts are non-neoplastic, epithelium lined cyst of central nervous system and mostly arise in the roof of third ventricle, dorsal to the foramen of Monro. These cysts are frequently asymptomatic and more cases are being reported with wider availability of CT scan. Though they are congenital their presentation in childhood is rare as they have to enlarge with age before becoming symptomatic. 80% of cases reported in the literature were in the age group of 30 to 60 years. Their etiology is uncertain and no genetic predisposition was defined, though familial occurrence was reported. Colloid cyst compromises 0.1-1% of all primary brain tumors and 15-20% of all intraventricular masses. The cysts become symptomatic depending on cyst size, ventriculomegaly, increased cyst signal on a scan and age of presentation. Surgical removal is the treatment of choice, transcortical, transcollosal or endoscopic approach. The surgical procedure is usually curative, medical management of symptomatic lesions is not appropriate.

### Case report

A 48 years old man was conveyed to my clinic with complaints of headache and vomitings of a day's duration. Two hours ago he experienced dizziness and fallen to the ground, he could not get up on his feet for some time. He came into my clinic walking. He appeared confused and disoriented. He found it tough to climb the examination couch. While sitting in the chair he was supporting his head with both the hands and trying to rest his head on the edge of the table. One month ago he felt similar way, headache and dizziness and had a fall to the ground at the time too. His daughter told us, at times he was erratic and irrational. He was finding it difficult to get out. He was going to the toilet instead of bedroom at times. The following day his colleagues from Insurance Company told us that for the last one month he was not given any work in the office as was forgetful and making tons of mistakes. He was unable performing simple arithmetic, earlier he was well recognized for his talent in solving complex insurance calculations. They felt that he was

suffering from depression, found it delicate to communicate the same to him. No obvious neurological deficit on clinical exam and no papilloedema on fundus examination. It was suspected that the patient had a cerebrovascular accident and sent to CT Scan on priority basis. Radiologist informed us that the patient has large third ventricular cyst larger than what we see in textbooks (fig1) and (fig 2). The neurosurgeon was consulted who advised us to transfer the patient to another hospital as this hospital has no competence to deal such case. He was shifted to another hospital. At the time of arrival to the hospital, he had cardiac arrest and he could be revived. Emergency ventriculoperitoneal shunt was placed. Next day Transcortical, Transventricular cyst removal was done. The patient did not recover neurologically, succumbed to pulmonary sepsis ultimately.

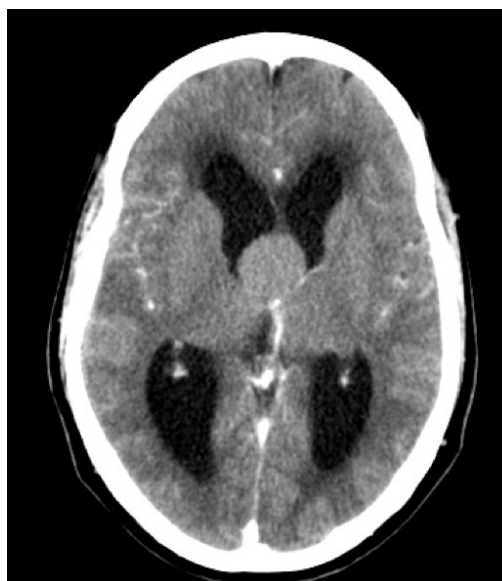


Fig 1: CECT of brain, coronal section of third ventricle showing a huge colloid cyst



**Fig 2:** CECT of brain, sagittal section of third ventricle showing a huge colloid cyst

### Discussion

Our patient presented with symptoms related to colloid cyst of the third ventricle at the age of 48 years. Though these cysts are congenital they often present in third to sixth decades. He was brought to us with severe headache and vomiting. Most of the patients present with headache, which is intermittent, intense, severe and mostly in the frontal region. Headache is often alleviated by lying down. In contrary, our patient preferred to rest his head on the edge of the table (1). There may be diagnostic confusion as the headache could be of many other reasons. High index of suspicion is needed if someone presents with severe unexplained headache. It may cost a life if scanning is delayed (2). There may be no clinical signs, at late 50 percent of people may have evidence of papilloedema. He had fallen to ground two hours before coming to our clinic, he could not get up though he was conscious, a classical feature of colloid cyst of the third ventricle. He was suffering from intellectual deterioration and memory loss. He had also shown abnormal erratic behavior. There were cases reported in literature presenting with progressive memory loss, confusion and gait instability (3). It was also reported that the third ventricular cyst may cause psychiatric disturbance leading to erroneous diagnosis of schizophrenia and neurosis which were reversed after cyst removal (4). He was transferred to another hospital for neurosurgery. It was discussed with neurosurgeons whether to perform ventriculoperitoneal shunt before shifting the patient. But it was deferred because the patient general condition was good and surgery was planned next day, as the filled in ventricles facilitate cyst removal during operation. He suffered a cardiac arrest just after arriving at a referral hospital. Sudden cardiac arrests were reported in patients with a colloid cyst of the third ventricle. It was hypothesized that reflex cardiac effects due to compression of the hypothalamic cardiovascular regulatory center by the cyst can lead to sudden cardiac deaths without signs of hydrocephalus or herniation (5). Risk of sudden cardiac death persists even after cyst removal or a shunt operation. The cyst was removed by transcortical, transventricular approach a reasonable safe procedure for cyst removal (6). Patient did not recover neurologically in spite of successful surgery, whether preoperative cardiac arrest or cyst was the culprit is a quandary.

### Conclusion

Though third ventricular colloid cysts are rare, they may present to a physician with varied symptoms of headache, dementia, gait disturbance, sudden falls, memory loss, intellectual deterioration or frank psychosis. If we go wrong to suspect this condition patient may land up in cardiac arrest, putting the physician in a dangerous situation. There is no classical clinical sign to prompt us to correct diagnosis. Hence, recursing to early scanning on the slightest suspicion saves the physician from dilemma.

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