

# COLLOID CYSTS OF THE THIRD VENTRICLE

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## ABSTRACT

**Objective:** Objective is to describe the natural history of colloid cysts and their reliable radiological diagnosis.

**Material and Methods:** Patients presenting with headache, vomiting fits etc from January 2001 to August 2003 in department of Radiology, Postgraduate Medical Institute, Lady Reading Hospital, Peshawar were investigated by CT Head taking axial section at 10 mm distance from base to vertex.

**Results:** Two cases of colloid cyst of third ventricular and diagnosed on CT Scan.

**Conclusion:** Colloid cyst of the third ventricular is a rare disease whose diagnosis can be relied on CT Scan.

**Key words:** Colloids Cyst, Third Ventricular, CT Scan.

## INTRODUCTION

During the past three decades or so there has been tremendous development of imaging techniques used in the field of clinical radiology. Few of these are available in this part of country and C.T. imaging is the diagnostic option available at Lady Reading Hospital, Peshawar. Most of the brain anomalies are potentially detectable by this technique including colloid cysts. Colloid cysts are relatively rare intracranial lesions having variable location and clinical features. One theory states that these are derived from the paraphysis, which is a

gland normally found in the human fetus at one stage of development but disappears later, so these have been termed paraphysial cysts<sup>14</sup>. Function of this gland is unknown and is present in some lower vertebrates. Some term these as neuroepithelial cysts. These are present in adults at any age but have been detected in children. Usual size is 1-2 cm in diameter but can be larger.

Clinical features may be variable and difficulty of accurate clinical diagnosis is common. Subtle signs or even lack of symptoms of increased intracranial pressure may prevent a timely diagnosis before the occurrence of deadly complications. Al-

though rare but should remain in the differential diagnosis of headache in children and young adults. Death has been reported due to sudden hydrocephalus with brain herniation<sup>2</sup>. Other presenting symptoms can be oligomenorrhoea, galactorrhea, polydipsia, hypogonadism, oligospermia and even hypopituitarism. Studies have shown improvement after surgery<sup>10</sup>. Colloid cysts may have differential cognitive affects<sup>1</sup>. Their usual location is the roof of the third ventricle directly behind the foramen of Monro and contains amorphous gelatinous material. Due to their position they can give rise to intermittent obstruction of the foramen of Monro causing symmetric hydrocephalus of lateral ventricles. If C.T. is negative (in an isodense lesion) then hydrocephalus sparing third and fourth ventricles should alert suspicion<sup>13</sup>. Colloid cysts can occur in unusual sites like brain stem, fourth ventricle, cerebellum, and intra or supra sellar regions. These are usually single but in one case paired colloid cysts have been reported<sup>6</sup>. Familial colloid cysts of third ventricle are very rare but screening is of value for families in which two or more members are affected<sup>9</sup>. These are hyperdense or isodense spherical masses on unenhanced C.T. The appearances are normally unchanged after contrast enhancement. Marginal enhancement may be seen either from the opacified capsule or from stretched veins around it.

## MATERIAL AND METHODS

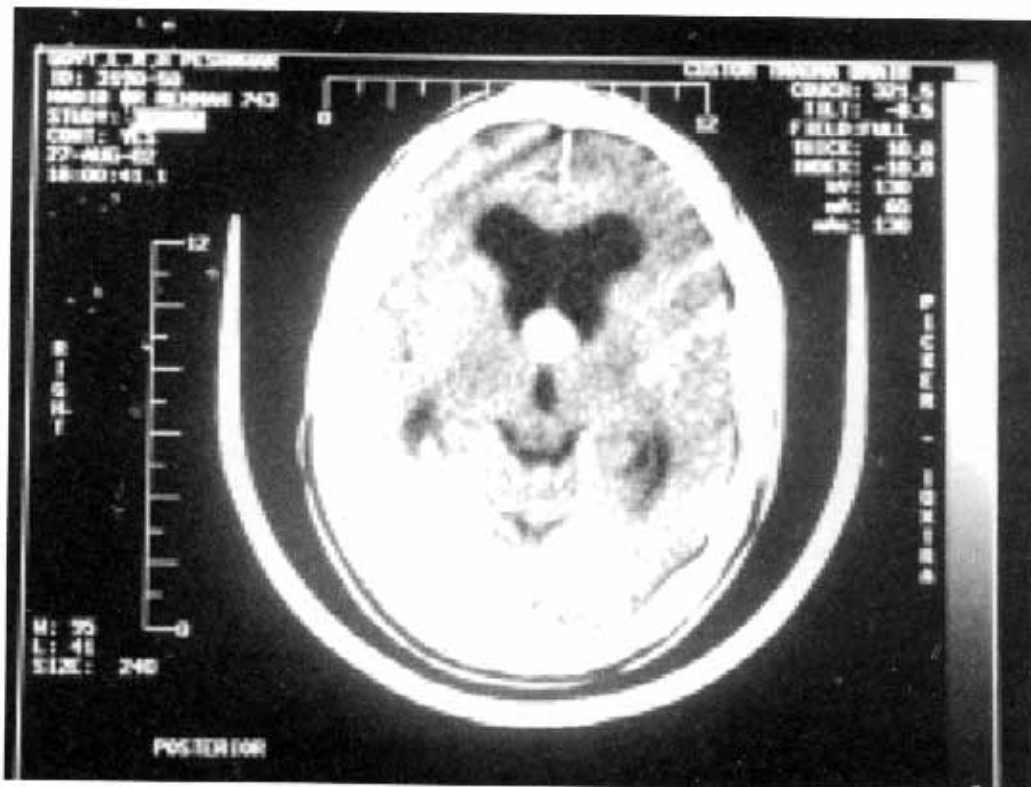
Patients presenting with symptoms of headache, vomiting, fits etc. were investigated with C.T. head by taking axial section at 10 mm distance from base to vertex. A fourth generation C.T. scanner was used for detection of intracranial lesions. Study was conducted without and with intravenous contrast according to the need of the case. In doubtful cases repeat scans were carried out.

## RESULTS

From January 2001 to August 2002 only two cases of colloid cysts of the third ventricle were observed at Lady Reading Hospital, Peshawar. Both the patients were male of 35 years and 05 years of age respectively. First case presented with history of chronic headache not responding to any treatment while the second patient was having fits and weakness of lower limbs for few months. In both the cases C.T. showed a hyperdense spherical mass lesion of 1 cm size located in third ventricle in unenhanced scans. The lesion was causing dilatation of lateral ventricles though not typically symmetrical but sparing third and fourth ventricles.

## DISCUSSION

This study shows reliability of diagnosis of colloid cysts of the third ventricle on unenhanced C.T. imaging and the results of this study are the same as reported in different other studies. This compares with detection of colloid cysts on C.T. scans which is even more conspicuous than on MRI as published by Mamourian-AC et al in AJNR in May 1998 about a study of two cases<sup>5</sup>. Similarly between 1987 and 1996 eleven patients with colloid cysts of the third ventricle were diagnosed and treated at the Department of Neurosurgery, the Medical University of Warsaw and in nine cases out of eleven, preoperative diagnosis was based on C.T. of head<sup>3</sup>. In an other study carried out by Urso-JA and others in 1998 in USA showed that an unenhanced brain C.T. even demonstrated the variability of density in colloid cyst from periphery to centre<sup>14</sup>. In Slovakia five patients of colloid cysts have been studied during the year 2000 and C.T. diagnosis has been declared as reliable<sup>12</sup>. In a retrospective study conducted in USA during twenty five years (1974 -1998) 162



patients with colloid cysts were examined and in all the cases C.T. scan was used as the method of neuroimaging<sup>11</sup>.

Another study has recommended serial C.T. imaging for the management of patients with colloid cysts<sup>15</sup>. Not only this but C.T. scan has also been used for guided stereotactic transcallosal excision of colloid cyst in one patient<sup>9</sup>.

## CONCLUSION

In this study it was noted that colloid cyst of the third ventricle is a very rare condition and does not have specific clinical features which can be rather variable and subtle. In some cases it has been seen in unusual sites. Most of the cases at the time of diagnosis have associated hydrocephalus. It usually presents in middle age but

few cases have been reported in children and can be accurately diagnosed on C.T. imaging. Reliability on C.T. imaging for diagnosis of colloid cysts has been proved throughout the world without need for any further investigations.

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