

**Long Standing Treated Migraine Patients End Up With Neuroepithelial Cyst**

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**Abstract:** A migraine can cause severe throbbing pain or a pulsing sensation, usually on just one side of the head. It's often accompanied by nausea, vomiting, and extreme sensitivity to light and sound. Most Of the time, it is neglecting part in our busy clinic. I reported two interesting long standing unilateral headache patients complicated with neuroepithelial cyst. Several epithelial cell types or connective tissue may constitute the cyst membrane, accounting for the variety of names used to describe these cysts, including epithelial cyst, ependymal cyst, choroid plexus cyst, choroidal-epithelial cyst, and subarachnoid-ependymal cyst. The most unifying theory suggests that all developmental intraventricular cysts, including the colloid cyst, arise from choroid plexus tissue derived from primitive neuroepithelium. In conclusion, long standing headache should have been undergone at least computed tomography of brain.

**Keywords:** Neuroepithelial cysts, colloid cyst.

**INTRODUCTION**

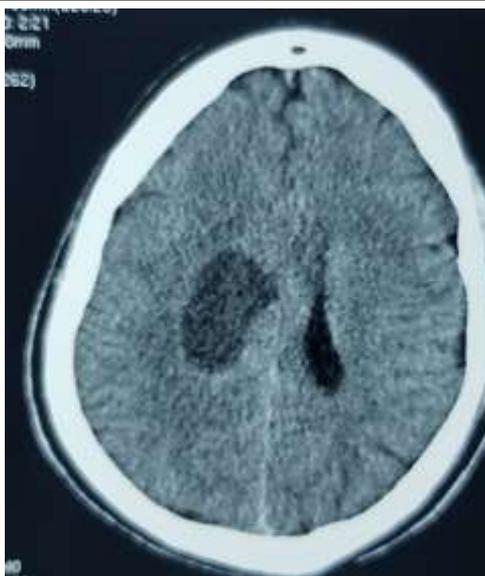
Neuroepithelial cysts one of the rare benign tumors that usually appear in the supratentorial compartment especially in the anterior third ventricle. It is well - circumscribed, non-enhancing, ovoid masses that follow cerebrospinal fluid density. It develops individuals between the age of 20 and 50. It makes spectrum of clinical symptoms, it is varying from asymptomatic to features of increased intracranial pressure.

The cyst also known as colloid cyst, it can be variable size and sometime appeared as multiloculate. The cyst membrane was formed by several types of epithelial or connective tissues, which accounting for diversity of names including ependymal cyst, choroidal plexus cyst, choroidal-epithelial cyst and subarachnoid-ependymal cyst. Still there is an argument about exact origin of this cyst. However, most of the literature suggested that all developmental cyst, including colloid cyst arise from choroid plexus tissue derived from primitive neuroepithelium. Small and incidental finding of small tumor do not need follow-up, but large tumor need regular follow-up. Here, I highlighted that treated migraine patients end up with neuroepithelial cyst.

**Case history 1**

A-31-year-old gentleman complained of right sided headache for last three years duration. Initially, it comes once a month interval, and associated with nausea, vomiting and photophobia. We made a

diagnosis as migraine. It well responded with paracetamol. However, with the time, it's frequency was increased, and he needed long term prophylaxis with propranolol. For last six month his headache got worse, but it responded with paracetamol. However, his relatives noticed that his way of walking is little bit abnormal and he was admitted one of the tertiary hospital in the east part of the SriLanka. On neurological examination, all cranial nerves are intact, but left sided lower limb spastic with exaggerated reflexes. All sensory modalities are intact, and gait was spastic. Urgent computed tomographic scan (CT-brain) was taken (Figure 1). Which revealed that 4.5 cm X 3.5cm cystic mass compress the fourth ventricle resulting dilatation of third and right lateral ventricles. He was transferred to national hospital SriLanka for further evaluation. Following magnetic resonance imaging (MRI) revealed a large, cystic lesion with enlarged third and lateral ventricles.

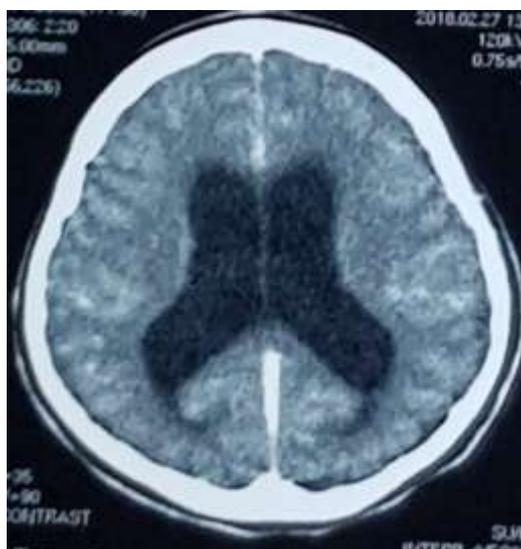


**Fig-1: CT -brain showed dilated right lateral ventricle**

### Case history 2

A 23-year-old, female complained of frequent headache for last 2 years, it progressively increasing in severity. This head ache was associated with nausea and vomiting. She gets 4 to 5 times a month interval, but it responded with simple analgesics. The provisional diagnosis of migraine was made and started long term prophylaxis with topiramate. However, for last two

month she had worsening headache with blurred vision. A neurological and physical examination revealed no abnormal findings. The computed tomographic scan revealed enlarged lateral ventricle (Figure 2). She was transferred to national hospital Sri Lanka for MRI. Subsequent magnetic resonance imaging revealed a large, cystic lesion with enlarged lateral ventricle.



**Fig-2: CT-Brain showed dilated both lateral ventricles**

### DISCUSSION

In 1929, Fulton and Bailey were introduced the term of neuroepithelial cyst[1]. The cyst also known as colloid cyst, it can be variable size and sometime appeared as multiloculate. The cyst membrane was formed by several types of epithelial or connective tissues, which accounting for diversity of names including ependymal cyst, choroidal plexus cyst, choroidal-epithelial cyst and subarachnoid-ependymal cyst. Choroid plexus cysts develop at six weeks of

gestation. Initially a bulge from the wall of the lateral ventricle and covered with either ependyma or fibrous connective tissue, it is the most common neuroepithelial cysts with varying size. In addition to that neuroepithelial cysts can be arise from intraparenchymal or extra-axial or intraspinal or intraventricular. It makes spectrum of clinical symptoms, it is varying from asymptomatic to features of increased intracranial pressure. Sometime fluctuating symptoms can be seen

which mainly due to changing location of the colloid cyst[2].

In 1936, McLean cited that there is a difference between epithelial lined cysts of the third ventricle from the connective tissue lined cysts of the choroid plexus[3]. Disagreement still exists over the precise origin of this cyst. However, in 1965 Shuangshoti *et al.* stated all sort of cysts are derived from primitive neuroepithelium[4]. Moreover, existing cysts contain serous fluid resembling cerebrospinal fluid (CSF) on naked examination, also demonstrate same signal intensity of CSF through on T1- and T2-weighted image. However, for definite diagnosis need to be identify the cyst wall is the paramount[5]. The consequence of the cysts are varying which depend on the size, small choroid plexus may resolve spontaneously and large one needed intervention. In order to diagnose neuroepithelial cysts need to do Magnetic resonance imaging (MRI) rather than CT, intraventricular cysts are hard to detect with CT because the cyst wall cannot be seen unless contrast material is instilled into the ventricles[6].

There are various types of treatment modalities are available, simply follow-up is recommended if cysts not cause any problems. Those who have mass effect with symptoms need surgical approaches such as simple stereotactic aspiration or endoscopic fenestration[7]. In future, we should take serious about all sort of headache, because it is a time bomb if we didn't do CT or MRI.

#### **Consent to participate**

Consent was taken from both patients

#### **Consent for publication**

Written informed consent was obtained from the patients for publication of this case report

#### **Availability of data and material**

All data gathered during this study are included in this published article.

#### **Competing interests**

The author declares that they have no competing interests.

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