

CASE REPORT

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Intraventricular Neurocystercosis with Psychiatry Manifestations

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Abstract

Neurocystercosis (NCC) is one of the common parasitic infections of the central nervous system, caused by *Taenia solium*. We present here a case of 19-year-old female presented with partial hanging, on CT brain incidentally found to have asymmetric ectasia of right lateral ventricle, for which MRI was done revealed - intraventricular neurocystercosis causing obstructive hydrocephalus. Extra parenchymal neurocystercosis can occur in ventricles, sub arachnoid space, spine and eyes. A recent study reported an overall frequency of subarachnoid cysts in 2%, ventricular cysts in 6%, and hydrocephalus in 16% of NCC cases. It may be associated with any neurological sign and symptom. Focal neurological deficits have been recognized in one-third of symptomatic patients. Motor deficits, involuntary movements, Parkinsonism, language disturbances, sensory deficits may occur in some patients. Psychiatric disorders may mark the evolution of hydrocephalus, As in our case, patient with unilateral hydrocephalus presented with alleged history of hanging, it is important to rule out organic brain diseases in all cases with psychiatry manifestations.

Keywords: Neurocystercosis; Hydrocephalus; Psychiatry disorder

Introduction

Neurocystercosis (NCC) is a common parasitic infection affecting central nervous system and is prevalent in Asia and Africa. It affects the brain parenchyma, subarachnoid spaces and ventricles. Prevalence of human taeniasis varies from 2.5% to 8.0% in India according to various studies data. Neurocystercosis causing epilepsy is about one per

1000 population. It is a parasitic infection by *Taenia solium*. Humans being only definitive host and disease is seen when the human beings ingest egg present in food contaminated with feces of the tapeworm. Neurocystercosis is classified based on its location- subarachnoid-cisternal space, parenchymal, ventricles, spinal and mixed form. These different forms can co-exist. Parenchymal is the most common location.¹

It may be associated with any neurological sign and symptom. Focal neurological deficits have been recognized in one-third of symptomatic patients. Motor deficits, involuntary movements, Parkinsonism, language disturbances, sensory deficits may occur in some patients. 3% of infected people can present with strokes. They also can present with features of raised intracranial pressure when hydrocephalus occurs.²

Hydrocephalus is a neurological problem caused by excessive accumulation of cerebrospinal fluid (CSF) due to abnormal secretion, circulation and absorption. It is one of the cause for reversible dementia, but role psychiatry manifestations is yet to delineate.³ When hydrocephalus occurs due to any infective agent, it is termed as post-infective hydrocephalus (PIH).⁴

Hereby presenting a rare case of neurocystercosis presented with unilateral hydrocephalus.

Case Report

A 19-year-old female presented to emergency department with alleged history of partial hanging and one episode of generalized tonic clonic seizures. Past history of psychotic episodes was given by patient attenders. Neurological Examination was unremarkable.

CT Brain imaging done showed asymmetric ectasia of right lateral ventricle.

MRI Brain revealed multiple intraventricular mobile cysts with calcified scolex with occasional obstruction in the right lateral ventricle. Asymmetric dilation of the right lateral ventricle.

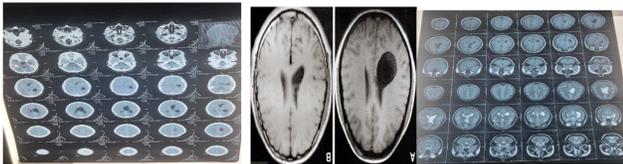


Fig 1. Radiographic images

Discussion

Extra parenchymal neurocystercosis is seen in ventricles, sub arachnoid space, spine and eyes. A study reported an overall frequency of subarachnoid cysts in 2%, ventricular cysts in 6%, and hydrocephalus in 16% of NCC cases.⁵ Clinical manifestations and CSF findings are similar to the more common tuberculous and fungal meningitis.^{6,7}

In intraventricular neurocystercosis, the larvae reach the cerebral ventricles via the choroid plexus and cause symptoms due to hydrocephalus. Intraventricular neurocystercosis commonly presents with acute obstructive hydrocephalus. Headache is the most common manifestation.

CSF findings are similar to fungal or tubercular meningitis with lymphocytic pleocytosis, elevated protein concentration. In one series of cysticercal meningoencephalitis, confusion with tubercular meningitis was present in 61.5% cases.⁸

Various therapeutic modalities include antihelminthic medication, microneurosurgical removal, ventriculoperitoneal shunting, and endoscopic management.⁹

In our present case psychiatric symptoms can be manifestation of hydrocephalus. As observed in a study, these patients may benefit from treatment of hydrocephalus to improve psychiatry symptoms.⁸ Psychiatric disorders may mark the evolution of hydrocephalus.^{3,10} As in our case, patient with unilateral hydrocephalus presented with alleged history of hanging, it is needed to rule out organic brain diseases in all cases with psychiatry manifestations.

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