CASE ON NEUROCYSTICERCOSIS IN A TERTIARY CARE TEACHING RIMS HOSPITAL KADAPA

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ABSTRACT

Cysticercosis is one of the most common parasitic infestations in humans. Neurocysticercosis (NCC) is the commonest parasitosis of the central nervous system (CNS), endemic in developing countries and is also seen in developing nations with high rates of immigration from prevalent areas. It is infected by the undercooked pork or infected eggs of T.S (Taeniasolium) it transmits through the fecal oral route. After enter primarily affect the gut and spread throughout body through circulating blood. For a long period of time is asymptomatic in condition. Finally affects the focal neurological effects and seizures. An 8-year child presented with headache, fever, nausea and vomiting causing acute generalized seizure and having the habit of eating sludge and was found to have calcification without peripheral edema in the left parietal lobe of the brain. Brain imaging and immunological studies were suggestive of neurocysticercosis. The patient was treated with Ceftriaxone 500mg, Paracetamol 250mg and Albendazole 400mg (3/4th) for 3 days and discharged with Carbamazepine 100mg (1/2 tab). This case report highlights the proper management of this parasitic infestation which involved in brain in children. A planned approach to therapy is necessary to prevent complications.

Keywords: Common Parasitic Infestations, Cysticercosis, Neurocysticercosis, Tapeworm, Taeniasolium, Undercooked Pork.
INTRODUCTION

Cysticercosis refers to tissue infection. After exposure to eggs of T.S (Taeniasolium), the pork tapeworm. It is transmitted through the feco-oral route or contaminated with food and water, and it is also called food borne disease. The another route through raw-eaten vegetables. Because which have been grown in fields irrigated with untreated dirt water. The other potential sources of feco-oral contamination and admixture of dirt drinking water in pipelines, and spread by the infected cockroaches and houseflies. After ingestion of eggs the T.S pass through the lumen of the intestine then migrate to the brain and muscles. They form acyst that can persist for years. General muscle pain is common. In some cases the cyst will cause an inflammatory reaction, painful nodules in the muscles and seizures when the cysts are located in the brain is known as neurocysticercosis. (1)

![Diagram](image1.png)

**Fig:1 Two different stages of the parasite’s life cycle**

![Diagram](image2.png)

**Fig: 2 Taeniasolium**
Symptoms of Neurocysticercosis: Symptoms depend on cyst location. Seizures or headache will cause if cyst in brain, If it is surrounding the brain, can indicate elevated intracranial pressure, especially outflow of cerebro-spinal fluid block by cyst from the ventricles, then it causing hydrocephalus. (2)

Diagnosis of Neurocysticercosis: Diagnosing A CT scan is often sufficient, though some cases an MRI is also helpful. Most of the cysts found between 5-20 mm for living cysts and 2 to 4 mm for granulomas. Sometimes, the cysts can grow to 20 cm. Blood tests are also necessary to check for antibodies to Taeniasolium. (3),

Treatment and Prevention: Someone with neurocysticercosis is to managed by antiepileptic therapy if any seizures or elevated intracranial pressure that has resulted. If the cysts are so large, they may need to be surgically removed. To start antiparasitic therapy in order to any active cysts, and to reduce the further risk of seizures or hydrocephalus. Medications used to attack the larval stage of Taeniasolium cysts include Albendazole or praziquantel. During this treatment inflammation and swelling can worsen for that to avoid potentially disabling inflammation to give corticosteroids. Of course, the best option is never to acquire the parasite in the first place. Precaution must be taken while before preparing food. Hand washing should be prior preventing this infection. Infected pork should be avoided. Meat must be well cooked or frozen in order to destroy cysticerci. (4)

Case report: An 8-year child presented with headache, fever, nausea and vomiting causing acute generalized seizure and having the habit of eating sludge and was found to have calcification without peripheral edema in left parietal lobe of brain. Brain imaging and immunological studies were suggestive of neurocysticercosis. The patient was treated with Ceftriaxone 500mg, Paracetamol 250mg and Albendazole 400mg(3/4th) for 3 days and discharged with Carbamazepine 100mg(1/2 tab).

CONCLUSION
This case report highlights the proper management of this parasitic infestation which involved in brain in children. A planned approach to therapy is necessary to prevent the complications. It indicates that treatment with albendazole significantly improves the prognosis for the recurrence of seizures. And well knowing about the pathophysiology (mechanism) of T. Solium and which stage it should be destroyed by effective treatment. Clinical pharmacist is main role to develop appropriate intervention and prevention programs.
REFERENCES


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