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# A Rare Case of Disseminated Cysticercosis

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**Abstract:** ***Disseminated cysticercosis is a rare form of cysticercosis in which the cysticerci spread out through the whole body. I am reporting a case of 54 year old male with disseminated cysticercosis. He visited our hospital after an elephant attack and was admitted in surgical department. On routine chest x-ray he found have many opaque lesions on chest wall and was referred to medicine. After doing x-ray of abdomen, thighs, brain computed tomography (CT), contrast enhanced CT brain, fundoscopy, he was diagnosed as having cysticercosis involving the brain, subcutaneous tissue, and skeletal muscles through the whole body. Patient had no symptoms and signs of neurocysticercosis. Hence, he was not given any specific treatment. He was followed up after 1 month and he was still having no symptoms.***

**Keywords:** Disseminated cysticercosis, neurocysticercosis, asymptomatic cysticercosis, rice grain appearance, Taenia solium

## 1. Introduction

Human cysticercosis is caused by the accidental infestation with Cysticercuscellulosae, the larval form of the tapeworm Taenia solium. Cysticercosis can involve any part of the body such as central nervous system, subcutaneous tissue, muscle, eye, lungs, liver and thyroid. Disseminated cysticercosis (DCC) is a rare form of cysticercosis caused by dissemination of the larval form of the pork tapeworm in which the cysticerci spread out through the whole body. Fewer than 100 cases have been reported worldwide, most of them originate from India and neighboring countries in South Asia [1]. Patient can present with varying symptoms depending on the sites of involvement.

## 2. Case Details

A 54 year old male patient was admitted in our hospital after an elephant attack in the department of general surgery. On routine chest x-ray he found to have many opaque lesions and was referred to department of general medicine. Patient was asymptomatic. On physical examination, his pulse rate was 74/min and blood pressure was 122/80 in right arm in supine position. There were no skin lesions or nodules. Examination of the nervous system, gastrointestinal system, respiratory system and cardiovascular system was within normal limits. On investigation, the haematological parameters were found to be normal.

Xray of the chest, abdomen and bilateral thigh showed presence of cysticerci, which appear as calcified specks in subcutaneous tissue and skeletal muscle giving a characteristic ‘rice grain' appearance. CECT scan of brain demonstrated multiple small focal granulomatous calcifications on both cerebral hemispheres. Fundoscopic examination of eyes and USG of thyroid gland was found to be normal. Since the patient was asymptomatic and was having calcified lesions, no specific treatment was given. He was followed up after 1 month and he was still having no symptoms.

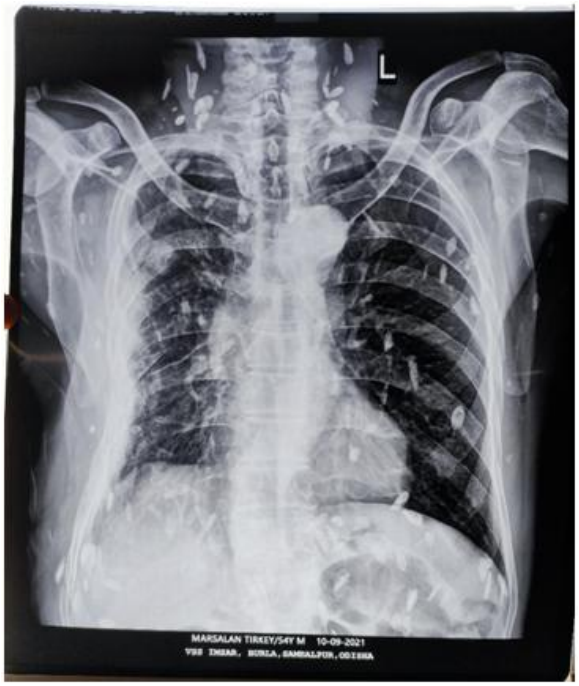


**Figure 1:** Chest X-Ray showing ‘ricegrain' appearance

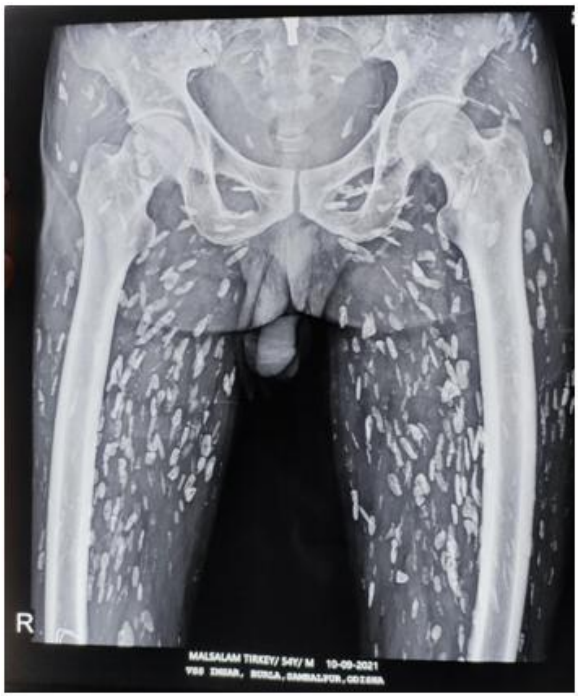


**Figure 2:** X-Ray of thighs showing cysticerci

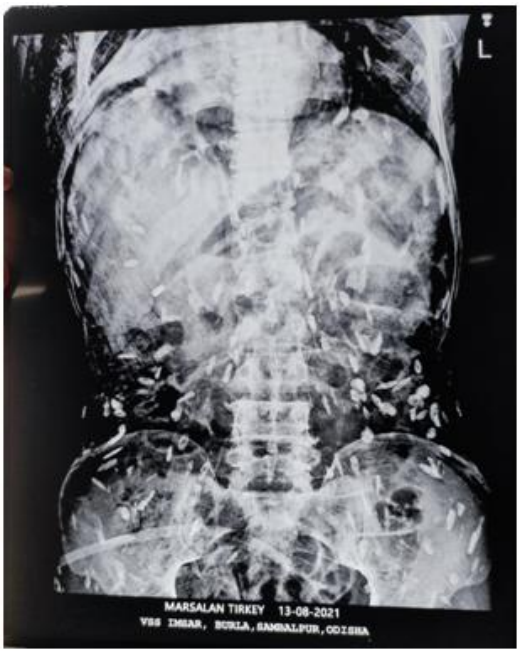


**Figure 3:** X-Ray abdomen showing cysticerci

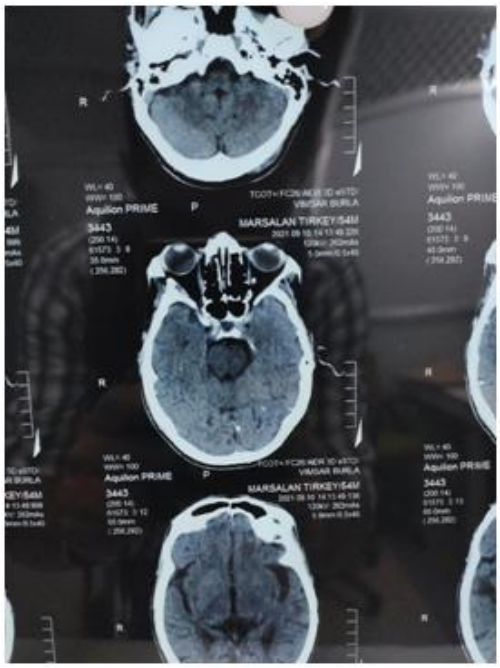

**Figure 4:** Multiple calcified brain lesions

## 3. Discussion

Neurocysticercosis is common parasite disease in most of developing countries, especially in Latin-America, Asia and Africa [3]. Widespread dissemination of cysticerci throughout the human body was reported as early as 1912 by British army medical officers stationed in India. In 1926, Priest described probably the first case of disseminated Cysticercosis in a British soldier who had epileptic seizures, mental dullness, swelling of his muscles and widespread subcutaneous nodules [5].

The pork tapeworm Taenia solium can cause two distinct forms of infection in humans: adult tapeworms in the intestine or larval forms in the tissues (cysticercosis). By ingesting undercooked pork containing cysticerci, humans acquire infections that lead to intestinal tapeworms. Infections that cause human cysticercosis follow the ingestion of T. solium eggs. Cysticercosis can be seen in brain, csf, eyes, muscle, subcutaneous tissue, liver and occasionally the heart. Widespread dissemination of the cysticerci can result in the involvement of almost any organ of the 5body. Neurocysticercosis can present as raised intracranial pressure, hydrocephalus, seizures or even meningitis. Sometimes it can be asymptomatic too, as in this case. Pseudohypertrophy of the muscles is an important presentation of disseminated cysticercosis.

Computed tomography (CT) scans and MRI are useful in anatomical localization of the cysts and in documentation of the natural history. MRI is more sensitive than CT as it identifies scolex and live cysts in cisternal spaces and ventricles and identifies the response to treatment. Unenhanced CT scans of muscles can show innumerable cysts standing out clearly against the background of the muscle mass in which they are embedded, the CT image appearing like a honeycomb or leopard spots. [2]

Management of DCC includes symptomatic treatment of central nervous system lesions using steroids and antiepileptics. In patients with raised intracranial tension, surgical removal of cysts and ventriculoperitoneal shunting can alleviate symptoms. Pharmacological management with the cysticidal drugs praziquantel and albendazole is indicated as they help by reducing the parasite burden. These drugs hasten the death of the cysts, which may occur even in the absence of such treatment. Pharmacological treatment may be associated with severe reactions, which may result from enlargement of cysts, massive release of antigens causing local tissue swelling and generalized anaphylactic reaction [4]. Priming with corticosteroids before starting the cysticidal drug decreases the incidence of such complications. In calcified Neurocysticercosis without edema anti helminthic or steroids not indicated.

## 4. Conclusion

Neurocysticercosis can have disseminated presentationand can be an incidental finding too.

## References

[1] Zou, Y., Wang, F., Wang, HB. *et al.* Disseminated cysticercosis in China with complex and variable clinical manifestations: a case series. *BMC Infect Dis* 19, 543 (2019).
[2] Kumar A, Bhagwani DK, Sharma RK, Kavita, Sharma S, Datar S, DasJR: Disseminated cysticercosis, Indian Pediatr 1996, 33: 337-339.
[3] J Korean Neurosurg Soc.2011 Mar; 49 (3): 190-193. Published online 2011 Mar 31.
[4] Bally GG: Cysticercosis. In Manson's Tropical Disease 21st edition Edited by: Cook GC, Zumla A. London: Saunders; 2003: 1584-1695.
[5] Venugopal S, Subramaniam SK, Kumar A, et al. Disseminated cysticercosis: A rare case report and review of the literature. MOJ Clin Med Case Rep. 2016; 4 (3): 56-58