

Myocysticercosis presenting as an uncommon cause of chest wall swelling: A case report

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ABSTRACT

Cysticercosis is a common helminthic parasitic infection in humans caused by larva of *Taenia solium*. It most commonly affects the brain causing neurocysticercosis. It also affects the different system of the body as eyes, subcutaneous tissue, eye, lungs. Diagnosis of cysticercosis is usually done by imaging such as ultrasound for cutaneous, muscular and orbital infection whereas CT scan for the neuro cysticercosis. We report a case of myocysticercosis on lateral chest wall of the 7-year-old male from a rural region of Nepal.

Keywords: chest wall, imaging, myocysticercosis, remission

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INTRODUCTION

Taenia solium is prevalent worldwide and, endemic where people devour poorly cooked or raw pork, or comes in contact with cyst. Human and procaine cysticercosis are among most common zoonotic disease in Nepal.¹ Larval stage of *Taenia solium* causes syndrome of cysticercosis, with human as a dead end host. Neurocysticercosis presents as seizure, headache, focal neurologic symptoms, visual disturbance.² Treatment depends on the site of infection, parenchymal cysticercosis is treated with albendazole and steroid, whereas ocular infection usually requires surgery.² Therefore this case report aims to discuss atypical manifestation of the disease. Chest wall swelling may raise suspicion for various conditions, but myocysticercosis might not be immediately considered in the differential diagnosis.

CASE REPORT

A 7-year-old boy from rural part of Nepal presented to the outpatient department of primary hospital previously managed and worked up at tertiary center with complain of an increase in the size and pain of preexisting swelling (figure. 1) present on mid axillary linear level of nipple for 1 week. There was no history of trauma, penetrating injury, weight loss, fever, seizure, sensory, and motor deficit.

On examination nodule of 3.0 x 1.4 cm was present on the left side on mid axillary line on chest wall at the level of nipple. It was soft in consistency, tender, ovoid, non-pulsatile, cystic, mobile. There were no similar nodules on other parts of body nor there were evidence of palpable lymph node. Clinically, differential diagnosis of abscess, sarcoma, foreign body, nodular fasciitis,

myxofibrosarcoma, hematoma were made. On ultrasonography using linear probe findings, (figure. 2) there was a cystic lesion mass noted at the bulging of the left lateral chest wall measuring 21 x 8.8 x 16.8 mm in the intramuscular plane with internal echoes within it. With a hyperechoic mass with multiple small echogenic liner structures largest of 3.4 mm x 2.4 mm likely a foreign body with fibrotic changes. Color Doppler showed no vascularity within it.

On CECT, done at tertiary center (Figure. 3) of the chest, well defined hypodense cystic lesion (mean HU 20) measuring 2.2 X 1.0 cm noted within the muscular plane in the midaxillary line in the left lateral chest wall. There was isodense (to muscle) area noted within the lesion. There were calcific or fat foci within the lesion. Post contrast study showed no significant enhancement of the isodense area of the cystic area. Provisional diagnosis from CECT chest was myocysticercosis. CT scan of head was normal. Similarly, routine stool examination was within normal limit.

Patient had been treated with tab. Albendazole (15 mg/kg) and tab prednisolone (1.5 mg/kg) for two weeks at tertiary center mentioned earlier, which had led to resolution of the symptoms. Soon after discontinuation of medicine, there was remission of symptoms. The patient presented to our center after 10 days of completing medication. Latter we continued tab. albendazole (15 mg/kg) once a day, tab prednisolone (1.5 mg/kg) once a day and tab paracetamol + ibuprofen on per needed for further two weeks which completely resolved the symptoms. Patient was further asked to follow up in two weeks, and he had no complain.



Figure 1. Nodule of 3.0 x 1.4 cm on mid axillary line



Figure 2. Musculoskeletal USG finding



Figure 3. CT slide showing isodense (to muscle) lesion with calcifi or fat foci within it

DISCUSSION

Encysted larvae (metacestode) of *T. solium* causes cysticercosis after ingestion of eggs in under cooked pork or via faeco-oral transmission between humans;³ as such in our patient had history of consumption of pork meat. Larvae can be disseminated into various region of body hematogenously.⁴ Broadly cysticercosis can be classified into parenchymal and extra parenchymal infections.⁵ Larval cyst can infect brain, muscle, eye, sub arachnoid space, gastrointestinal tract and are the major cause of the adult onset of seizure in the most low-income countries.⁶ Cysticercosis causes upto 50% epilepsy cases presenting as partial seizure and is also major cause of epilepsy in Indonesia, Veitnam, China, and Nepal.⁷

Myocysticercosis have three varieties , first type is myalgic due leakage of cystic fluid causing inflammation , second is myopathic which is caused by degenerative cyst causing chronic inflammation and third is pseudo-hypertrophy type.⁸

Cysticercosis can be diagnosed by imaging usually CT scan, Advanced MRI sequences like susceptibility-weighted imaging (SWI) and constructive interference in steady state (CISS) and ultrasonography depending upon site of infection and number of parasites.⁹ Ultrasonography can have three types of presentation as follows on the basis of frequency.¹⁰ first Cyst with scolex without surrounding edema.(as in our case). Second is Cyst with scolex and surrounding edema. Third is Irregular cyst with no scolex and with surrounding edema.

Treatment modalities for cysticercosis includes larvicidal drugs such as albendazole or praziquantel, corticosteroids, anti-seizure medication and surgery.¹¹ In study conducted by R Sihota et al 1994, there was resolution of symptoms in patient with extraocular cysticerci who were treated with Tab. Albendazole at dosage 15mg/kg per day for a month while compared to placebo.¹² The combination treatment of albendazole and praziquantel in individuals with

active symptomatic neurocysticercosis (NCC) following albendazole monotherapy has exhibited remarkable outcomes.¹³ Because of the variability of presentation, treatment most be individualized. *Taenia solium* infection is preventable by imposing basic personal hygiene, proper hand washing and sanitation.¹⁴ Deworming regularly, proper disposal of human excreta and good meat hygiene can prevent cysticercosis.¹⁵

CONCLUSION

This case report highlights myocysticercosis as an uncommon cause of chest wall swelling in pediatric patient from rural Nepal. The clinical and radiological findings, as well as the successful response to albendazole and prednisolone treatment, provide valuable insights into the management of this rare presentation. Raising awareness of myocysticercosis and its potential occurrence in atypical locations can aid in early diagnosis and appropriate management in similar clinical scenarios. This case report can provide valuable information to physicians and aid in early recognition and diagnosis of such case and provide valuable clinical insight and contribute to existing medical literature. However, further research and reporting of such cases are essential to broaden our understanding of this condition and improve patient outcomes.

Consent

A signed consent was taken from the patient guardian regarding the publication of the case reports.

Conflict of interest

None

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