

Isolated paraspinal muscle cysticercosis diagnosed on ultrasonography in a young patient presenting as low back ache

Abstract

Cysticercosis is a grave helminth infection caused by the larval stage of a *Taenia solium*, it is commonly seen as cysts in various body tissues. Usually the patients with cysticercosis are asymptomatic, but in symptomatic patients the clinical findings depend on the number and location of cysticerci as well as the extent of surrounding inflammation. In the present case, we discuss an unusual presentation of the muscular cysticercosis as the cause of low back pain. The typical cysticercal cyst could be demonstrated on ultrasonography in the paraspinal muscles that responded well to conservative management.

Key words: Cysticercosis, diagnosis, high resolution sonography, intramuscular, medical management, noninvasive

INTRODUCTION

The blend of rural society, crowding, and poor sanitation creates more opportunities for fecal contamination of food and water thus leading to widespread tapeworm infection in developing countries.^[1] *Taenia solium* infection is common in latin American countries, Central and South Africa, India, Indonesia and China.^[2] Approximately 50 million people are infected with the parasite and some 50,000 die of cysticercosis annually.^[3] Cysticercosis is a parasitic infection caused by the larval stage (cysticercus) of *T. solium*. Humans can be the definitive host as well as the intermediate host of *T. solium*. Infection with the invasive intermediate stage (cysticercus) is called cysticercosis. The risk of cysticercosis may be the same for individuals who eat or do not eat pork, since humans acquire the intermediate form by ingestion of food or water contaminated with the eggs of *T. solium*.^[4] More often than not the patients with cysticercosis are asymptomatic and in symptomatic patients the clinical features depend on the number and location of cysticerci. In the present case, we discuss an unusual presentation of the muscular cysticercosis as the cause of low back pain.

CASE REPORT

An 20-year-old male presented with persistent low back ache of 2 months duration, which was localized to the lower back, non-radiating, without any difficulty in walking. There was no history of preceding trauma. Local examination of the spine and paraspinal region revealed an area of tenderness over the left side at the level of L2-L3 region. There was no local rise of temperature, or any palpable swelling. There was no history of hematuria in the past. Detailed neurological examination revealed no abnormality. Routine blood investigations were within normal limits. As a part of radiological work-up an ultrasonography (USG) abdomen was performed on Logiq 500 Pro machine (GE Medical Systems, USA) with a linear probe at 8.2 MHz frequency. It revealed a well-defined isolated cystic lesion of size 1.8 cm × 1.2 cm in the left paraspinal muscles with well-defined echogenic scolex of 3 mm size [Figure 1] with features of surrounding inflammation. These features were consistent with the diagnosis of cysticercosis in the lower paraspinal muscle. Ultrasound of the abdomen was normal. The patient was managed conservatively with a short course of tapering steroid, Prednisolone 2 mg/kg/day and on the tablet albendazole 15 mg/kg body weight/day for 21 days. After 3 weeks of conservative treatment, on follow-up, pain and

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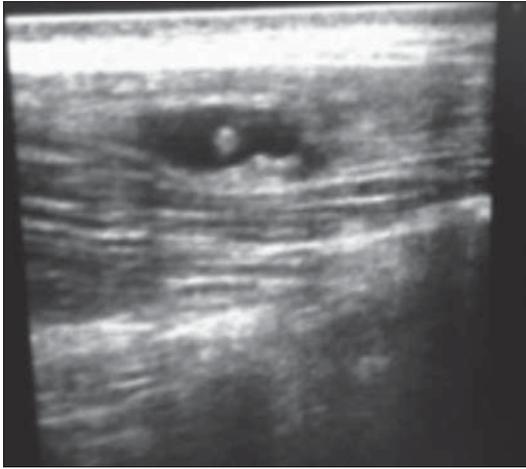


Figure 1: Isolated cystic lesion with well-defined echogenic scolex

tenderness completely disappeared and the patient was doing well. On follow-up USG, there was no evidence of cysticercosis. Patient was followed again after 3 months and he was relieved of his symptoms.

DISCUSSION

Although asymptomatic in the majority of the patients, the muscular form of cysticercosis can present clinically in three different ways myalgic, myopathic and nodular or mass like type (rarely pseudohypertrophy type).^[5,6] Many imaging modalities have been used to identify these lesions.^[6] Recently, high resolution sonography has been recognized as a safe and non-invasive method that can be used in the diagnosis of muscular and soft-tissue cysticercosis.^[6,7] On USG the muscular cysticercosis characterized by a small, well-defined, elliptical cystic lesion with an eccentric hyperechoic area within, with or without surrounded inflammation and or calcification in the muscle.^[7] On USG four types of lesions have been described:

1. Cysticercus cyst with an inflammatory mass around it as a result of the death of the larva
2. An irregular cyst with very minimal fluid on one side, indicating

a leakage of fluid. The eccentric echogenic protrusion from the wall due to the scolex is not seen within the cyst

3. A large irregular collection of exudative fluid within the muscle with the typical cysticercus cyst containing the scolex, situated eccentrically within the collection
4. Calcified cysticercosis.^[7]

Solitary cysticercosis of muscles and soft tissue is a rare disease and can cause a diagnostic dilemma.^[8] Rarely, the paraspinal muscle involvement can be an incidental finding in a patient with low back because of other reasons. In the present case, the typical cysticercal cyst could be demonstrated on USG in the paraspinal muscles that responded well to conservative management.

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