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Case Report

Isolated intramuscular cysticercosis in an infant-a case report

Shivani, Jatinder Singh*, Manisha Duggal

Department of Surgery, Punjab Institute of Medical Sciences, Jalandhar, Punjab, India

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***Correspondence:**
Dr. Jatinder Singh,
E-mail: jatvani@yahoo.com

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ABSTRACT

Intramuscular cysticercosis is a rare entity and presents diagnostic dilemma due to uncommon presentation. We present a case report of an 8-month-old child with muscular cysticercosis who presented with fever and a swelling on the abdominal wall. Through thorough clinical examination, laboratory investigations, and imaging studies, the diagnosis of intramuscular cysticercosis was established. The patient received prompt treatment with anthelmintic drug, leading to successful management. This case emphasizes the importance of considering muscular cysticercosis as a differential diagnosis in infants presenting with atypical symptoms, expanding our understanding of the diverse clinical presentations of this uncommon condition in pediatric populations.

Keywords: Intramuscular cysticercosis, Taenia solium, Parasitic infection, Cysticercosis, Abdominal wall swelling

INTRODUCTION

Cysticercosis is a parasitic infection caused by the larval stage of the tapeworm Taenia solium and an emerging health problem in developing countries.[1] This case report describes a rare case of 8-month-old child diagnosed with intramuscular cysticercosis who presented with fever, neck stiffness, and swelling on the right-side abdominal wall, highlighting the need for increased awareness and early recognition of this condition in the pediatric population.

CASE REPORT

An 8-month-old male infant was admitted to the pediatrics department with two week history of fever, a palpable swelling on the right side of abdominal wall. No history of recent illness, trauma, or exposure to Taenia solium was reported. He had vegetarian diet. The child appeared irritable and resisted neck movement during examination. Vital signs were within normal limits except for an elevated body temperature of 101.4°F (38.6°C). Initial suspicion of meningitis prompted the initiation of empirical antibiotic therapy.

Physical examination revealed an elevated body temperature of 101.1°F (38.4°C). A localized swelling on the abdominal wall just anterior to mid axillary line in the right lumbar region (Figure 1). It was tender, freely mobile, and firm measuring about 1.5 cm in diameter. Neck stiffness was observed during the examination. The remaining systemic examination did not reveal any notable findings.

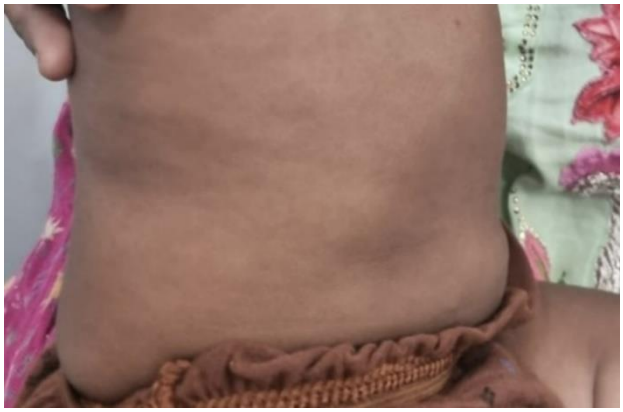

Figure 1: Abdominal wall swelling (side view).

Laboratory investigations showed leukocytosis (Total leucocyte count 33,240/cmm) and an elevated C-reactive protein level (CRP 85). Considering the unusual presentation with fever, neck stiffness, and abdominal wall swelling, further investigations were conducted. Ultrasound of the swelling revealed the intramuscular cystic lesions with internal echoes measuring approximately 12×5 mm and 15×6 mm present in right lateral abdominal wall. These findings raised suspicion of cysticercosis. Stool examination showed presence of abundant yeast cells but negative for ova. Neuro-ophthalmic examination revealed no abnormality.

Serological tests, including enzyme-linked immunosorbent assay (ELISA) for detection of Taenia solium antibodies, were performed and yielded positive results. Imaging was done to rule out neurocysticercosis. Based on the clinical presentation, imaging findings, and positive serology, a diagnosis of muscular cysticercosis was established. The child was promptly initiated on albendazole therapy. Supportive care, including antipyretics and analgesics, was provided to alleviate symptoms.

Over the course of few weeks, the child showed gradual improvement, with resolution of fever, improved neck mobility, and reduction in the size of the abdominal wall swelling. Follow-up imaging studies demonstrated regression of the cystic lesion. The treatment was completed without any notable complications.

DISCUSSION

Humans acquire T. solium taeniasis by consuming undercooked pork that contains the larval cysts (cysticerci) of the parasite.[2] Humans typically serve as the definitive host, while pigs commonly act as the intermediate host in the life cycle of the parasite.[1] However, humans can occasionally become intermediate hosts, manifesting cysticercosis by consuming contaminated water or raw vegetables or pork infested with larvae.[2] It is a significant public health concern in many parts of the world, particularly in regions where sanitation and hygiene practices are inadequate.[3] There is increased prevalence of cysticercosis in North India especially in Bihar, Uttar Pradesh, and Punjab. Cysticercosis commonly affects the central nervous system (neurocysticercosis) but can also involve other organs, including the muscles (muscular cysticercosis).[4]

Intramuscular cysticercosis is a rare manifestation of Taenia solium infection, characterized by the presence of cysticerci within the skeletal muscles. While it is more commonly reported in adults, cases in children, particularly infants, are infrequent. The clinical presentation of muscular cysticercosis can vary widely, ranging from asymptomatic cases to localized pain, swelling, and even muscle dysfunction. Diagnosis can be challenging, especially in young children, as the symptoms may mimic other conditions such as infections or musculoskeletal disorders.[5] The early diagnosis of this condition can help prevent the requirement of surgical excision of isolated soft tissue cysticercosis.[1]

CONCLUSION

Intramuscular cysticercosis should be considered in the differential diagnosis of infants presenting with swelling, particularly in regions endemic for T. solium infection. This case report emphasizes the importance of a thorough and multidisciplinary approach, including clinical, radiological, and serological investigations, to differentiate muscular cysticercosis from other conditions, such as meningitis. Early diagnosis and timely initiation of anthelmintic therapy are crucial for a favorable outcome in patients with muscular cysticercosis.

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