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Case Report

Case report of a rare isolated cysticercosis of the inguinal region

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ABSTRACT

Cysticercosis, an infection with larval form of pork tape worm, *Taenia solium*, commonly presents with multiple muscular cysts or CNS involvement. Due to vague clinical presentation and unfamiliarity of clinicians with this entity, it is difficult to diagnose which seen as an isolated cyst. In this article presented a case of solitary inguinal region swelling in an 8-year-old boy which after diagnosis proved to be a solitary cysticercosis in the inguinal region which is very rare occurrence.

Keywords: Cysticercosis, Young, Inguinal region, Inguinal swelling

INTRODUCTION

Cysticercosis in humans is infection with larval form (cysticercus cellulosae) of the pork tapeworm *T.* solium.[1] The occurrence of cysts in humans in order of frequency is the central nervous system, vitreous humor of eye, striated muscles, subcutaneous tissue and rarely other tissues.[2] Most muscular disease is associated with central nervous system involvement, presence of multiple muscular cysts or both.[3] Isolated muscular involvement is rare finding.[4] Solitary cysticercosis of muscles and soft tissue is a rare disease and can cause a diagnostic dilemma clinically.[5]

CASE REPORT

An 8 years old boy came with a swelling in his left inguinal region for 3 years. The swelling was pea size to begin with and grew to the present size of 10×8 cm in past 3 months and turned painful. The swelling is smooth, firm, mobile in horizontal plane, non-reducible, and non-transilluminate. No neurological deficit or history of seizures present. The patient gives a history of pig meat consumption in a regular basis.

Figure 1: Left inguinal swelling frontal view.

Figure 2: Left inguinal swelling left lateral view.

The patient was diagnosed radiologically by ultrasonography which revealed that it might be case of cysticercosis of anterior abdominal wall in the muscular plane cyst measuring 1.3×1.3 cm with surrounding chronic abscess 5×3 cm.

After the probable radiological diagnosis decided to operate the patient for excision of cyst and drainage of pus.

Intraoperatively an oblique incision was given along the axis of the swelling. Subcutaneous fat and superficial fascia were incised. External oblique muscle was split and then about 50 ml of pus and one singular cyst was removed. The wound was packed and left open for 5 days and secondary suturing was done. Patient was started on oral antiparasitic drugs.

Figure 3: Intraoperative view of swelling.

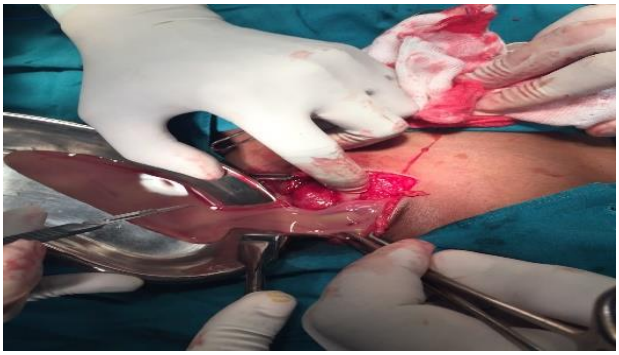

Figure 4: Drainage of the surrounding pus.

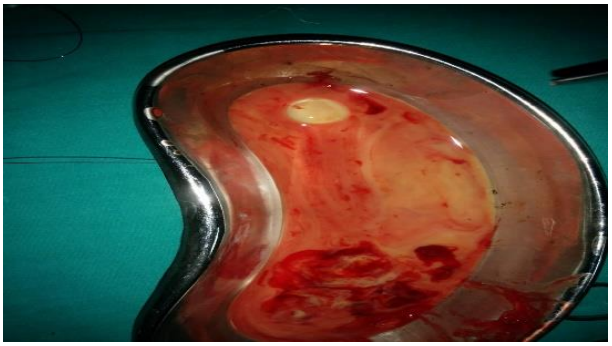

Figure 5: Drained pus with isolated cysticerci.

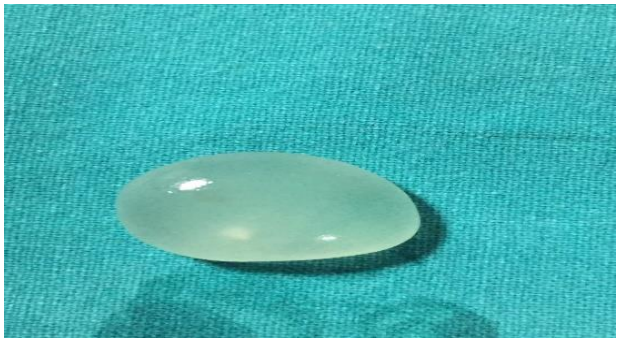

Figure 6: The isolated cysticerci.

Histopathology confirmed the diagnosis of cysticercosis. Report concluded of singular cysticerci with scolex inside.

Figure 7: Cavity after drainage.

A CT scan of brain was done in this patient later which did not show any signs of neurocysticercosis.

DISCUSSION

Cysticercosis has been designated as a 'biological marker' of the social and economic development of a community. All the biological markers for transmission of *T. solium* taeniasis and cysticercosis exist in India. It is likely that the disease is under reported in India because due attention has not been given to this neglected disease and systematic population-based studies are lacking. There are great disparities within the country in geography, ethnicity, religion rituals, income, food habits, personal hygiene, level of education and standards of living, which are likely to influence the disease burden.[6]

Humans are the only definitive host for this parasite. When people ingest the raw or undercooked infected meat, stomach enzymes lyses the outer shell of the parasite cyst, leaving the scolex (head) behind. The scolex has suckers and hooks (rostellum) that aid in attachment to the intestinal wall. Once the parasite has attached itself to the intestinal wall, the scolex proliferates and becomes an adult tapeworm over 2 months; these tapeworms can survive 4 years within the human intestines. They may reach 2 to 7 m in length.

Adult tapeworms produce eggs (proglottids), which mature, become gravid, detach from the tapeworm, and migrate to the anus or are passed in the stool. When pigs ingest the eggs from infected soil, the cycle begins again.[7] The cysticerci travels through the intestinal wall and through blood to other parts of body in humans as embryonated eggs/oncospheres.

Most muscular cysticercosis is asymptomatic and goes unnoticed for life of the patient. Rarely, after death of worm in cyst or trauma to cyst there is release of antigens from cyst which initiates immune reaction and inflammation around cyst, making it symptomatic.[7]

Clinical suspicion of cysticercosis is difficult unless this differential diagnosis is kept in mind and due importance is given to history. The other common pseudotumor causing similar presentation includes lipomas, neurofibromas, epidermoid cysts, pyomyositis or tuberculous lymphadenitis.[5,8,9]

Plain radiographs rarely show cysticerci unless they are degenerated and get calcified. Multiple small elongated calcifications in soft tissues shadows of thigh and calf are very likely of cysticercosis and not beneficial in musculoskeletal lesions.[10] Muscular cysticerci can be reliably diagnosed on ultrasound.[11,12] MRI assess the degree of infection and exact plane of lodgement of cyst in soft tissues. It visualises well the perilesional oedema and the degenerative changes of the parasite. Sometimes it can also show characteristic appearance of solitary cyst and a scolex within it. However, findings may differ according to the growth stage of parasite and host's immune response.[13]

Serological test for the detection of specific anti cysticercal antibodies in serum has low sensitivity for solitary cyst. Abdominal wall involvement mimics hernia, tumour like desmoids and endometriosis. Patient presenting with a solitary intramuscular lesion without CNS involvement, often pose with diagnostic difficulties owing to lack of specific clinical features.[14]

CONCLUSION

Isolated cysticercosis of the striated muscle is rare. Even more rare is its occurrence in the inguinal region which further worsens the diagnostic dilemma.

The case here presented an isolated cysticerci in the inguinal region which was managed by operative excision and pus drainage with anti-parasitic drugs is a very rare occurrence.

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