Isolated Myocysticercosis

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Abstract
Cysticercosis, a parasitic disease caused by larval form of *Taenia solium*, is a major health concern in the developing world. The encysted larval stage can affect any part of the body, but are most frequently detected in brain, eye, skeletal muscle and subcutaneous tissue. Most muscular cysticercosis are almost always associated with central nervous system involvement or with multiple intramuscular cysts or both. Here we report an unusual case of cysticercosis in right rectus muscle which was an isolated muscle involvement without any other systemic manifestation.

Introduction
Cysticercosis is the tissue infection caused by the larval form of the pork tapeworm, *Taenia solium*.¹ The occurrence of cysts in humans in order of frequency is the central nervous system, vitreous humor of eye, striated muscle, subcutaneous tissue and rarely other tissues. Most muscular disease is associated with central nervous system involvement or presence of multiple intramuscular cysts or both. Isolated muscular involvement is a rare finding and because of the non-specific symptoms, isolated soft tissue cysticercosis is very difficult to diagnose. Till date there are only a handful of cases of isolated muscular cysticercosis reported.² Diagnosis is made by computed tomography, magnetic resonance imaging, serological investigations and histopathology.³ In Indian scenario, this case needs documentation in the medical literature so that clinicians can have a differential diagnosis of an asymptomatic lump under the skin.

Case History
A 18 yrs old female presented with asymptomatic abdominal swelling for past one month in her right hypochondrium. Examination revealed a 1*2 cm non-tender, mobile, globular swelling, not fixed to the skin or underlying structures, and it was prominent with head rising. Rest of the examination was normal. USG abdomen showed a hypoechoic lesion measuring of approximately 8*5 mm with a central anechoic area and calcification inside the right rectus muscle suggestive of granulomatous lesion (Figure 1). Her dietary history also revealed occasional pork consumption. Her Absolute eosinophil count was only 100 (Ref range: 40-440). ELISA for anticytisticercal antibody was also negative. MRI abdomen was done which revealed a sub-centimeter sized well defined rounded lesion in the right rectus muscle likely to represent inflammatory granuloma – cysticercosis (Figure 2).

Discussion
Human cysticercosis is caused by infestation of *Cysticercus cellulosae*, the larval form of *Taenia solium* which results from eating food (undercooked pork or beef and raw vegetables) and water contaminated with viable eggs of *Taenia solium*.²,³ Infestation of the human intestine with an adult tapeworm is known as Taeniasis, whereas tissue infestation is called Cysticercosis.¹ Involvement of the central nervous system is called neurocysticercosis. Human are the only definite host while human and pigs can act as an intermediate host.

Cysticercosis can affect various organs including the brain, spinal cord, orbit, muscle, subcutaneous tissue and even heart. Clinical manifestations depend upon anatomic site of larval encystment, number of cysts and associated inflammatory response or scarring.³ Soft tissue cysticercosis...
frequently presents with multiple intramuscular lesions and central nervous involvement usually. Isolated soft tissue involvement is rare and clinically confused with other soft tissue lesions like neoplasm and other infective or inflammatory pathologies. 3

The most common presentation and site of soft tissue cysticercosis is a lump in upper extremities. Abdominal and chest wall lesions are seen less often. 1

Isolated soft tissue cysticercosis is often used as a marker of neurocysticercosis and an evaluation for coexisting central nervous system, and ocular involvement is recommended. 5

Serological test for specific anti-cysterceral antibodies has low sensitivity when the parasite burden is low as in solitary lesions. Radiological modalities like CT, MRI play a crucial role in establishing the diagnosis. 3

High-resolution sonography can clench the diagnosis by demonstrating the presence of a scolex within the cyst. 1 FNAC or excision biopsy provides most definitive diagnosis. The cyst is usually filled with clear fluid or sometimes it is pearly white and may show presence of scolex or parasite fragments.

Treatment of cysticercosis depends upon the site of involvement, number of cysts and symptoms of the patient. Isolated soft tissue cysticercosis can be treated with surgical excision along and/or with antihelminthic medications like albendazole or praziquantel. 3

In conclusion, isolated soft tissue cysticercosis is a rare entity and in a developing country like India it should be always kept as a differential for solitary abdominal lump and HPE studies (FNAC or biopsy) should always be carried out to confirm even in the absence of eosinophilia or serological evidence, like in our case and when Myocysticercosis is confirmed Neurocysticercosis should be ruled out by brain imaging always. Measures for prevention of the disease by proper cooking of meat, proper sanitation and hygiene practices and boiled and clean drinking water habits should be emphasized. Prompt recognition and early treatment of cysticercosis is always beneficial.

References