

A Rare Case Report on Isolated Cysticercosis of Arm

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Abstract: Cysticercosis refers to tissue infection after exposure to eggs of *Taenia solium*, the pork tapeworm. The disease is spread via the feco - oral route through contaminated food and water, and is primarily a food borne disease. The case report here describes a rare case of isolated cysticercosis infection of the arm. A 12 year old male came with complains of swelling of the left arm shoulder region, ultrasound revealed intramuscular cysticercosis for which surgical excision was done. This is a rare case of cysticercosis infection of the arm without involving the any vital organs.

Keywords: Cysticercosis; Intramuscular; Swelling in arm.

1. Introduction

The tapeworm that causes cysticercosis is endemic to many parts of the world including China, Southeast Asia, India, subSaharan Africa, and Latin America. Cysticercosis refers to tissue infection after exposure to eggs of *Taeniasolium*, the pork tapeworm. The disease is spread via the feco - oral route through contaminated food and water, and is primarily a food borne disease [5]. The Clinical syndrome caused by this parasite is categorized as either neurocysticercosis or extraneural cysticercosis (intestinal tapeworm, subcutaneous or muscular cysticerciinfection.) In order of frequency, the occurrence of cysts in humans is the central nervous system, the eye, striated muscle, subcutaneous tissue, and rarely, other tissues [1]. Most muscular cases are associated with central nervous system involvement, presence of multiple muscular cysts or both [2]. Isolated muscular involvement is rare [3] The cases can be treated medically or surgically. We report a rare case of surgically treated isolated cysticercosis involving the arm in the region of Surat, Gujarat, India.

2. Case Report

A 12 year old male presented in General surgery OPD of SMIMER hospital. he was non - vegetarian. His chief complaints were lump in left arm at shoulder region for 1.5 months. The onset was insidious, slowly progressive in nature and associated with occasional mild grade pain and discomfort.

On examination, there was a single mass on the lateral surface of left upper arm at shoulder region, approximately 3x3cm in size, not fixed to skin, slightly movable and mildly tender (Figure 1).

The ultrasonography report showed intra muscular cysticercosis with collection (Figure 2). Patient was treated surgically, complete excision of cyst was done (Figure 3). Histopathological report showed features consistent with degenerated cysticercous cyst.



Figure 1

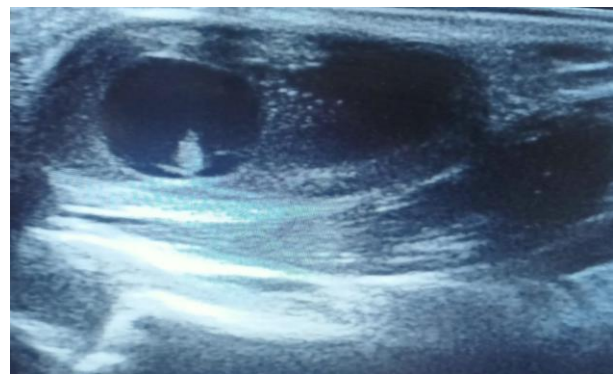


Figure 2



Figure 3

3. Discussion

Taeniasis, the condition caused by infection with adult worm, *Taenia solium*, is worldwide in distribution, but endemic in some parts of the world. While taeniasis is rarely seen in those who do not eat pork, cysticercosis occurs in all ethnic groups regardless of dietary habits. Cysticercosis in man is caused by the encystment of the larval form of *T. solium* and is the most important clinical manifestation of *T. solium* infection in man [4].

In the normal life cycle of *T. solium*, man is the definitive host and pig is the intermediate host. Cysticercosis in man occurs when man accidentally becomes the intermediate host, by ingestion of eggs through contaminated water and food which in turn is related to poor hygiene and poverty, therefore, the disease is mainly seen among low socio-economic classes in China, Eastern Europe, India, Indonesia, South America and Pakistan [6].

The incubation period ranges from months to over ten years. Ova are digested in the stomach and release oncospheres which penetrate the intestinal wall and reach the bloodstream. These oncospheres develop into cysticerci in any organ but are common in brain, subcutaneous tissue, muscle or eyes [7].

The Cysticerci can develop in any voluntary muscle in humans. Invasion of muscle by cysticerci can cause myositis with fever, eosinophilia and muscular pseudo hypertrophy leading to atrophy and fibrosis. In most cases, it is asymptomatic since the cysticerci die and become calcified [7, 8].

Previously stool samples were used to demonstrate tapeworm eggs. Antibody to cysticerci by ELISA method is more sensitive and specific. However, Individuals with intracranial lesions and calcifications may be seronegative [9]. Ultrasonography is useful for subcutaneous and muscular cysticercosis [10]. CT or MRI is the most useful method of diagnosis. CT scan shows both calcified and

uncalcified cysts, as well as distinguishing active and inactive cysts [11]. Treatment recommendations for subcutaneous and muscular cysticercosis include surgery and antihelminthics [12].

Three different clinical manifestations of muscular cysticercosis are described: myalgic myopathic type; the nodular or mass like type; and the pseudohypertrophy type in which multilocular cyst formation occurs in group of muscle [13, 14]. The myalgic type results from death of the cyst and leakage of fluid leading to inflammation. The nodular type or pseudotumor type both result from degeneration of the cyst and slow intermittent leakage of fluid over time, leading to a chronic inflammatory response with collection of fluid around the cyst producing a mass. Our case was characteristic of the myalgic variant.

Treatment of cysticercosis depends on the site of involvement. Isolated muscular or subcutaneous cysticercosis require no specific treatment unless it is painful, which may necessitate excision.

4. Conclusion

In countries like India where people live in places where pigs are reared and sanitary conditions are poor, cysticercosis should be in differential diagnosis of intramuscular swellings. Medical management will cure the disease but if the patient is having severe pain and tenderness with difficulty in carrying daily activities, it is always advisable to excise the cyst, especially when it is solitary. Surgery is one - time procedure with quick results and will give a specific diagnosis. Cysticercosis carries good prognosis if diagnosed and treated. It is important to screen family members if they are carriers and treat them as well. Always educate patient of good hygiene and to eat properly cooked meat.

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