

Cysticercosis of the Pectoralis Major: A Case Report and Review of Literature

Mangala Nagare, Sneha R. Joshi, Rupali Munde, Sandesh Gawade

Department of Pathology and Surgery, MIMER Medical College, Talegaon Dabhade, Pune, Maharashtra, India

ABSTRACT

Cysticercosis is a condition caused by the encysted larval form of *Taenia solium*. Cysticercosis can involve any tissue of body but, commonest system affected is the central nervous system neurocysticercosis (80%), followed by subcutaneous tissue, eyes. Sporadic cases of solitary intramuscular cysticercosis have been reported in the literature. We report a case of Cysticercosis in a 28 year old female patient, who presented with a swelling over the left side of pectoralis region. Imaging techniques revealed a cystic mass in the left pectoralis major muscle. Cyst was excised, submitted for histopathology and was diagnosed as Cysticercosis. Treatment should be instituted after definite diagnosis and multidisciplinary management may be required in complex cases.

Key words: Cysticercosis, muscles, *Taenia solium*

INTRODUCTION

Cysticercosis is a condition caused by the encysted larval form of *Taenia solium* (pork tapeworm).^[1] *T. solium* infection is endemic in many countries of Latin America, Africa and Asia, India, as well as in some parts of Europe and the Union of Soviet Socialist Republics.^[2,3]

Neurocysticercosis is the most common parasitic disease of the central nervous system (CNS) worldwide.^[3] It may present as intramuscular or subcutaneous nodules the latter being rare. Clinically, it may be mistaken as lipoma or neurofibroma.^[4,5]

Here, we describe a case of intramuscular cysticercosis in a 28-year-old female who presented

with the swelling over the left side of pectoralis region. Young female presenting with swelling on chest can lead the treating surgeon to number of differential diagnosis ranging from an abscess to neoplasm, but cysticercosis can never be thought of particularly in the absence of neurocysticercosis even though sporadic cases of solitary myocysticercosis have been reported in literature.^[7]

CASE REPORT


A 28-year-old female who presented with a swelling over the left side of pectoralis region for 2 months. On local examination, the swelling was measuring 3 cm × 2 cm, well-defined, soft to firm. The overlying skin appeared normal.

Routine investigations were within normal limits.

No eosinophilia was found in peripheral blood smear.

On ultrasound examination, the features were suggestive of cysticercosis.

The swelling was excised under local anesthesia and the nodular mass was sent for histopathological examination which showed intramuscular cysticercosis

Access this article online	
Website: www.mmj.net.in	Quick Response Code 
DOI: 10.15713/ins.mmj.47	

Address for correspondence:

Rupali Munde, Department of Pathology and Surgery, MIMER Medical College, Talegaon Dabhade, Pune, Maharashtra, India. E-mail: rblahane@gmail.com

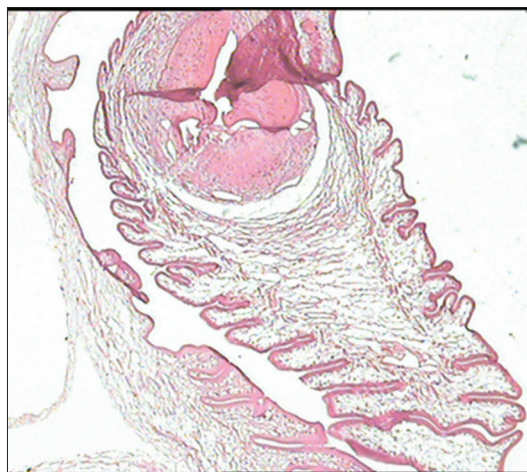


Figure 1: (10 × View) Photograph showing scolex of *Taenia solium* with suckers

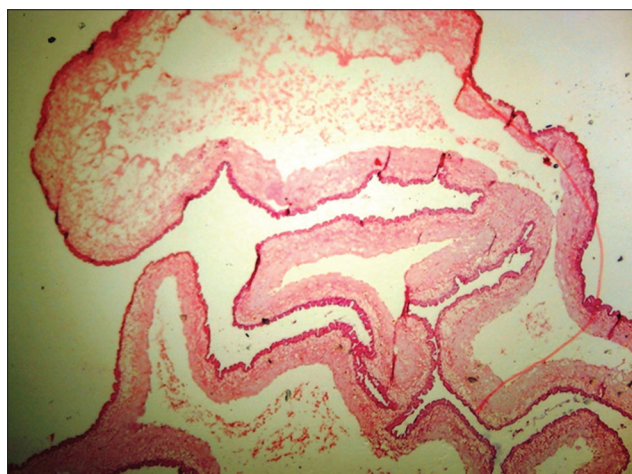


Figure 2: (10 × View) Photograph showing inflammatory reaction – giant cell, lymphocytes, and plasma cells

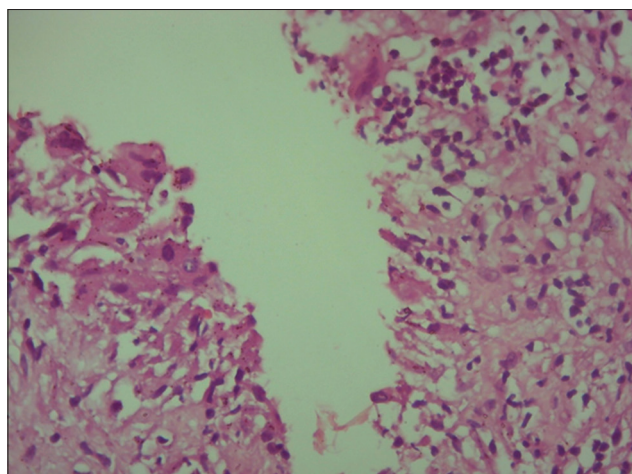


Figure 3: (10 × view) Cystic wall of cysticercus

surrounded by foreign body giant cells and inflammatory infiltrate composed of lymphocyte and histiocytes, so the diagnosis of cysticercosis was offered [Figures 1-3].

DISCUSSION

Human cysticercosis is a major health concern worldwide.^[6] Tapeworm infection is common in developing countries where the combination of rural society, crowding, and poor sanitation allows greater contact between humans and pigs and thus more opportunities for fecal contamination of food and water.

The pork tapeworm can cause two distinct forms of infection. The form that develops depends on whether humans are infected with adult tapeworms in the intestine or with larval forms in the tissues, so-called cysticercosis. Humans are the only definitive hosts for *T. solium*, while pigs are the usual intermediate hosts, although dogs, cats, and sheep may harbor the larval forms.

The adult tapeworm generally resides in the upper jejunum. Its globular scolex attaches by both sucking disks and two rows of hooklets. The tapeworm, usually about 3 m in length, may have as many as 1000 proglottids each of which produces up to 50,000 eggs. Groups of 3-5 proglottids generally are released and excreted into the feces and the eggs in these proglottids are infective for both human and animals. The eggs survive in the environment for several months.^[3]

Clinical manifestations depend on the organ involved, extent of involvement, and cysticerci load.

The most common system affected is the CNS followed by subcutaneous tissue, eyes, and muscles.

Intramuscular cysticercosis was reported in majority with the disseminated form of the disease. Hence, it warrants investigation to rule out neurological and ocular involvement.^[6] In our case, the computed tomography scan of the brain and ophthalmic examination were normal.

In the muscular type of cysticercosis, three different clinical manifestations described are the myalgic type; the mass-like, pseudotumor or abscess-like type, and the rare pseudohypertrophic type.^[6] Our patient presented with clinical nodular, mass-like abnormalities. Patients with the muscular cysticercosis are mostly asymptomatic as was seen in our case.

The treatment should be individualized, based on the number and location of cysts and their viability. Medical treatment is more effective for parenchymal cysts and less effective for intraventricular,

subarachnoid cysts. Albendazole and praziquantel are both effective in the treatment.^[2]

The patient was treated with albendazole (15 mg/kg/day) for 14 days. On follow-ups at the 2nd and 4th weeks, the swelling showed reduction in size and no new swelling or symptoms were noticed. There was complete resolution of the swellings at 3 months follow-up.

As we know, “Prevention is much better than cure.”

Cysticercosis is a preventable disease. The methods usually employed for control are as follows: (a) Treatment of infected person, (b) meat inspection, (c) health education, and (d) adequate sewage treatment and disposal.

Early detection and early treatment of *T. solium* cases is essential to prevent human cysticercosis.^[2]

CONCLUSIONS

The possibility of intramuscular cysticercosis should be thought in non-endemic regions like ours, whenever a patient presents with a nodule or swelling over the body. USG should be considered as an initial investigation to rule out intramuscular cysticercosis and in doubtful cases, invasive techniques such as fine-needle aspiration cytology or fine-needle aspiration biopsy could be performed for establishing the diagnosis.

REFERENCES

1. Chauhan S, Singh G, Khan I. Cysticercosis of the pectoralis major: A case report and review of literature. *Am J Dermatopathol* 2017;39:e34-7.
2. Park K. Park's Textbook of Preventive and Social Medicine. 24th ed. Jabalpur: M/s Bhanarasidas Bhanot Publishers; 2017. p. 319.
3. Patil C, Kharat R, Deshmukh P, D'Souza B. Cysticercosis of the neck: A case report. *Asian Pac J Trop Med* 2010;3:833-4.
4. White AC Jr., Weller PF. Kasper cestode infections. In: Dennis L, editor. *Harrison's Principles of Internal Medicine*. 19th ed. United States: McGraw-Hill Education; 2018. p. 1430-1435.
5. Goyal DN, Priyadarshini I, Katta VR, Kumar VA. Subcutaneous cysticercosis-a case report. *IOSR J Dent Med Sci* 2014;13:1-2.
6. Kanhere S, Bhagat M, Phadke V, George R. Isolated intramuscular cysticercosis: A case report. *Malays J Med Sci* 2015;22:65-8.
7. Chaudhary S. Cysticercosis of deltoid muscle. *BMJ Case Rep* 2014;2014:bcr2014204578.

How to cite: Nagare M, Joshi SR, Munde R, Gawade S. Cysticercosis of the pectoralis major: A case report and review of literature. *MIMER Med J* 2020;4(1):16-18.

Source of Support: Nil. **Conflicts of Interest:** None declared