

*Case Report***Solitary Intramuscular Cysticercosis- A Rare Case Report of Two Cases**Yashas H R¹, Srinath R², Geetha Avadani³, Tejas Nagireddy⁴¹Assistant Professor, ²Professor, ³Professor & HOD, ⁴Post Graduate,
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*Received: 03/08/2015**Revised: 27/08/2015**Accepted: 01/09/2015***ABSTRACT**

Introduction- Cysticercosis - A helminthic infestation caused by *Taenia solium* (pork tapeworm), can produce central nervous system, muscles, visceral, subcutaneous tissues and skin manifestations. Cysticercosis in muscles does not cause any symptoms. However, one may feel lump under the skin, Solitary intramuscular cysticercosis without involvement of central nervous system is a rare entity. We present two cases of solitary intramuscular cysticercosis, without any systemic or neurological manifestations.

Discussion - Human cysticercosis is an infection by the tapeworm *Taenia solium*. It is seen in central and South America, Africa, India, and China. Tapeworm infection is commonly seen in developing countries due to a combination of factors like rural society, crowding and poor sanitation allowing greater contact between humans and pigs. Infection with the adult worm takes place by the ingestion of uncooked or ill- cooked pork containing larvae of *Taenia solium*.

Conclusion - Cysticerci can develop in any voluntary muscles in humans. Invasion of muscle by cysticerci can cause myositis, with fever, eosinophilia, and muscular pseudohypertrophy, which initiates muscle swelling and later progress to atrophy and fibrosis. In most cases, it is asymptomatic since the cysticerci die and become calcified. Painful and bothersome cysts can be surgically removed.

Keywords: Cysticercosis, Intramuscular, *Taenia solium*.

INTRODUCTION

Cysticercosis is no longer an endemic disease of the developing countries. It has become a global problem, because of immigration from endemic areas. [1,2] The larvae form cysts commonly in the brain, meninges, and eyes, which together constitute 86% of the cases. The other locations are muscle, heart, lungs, and peritoneum. Solitary cysticercosis of muscle without central nervous system involvement is rare causing difficulty in the diagnosis. We present here, two cases of solitary intramuscular cysticercosis.

CASE SUMMARY -1

Case 1- We report a rare case of young female 28year old who presented to OPD with painless swelling in the left lumbar region.

On examination it revealed 2x1 cm single smooth, firm, tender, non mobile located deeper in the muscular plane.

Haematological parameters showed normal complete blood count.

She had no history of seizures or neurological or systemic abnormalities. And initially diagnosed as intermuscular lipoma or cyst. On USG f/s/o Intramuscular cysticercosis.

The mass was surgically excised and a smaller pearly white cyst about 2 cm in size containing clear fluid was noted. Specimen was sent for HPE. HPE report- sections show multiple larval forms of cysticercosis cellulosa with features suggesting cysticercosis.



Figure 1 showing excision of intramuscular cysticercosis



Figure 2 showing excised cyst.

CASE 2

35 year old female patient, homemaker from Kunigal presented with complaints of gradually increasing swelling over the right upper abdomen since two weeks, not associated with pain, fever.

An Oval swelling 5x2 cm in right lumbar region, smooth surface, cystic to firm in consistency, margins well defined, skin over

the swelling normal, arising from deep structure, non mobile, no blood vessels visible, regional lymph nodes not palpable.

Systemic examination: nothing significant.

Local scan - An intramuscular well defined oval cystic lesion measuring 2.4x1cm is noted along the axis of the muscle plane of external abdominis. An eccentric echogenic focus is noted in its superior wall. No e/o internal echoes/sepatations. No e/o vascularity on applying Doppler

F/S/O s/o intramuscular cysticercosis.

The mass was surgically excised and a pearly white cyst of 4 cm in size containing clear fluid was noted intramuscularly.

**FNAC AND HPR SHOWED
INTRAMUSCULAR PARASITIC
GRANULOMA**



Figure 3 showing pre operative photograph.



Figure 4 showing post operative photograph

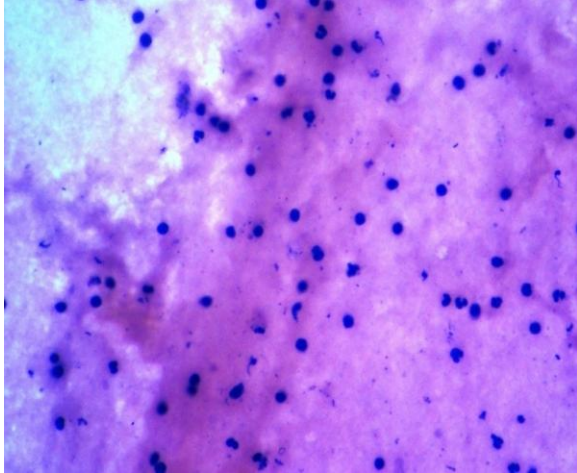


Figure 5 showing FNAC

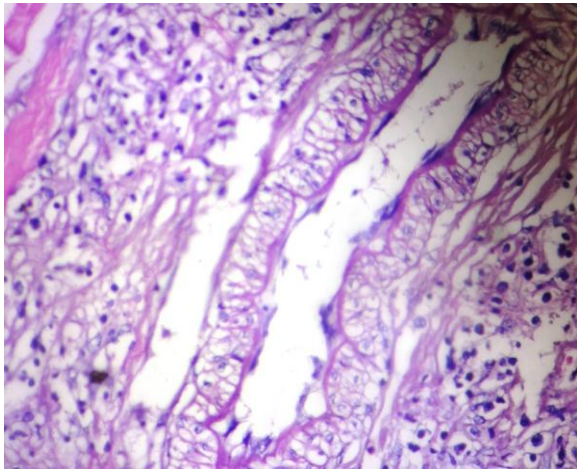


Figure 6 showing histology

DISCUSSION

Human cysticercosis is an infection by the tapeworm *Taenia solium*. It is rare in Europe & North America, seen in central and South America, Africa, India, and China. [3] Tapeworm infection is commonly seen in developing countries due to a combination of factors like rural society, crowding and poor sanitation allowing greater contact between humans and pigs. [4] Infection with the adult worm takes place by the ingestion of uncooked or ill-cooked pork containing larvae of *Taenia solium*.

LIFE CYCLE

The larval wall is destroyed by secretions in stomach, releasing tapeworm

head which passes into and attaches to the intestinal mucosa, and grows into an adult worm in 5-12 weeks. Eggs are passed into the faeces. Eggs are thick shelled and hence are not destroyed in the soil for days together. When humans ingest the eggs, the gastric secretions break the egg wall and release the oncospheres which penetrate the intestinal wall, enter the mesenteric venules, spread throughout the body, and reach the subcutaneous and intramuscular tissues, eye, brain and other body sites. [5]

Cysticerci can develop in any voluntary muscle in humans. Invasion of muscle by cysticerci can cause myositis, with fever, eosinophilia, and muscular pseudohypertrophy, which initiate with muscle swelling and later progress to atrophy and fibrosis

In most cases, it is asymptomatic since the cysticerci die and become calcified.

In general, subcutaneous disease does not need specific therapy. Painful or bothersome cysts can be surgically removed and patient to be put on anti helmenthics praziquantal/ albendazole for 2 months.

Cysticercosis is considered as “tools-ready disease” according to WHO. International Task Force for Disease Eradication in 1992 reported that cysticercosis is potentially eradicable. [6] It is feasible because there are no animal reservoirs besides humans and pigs.

The only source of *Taenia solium* infection for pigs is from humans, a definite host. Theoretically, breaking the life cycle seems easy by doing intervention strategies from various stages in the life cycle.

For example, Massive chemotherapy of infected individuals, improving sanitation, and educating people are all major ways to discontinue the cycle, in which eggs from human feces are transmitted to other humans and/or pigs.

Cooking of pork or freezing it and inspecting meat are effective means to cease the life cycle.

The management of pigs by treating them or vaccinating them is another possibility to intervene. The separation of pigs from human faeces by confining them in enclosed piggeries. In Western European countries post World War 2 the pig industry developed rapidly and most pigs were housed. This was the main reason for pig cysticercosis largely being eliminated from the region. This of course is not a quick answer to the problem in developing countries.

CONCLUSION

Cysticerci can develop in any voluntary muscles in humans. Invasion of muscle by cysticerci can cause myositis, with fever, eosinophilia, and muscular pseudohypertrophy, which initiates muscle swelling and later progress to atrophy and fibrosis. In most cases, it is asymptomatic since the cysticerci die and become calcified. Painful and bothersome cysts can be surgically removed.

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