

# A Rare Case of Asymptomatic Intramuscular Cysticercosis

Vatsayan Rahul<sup>1</sup>, Sood Abhinandan<sup>2</sup>

<sup>1</sup>Incharge, Medicine Unit, Civil Hospital, Bhawarna, Distt. Kangra (HP)

<sup>2</sup>Incharge, Paediatric Unit, Civil Hospital, Bhawarna, Distt. Kangra (HP)

Corresponding Author: Sood Abhinandan

## ABSTRACT

Cysticercosis is a parasitic disease affecting the worldwide population. There is a large volume of data present in the literature for neurocysticercosis. The intramuscular involvement of cysticercosis is not very common with a few cases described in the literature. Knowledge about the clinical presentation and the radiological appearance of the intramuscular cysticercosis is important, especially in low resource settings. Here we describe a case of an asymptomatic 70-year-old male who presented to us for routine clinical examination and was found to have intramuscular cysticercosis. This case description would improve the understanding of the clinical presentation as well as the diagnosis and treatment of intramuscular cysticercosis.

**Keywords:** Cysticercosis, Parasitic disease, Tropical disease

## INTRODUCTION

Cysticercosis, a parasitic infection caused by encysted larvae of *Taenia solium*, the pork tapeworm.<sup>1</sup> Cysticercosis is a disease of major concern in the developing countries, owing to poor sanitation conditions, especially in Latin America, Asia, and Africa; however, now it is also seen in the developed countries due to increased travel and immigration.<sup>2,3</sup> Cysticercosis results from fecal-oral contamination.<sup>2</sup> The central nervous system and the muscles are the most commonly involved sites in the body. Myalgias, or feeling of mass, pseudotumor, or pseudohypertrophy are the clinical

manifestations of the muscle disease;<sup>2</sup> Commonly used laboratory tests such as the eosinophil count and the ESR are usually inconsistent<sup>3</sup>. Thus the clinical diagnosis of intramuscular cysticercosis can be difficult, especially in resource limited settings, necessitating further imaging evaluation. The imaging appearance of cysticercosis depends on the status of the parasites. Radiographs can depict rice-like calcifications of the calcified cysts<sup>5</sup>. Ultrasonography demonstrates the presence of eccentric echogenic scolex in the cysticercus.<sup>3</sup> The treatment of intramuscular or subcutaneous cysticercosis is given only in symptomatic patients, who develop pain or local inflammation.<sup>2,3</sup> Antiparasitic agents, such as albendazole or praziquantel,<sup>3</sup> can be administered to hasten the involution of cysticercosis, and corticosteroids can be added to reduce the host response and inflammatory changes associated with rupture of the cysts.<sup>3</sup>

## CASE DESCRIPTION



Figure1: Depicting the lesions in the chest wall



Figure2: The Lesions present over the abdomen



Figure3: The Lesions on the right upper arm



Figure 4: Lesions present over the bilateral forearms

A 70-year-old man with no past medical history came to Outpatient department at a peripheral health institution in North India for routine clinical evaluation. He did not report any symptoms and had no associated co-morbidities. On clinical examination; several lumps were palpated in the skin of the entire body, with arms and legs predominance. No other

clinical abnormalities were found, with normal neurological and ophthalmological examinations. Complete blood count and routine biochemical examination of the patient were normal. Chest radiography also revealed numerous “rice grain” calcifications resembling the starry sky appearance throughout the thorax, oriented in the plane of muscle fibers, whose appearance was highly suggestive of disseminated cysticercosis with muscular involvement (Figure 1). A careful review of other radiological imaging revealed abdominal (Figure2), superior limb (Figure 3 and 4), pelvic (Figure 5) as well as lower limb involvement (Figure 6). Anticysticercal antibodies tests and a CT head were not performed due to financial restrictions. Since the patient was asymptomatic at the time of diagnosis, no specific therapy was administered. The patient was kept under close follow-up for 6 months and was healthy and asymptomatic.



Figure 5: Lesions present all over the pelvis

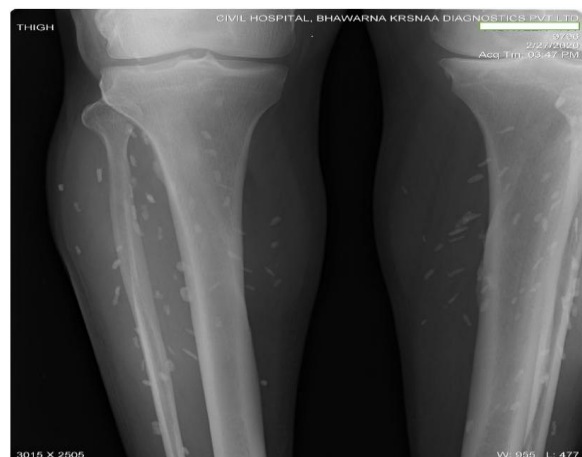


Figure 6: Lesions over the bilateral lower limbs

## DISCUSSION

Cysticercosis is a tropical disease, which is highly prevalent in Africa, Asia, and Latin America.<sup>6</sup> It is caused by the presence of *Taenia solium* parasite in its larval stage in the tissue of intermediate hosts (pork and cattle). Human beings are the accidental intermediate host with most of the infection acquired by fecal-oral contamination or by ingestion of inappropriate cooked and egg-contaminated food or water<sup>6, 7, 8</sup>. Cysticercosis infects any tissue of the body, the most commonly affected sites being the central nervous system, subcutaneous tissue, eyes, and muscles<sup>9</sup>. Clinical features depend on the location and extent of involvement of the cyst. Muscular involvement is usually asymptomatic, although it can produce muscle pain, mass-like nodules, and/or muscle pseudohypertrophy<sup>6,7,8,9</sup>. The imaging appearance depends on the status of the parasites. If cysts are calcified, radiography can demonstrate rice-like calcifications oriented in the plane of the muscle fibers<sup>9</sup>. Treatment of intramuscular cysticercosis depends primarily on the presence of symptoms<sup>8</sup>. The authors intended to highlight this rare condition, its nonspecific presentation, and indolent clinical course. Therefore a thorough knowledge of the characteristic radiological pattern is mandatory to make a prompt and accurate diagnosis.

## CONCLUSION

Cysticercosis is a tropical disease that has now become a major health concern worldwide. Infection occurs due to fecal-oral contamination or by ingestion of inappropriate cooked and egg-contaminated food or water by *Taenia solium* parasites. The typical clinical presentation and the radiological pattern of rice-like or starry sky appearance seen on the radiographs are very typical and should alert the physician, especially in the low resource settings. The

patients should not be treated if they are asymptomatic.

**Conflict of Interest:** None

## REFERENCES

1. Oscar H. Del Brutto, Julio Sotelo, Neurocysticercosis: An Update, *Reviews of Infectious Diseases*, Volume 10, Issue 6, November 1988, Pages 1075-1087
2. Ramraje S, Bhatia V, Gsoel A. Solitary intramuscular cysticercosis-a report of two cases. *AMJ* 2011; 4:58-60.
3. Tripathy SK, Sen RK, Akkina N, Hampannavar A, Tahasildar N, Limaye R. Role of ultrasonography and magnetic resonance imaging in the diagnosis of intramuscular cysticercosis. *Skeletal Radiol* 2012; 41:1061-6.
4. Juan YH, Saboo SS, Tirumani SH, Khandelwal A, Shinagare AB, Ramaiya N, et al. Malignant Skin and Subcutaneous Neoplasms in Adults: Multimodality Imaging with CT, MRI, and FDG PET/CT. *AJR Am J Roentgenol* (in press).
5. Oh JY, Kim MJ, Sohn JW, Hong SJ, Yoon YK. Asymptomatic disseminated cysticercosis in an immunocompetent patient. *Korean J Intern Med* 2012; 27:481-2
6. García HH, Gonzalez AE, Evans CA, Gilman RH; Cysticercosis working group in Peru. *Taenia solium* cysticercosis. *Lancet* 2003 Aug 16;362(9383):547-5
7. Venkat B, Aggarwal N, Makhaik S, Sood R. A comprehensive review of imaging findings in human cysticercosis. *Jpn J Radiol* 2016 Apr; 34(4):241-57.
8. Liu H, Juan YH, Wang W, et al. Intramuscular cysticercosis: Starry sky appearance. *QJM* 2014 Jun;107(6):459-61
9. Meena D, Gupta M, Jain VK, Arya RK. Isolated intramuscular cysticercosis: Clinicopathological features, diagnosis, and management - A review. *J ClinOrthop Trauma* 2016 Oct-Dec; 7(Suppl 2):243-9.

How to cite this article: Rahul V, Abhinandan S. A rare case of asymptomatic intramuscular cysticercosis. *International Journal of Science & Healthcare Research*. 2021; 6(1): 320-322.

\*\*\*\*\*