Cysticercosis Cellulosae Cutis: A Forgotten Entity

Abstract

Cysticercosis cellulosa cutis is caused by larval stage of Taenia solium. It most commonly affects central nervous system, muscle, and subcutaneous tissue. Here, we report a case of 70-year-old female who was misdiagnosed on ultrasound as abscess and was treated with no improvement. Later, she was diagnosed on FNAC as cutaneous cysticercosis. Hence, we report this case because of its uncommon clinical presentation and diagnostic difficulty.

Keywords: *Cutaneous cysticercosis, cutaneous manifestation of Taenia solium, cysticercosis cellulosa cutis, multiple subcutaneous nodules in 70 year old*

Kanagala Chowdary Neethu, Akshay Jain, S. Haritha

Department of Dermatology, Dr Pinnamaneni Sidhartha Institute of Medical Sciences and Research Foundation, Chinaoutapali, Andhra Pradesh, India

Introduction

Human cysticercosis is a parasitic infection caused by the larval form of Taenia Solium, known as cysticercus cellulosae. In India, the first case of cutaneous cysticercosis was recorded by Campbell and Thomson in 1912.[1] Here, we report a case of cysticercosis cellulosae cutis because of its atypical presentation and diagnostic difficulty.

Case Report

A 70-year-old female patient presented with multiple swellings of 4 months duration over chest, abdomen, and right hand. The lesion started as single small swelling over the right side of abdomen which gradually increased in size and number involving other areas within 4 months. On examination, multiple skin colored, firm, nontender, mobile subcutaneous nodules---10 in number varying in size from 1 to 5 cm diameter were present as shown in Figure 1. Eosinophil count was high. Ultrasound and CT abdomen done outside showed abscess. Repeat ultrasound showed multiple oval hyperechoic with central anechoic regions and some fluid-filled cavities suggestive of cutaneous cysticercosis as shown in Figure 2. FNAC was done which showed scolex, hook, cyst with surrounding fluid cavity and cyst macrophages confirming cysticercosis [Figure 3]. Retrospective history revealed eating of pork 7 years ago. Patient was started on oral albendazole 400 mg thrice daily with which there was significant resolution of lesions.

Discussion

Cysticercosis is the most common parasitic disease of the central nervous system in the world but cysticercosis cutis has been reported much less frequently.[2] The infection is common in India, Africa, Mexico, and South America.[3] Less than 50 disseminated cysticercosis cases have been reported worldwide.[4]

Any age and gender may be affected but children commonly suffer because of increased chance of fomite infection.[5] The present case was of 70-year-old female, which is of uncommon occurrence. In the majority of cases, brain, eyes, or skeletal muscle are involved. Brain is the most common location accounting for 60–90% of all cases.[6] In the subcutaneous tissue, most commonly affected site for the lesions was upper extremity, followed by the head and neck.[7] Our case showed involvement of subcutaneous tissue of abdomen and breast. It is also uncommon to see multiple foci present in a single individual.[7] Our case had 10 foci of subcutaneous nodules.

The symptoms may occur 5 years after infection, but may appear even after 10--30 years.[7] The present patient gave a history of 7 years after which

How to cite this article: Neethu KC, Jain A, Haritha S. Cysticercosis cellulosae cutis: A forgotten entity. Indian Dermatol Online J 2019;10:574-6.

Received: December, 2018. **Accepted:** February, 2019.

Address for correspondence:
Dr. Kanagala Chowdary Neethu, HIG-125, VUDA Colony, Vinayak Nagar, Visakhapatnam - 530 044, Andhra Pradesh, India.
E-mail: neethuchowdary1@gmail.com

Access this article online

Website: www.idoj.in

DOI: 10.4103/idoj.IDOJ_469_18

Quick Response Code:

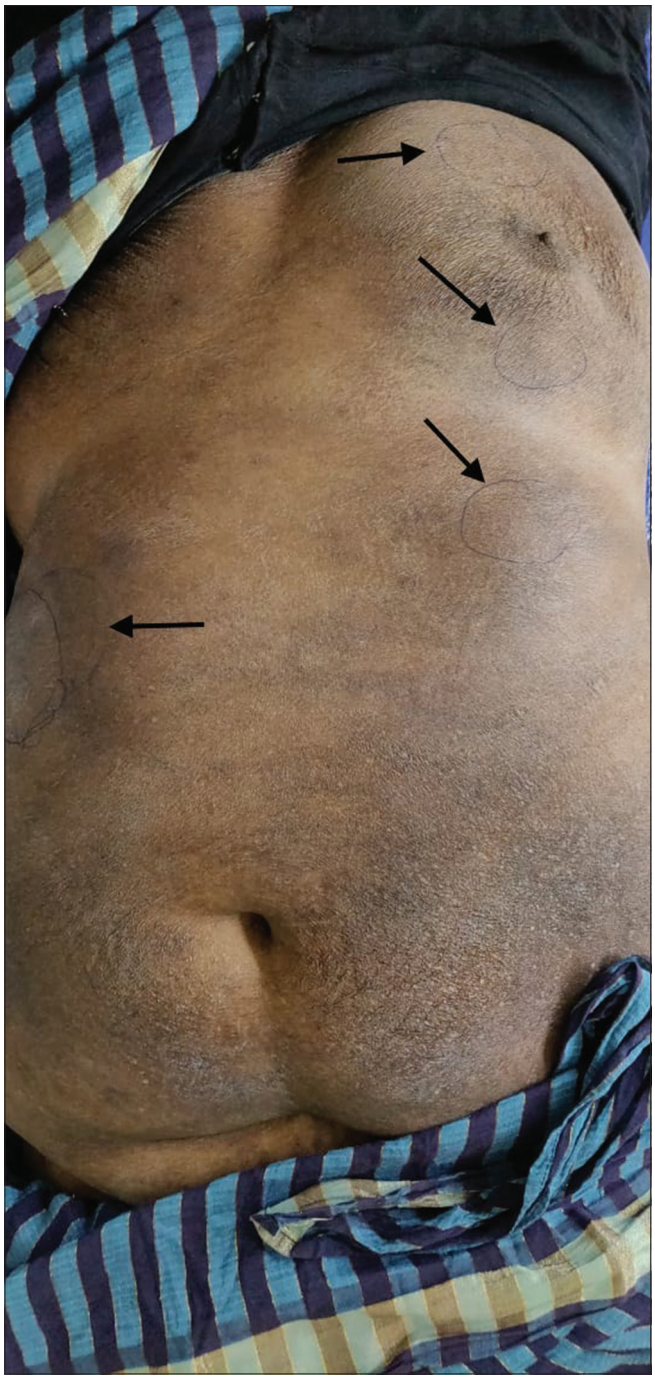

Figure 1: Multiple subcutaneous nodules over abdomen and left breast

she developed lesions. The clinical features depend on the location of the cyst, the cyst burden, and the host reaction.[8] Subcutaneous cysticercosis may cause painless or painful subcutaneous nodules.[8] Clinically, soft tissue cysticercosis can be misdiagnosed as lipoma, epidermoid cyst, abscess, pyomyositis, tuberculous lymphadenitis, neuroma, neurofibroma, sarcoma, myxoma, ganglion, or fat necrosis.[8]

Ultrasonography (USG) is the initial and most reliable diagnostic modality for a soft tissue swelling.[8] The most

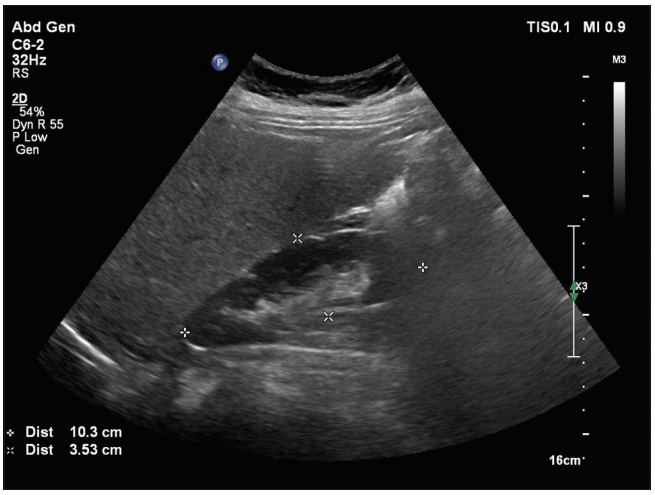

Figure 2: Ultrasound showing oval hyper echoic with central anechoic region

common USG appearance of soft tissue cysticercosis that was encountered by Naik *et al*. in their study was that of an intramuscular abscess.[8] Hence, it is important to think of cysticercosis even when USG report shows abscess in atypical cases as in our case. The diagnosis of cysticercosis can be confirmed by fine-needle aspiration cytology (FNAC) or biopsy, which shows the detached hooklets, scolex, and fragments of the spiral wall of cysticercosis cellulosae.[8] A study done by Pooja Kala and Prathima Khare found that it was a rare finding to see scolex on FNAC which they observed only in 1 case out of 137 cases.[7] Our case has scolex seen on FNAC.

Treatment of soft tissue cysticercosis depends on the location of the cysts. Surgical excision is done for isolated skeletal muscle or soft tissue cysticercosis associated with abscess.[8] Cysts that are not associated with abscess can be treated with antihelminthic medications such as albendazole or praziquantel.[8]

Conclusion

Although cysticercosis commonly involves the central nervous system, it can affect other unusual sites like skeletal muscles, eye, heart, lungs, liver, and subcutaneous tissues. In endemic areas like ours, subcutaneous cysticercosis should be thought of as a possibility whenever a patient presents with swelling or nodule over the body. Appropriate investigations like FNAC should be performed for establishing the diagnosis. Public health education regarding personal hygiene and proper handling techniques must be encouraged.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patients have given their consent for their images and other clinical information to be reported in the journal. The patients understand that

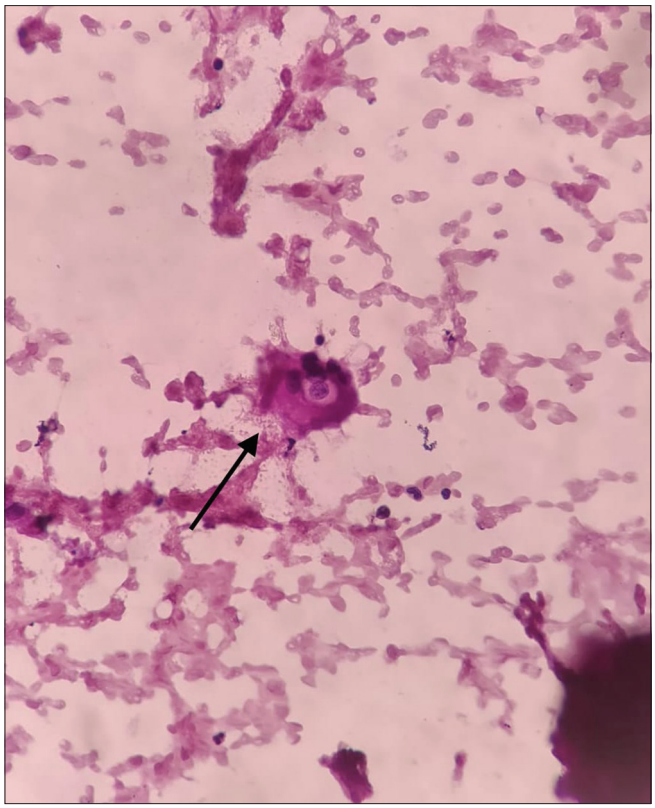

Figure 3: FNAC---showing scolex, hooks and macrophages with H and E staining under high power

their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Arora PN, Sanchetee PC, Ramakrishnan KR, Venkataram S. Cutaneous, mucocutaneous and neurocutaneous cysticercosis. Indian J Dermatol Venereol Leprol 1990;56:115-8.
2. Schmidt DK, Jordaan HF, Schneider JW, Cilliers J. Cerebral and subcutaneous cysticercosis treated with albendazole. Int J Dermatol 1995;34:574-9.
3. Valia RG, Valia AR. IADVL Textbook of Dermatology. 3rd ed. Mumbai, India: Bhalani Publishing House; 2010. p. 441-4.
4. Sacchidanand S, Namitha P, Mallikarjuna M, Nataraj HV. Disseminated cutaneous cysticercosis and neurocysticercosis: A rare occurrence. Indian Dermatol Online J 2012;3:135-7.
5. Meena D, Gupta M, Jain VK. Isolated intramuscular cysticercosis: Clinicopathological features, diagnosis and management - A review. J Clin Orthop Trauma 2016;7:243-9.
6. Siddeswari R, Manohar S, Sudarsi B. Cutaneous cysticercosis. J Acad Med Sci 2012;2:132-4.
7. Kala P, Khare P. Fine-needle aspiration cytology as a diagnostic modality for cysticercosis: A clinicocytological study of 137 cases. J Cytol 2014;31:68-72.
8. Naik D, Srinath MG, Kumar A.Soft tissue cysticercosis- Ultrasonographic spectrum of the disease. Indian J Radiol Imaging 2011;21:60-2.AQ3