Case Report

Cysticercosis neck mimicking tubercular lymphadenitis: An incidental diagnosis on FNAC

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Introduction

Cysticercus cellulosae is the larval form of the parasite taenia solium, in which humans are the final host. Cysticercosis is reported to cause major morbidity, especially in the developing countries. The most frequent cause is through the ingestion of tapeworm eggs through contaminated food and water due to open-air defecation in the rural areas.[1-4] Larvae of taenia solium affect humans as the definitive host following ingestion of contaminated food and water. Neurocysticercosis is one presentation while involvement of soft tissue is another. Neck is a rare site to be affected. However, if it occurs in this site, the most common clinical diagnosis most often thought is tubercular lymphadenitis. A case of neck swelling in a 18-year-old male which was cytologically detected as cysticercosis is presented. The case is unique because occurrence of this entity is extremely rare in this site.

Key Words: Taenia, cysticercosis, tuberculosis, parasite, larva, lymphadenitis

Case Report

A 18-year-old male patient presented in a tertiary care teaching hospital of Western Uttar Pradesh, India, with a right-sided neck swelling. The swelling was noticed 3 months back. There was no history of trauma, pain, fever, or any other constitutional symptom in the patient. On examination, there was a partially cystic non-tender swelling present in the right supraclavicular area measuring 3 cm in diameter. No other palpable swelling in any other part of the body was noticed. No organomegaly was present. Results of complete blood counts showed moderate forms. The common sites of occurrence of cysticercosis in humans are the subcutaneous tissue, skeletal muscle, brain, eye, heart, liver, lung, and peritoneum.[1-3] The neck is an unusual site to be involved by this parasite.[5] We report a case of cysticercosis present in the neck mimicking tubercular lymphadenitis with the diagnosis made on FNAC.

Access this article online

Website: www.ijaims.net

Quick Response code

Received: 02/01/2020
Accepted: 22/01/2020
Published: 03/02/2020

How to cite this article:

Source of Support: Nil, Conflicts of Interest: None declared.
eosinophilia. The clinical diagnosis of tuberculous lymphadenitis was thought of. FNAC was performed using a 22-gauge needle on a 10 ml syringe. Aspiration yielded 0.5 ml of clear watery fluid.

The air-dried smears were stained using May–Grunwald–Giemsa and the alcohol fixed smears were stained with Papanicolaou stains. Microscopic examination revealed many hooklets along with eosinophilic granular deposit, few lymphocytes, occasional histiocytes, and degenerated cells in a proteinaceous background along with a parasitic structure [Figures 1 and 2]. The diagnosis of cysticercosis was confirmed. Excision of the swelling was advised. Simultaneously, medications were also started.

**DISCUSSION**

Cysticercosis in humans is due to the parasitic disease caused by the larval stage of T. solium which spreads in human through feco-oral route by consumption of the undercooked pork or uncooked vegetables consumed raw such as cabbage and carrots or drinking of contaminated water.[4,5] This parasitic disease commonly affects the central nervous system, eyes, skeletal muscles, and subcutaneous tissue, presenting as a palpable nodule. Rare sites reported to be involved include axilla, chest wall and abdominal wall.

Cysticercosis can be diagnosed by radiological, serology and pathological tests of which pathological examination provides a definitive diagnosis while the former two provide a supportive diagnosis. FNAC is an universally recognized cost-effective test providing a fast and definitive diagnosis in such cases. The diagnostic role of aspiration cytology in cysticercosis was first reiterated by Kung et al. in 1989. The spectrum of cysticercosis on cytology ranges from presence of viable cyst, necrotic lesion or as calcified mass.[6] Presence of hooklets or the parasitic part confirms the presence of cysticercosis.

The parasitic lesion should be strongly suspected if there is the presence of palpable subcutaneous or intramuscular nodule and the aspirate yields clear fluid.[7] Such aspiration and presence of mixed inflammatory infiltrate comprising of eosinophils, neutrophils, histiocytes, plasma cells and/or giant cells on microscopy in a palpable nodule could be because of parasitic infestation. In this present case, the aspiration yielded a clear watery fluid and microscopy showed hooklets along with eosinophilic granular deposits, lymphocytes, few histiocytes, and degenerated cells in a proteinaceous background along with a parasitic structure.

Cytomorphologically, cysticercosis mimics similar other parasites, including cystic forms of Echinococcus and the larval form of Coenuri and Sparagna.[8] The larval stage of cysticercosis has the presence of a single scolex whereas larval stage of coenuri has multiple protoscolices thus distinguishing both the entities. In addition, the bladder wall in cysticerci is thin and membranous, whereas, in the hydatid cyst, it is thicker and lamellated. Aspirate from Echinococcus contains numerous small scolices as compared to a single large scolex seen in cysticerci.[8,9]

**CONCLUSION**

Parasitic infestation should be considered in the differential diagnosis in patients presenting with subcutaneous or intramuscular palpable nodule even if present at unusual or rare sites, as observed in the present case. FNAC is an easy, fast, and cost-effective diagnostic investigation that helps in providing a definitive diagnosis of superficial cysticercus lesions.

**REFERENCES**


