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Case Report

AN UNUSUAL CASE OF CYSTICERCOSIS OF THE TENDON SHEATH OF THE TENDOACHILLES

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Abstract

Cysticercosis is an infection by the larval stage (cystcercus cellulosae) of the cestode, Taenia Solium (pork tape worm), especially in those individuals who live in the endemic areas. After gaining entry into the body, the larvae become encysted and may lie in subcutaneous tissue, striated muscle, the vitreous humor, or other tissues. We report an unusual case of cysticercosis of the the tendon sheath of the tendoachilles that presented as a swelling of the tendoachilles. Upon Fine Needle Aspiration and Cytology (FNAC) that were conducted preoperatively, the possibility of villonodular synovitis was identified. However, the cysticercosis diagnosis was confirmed later after an excisional biopsy was performed. We could find no reports in the literature concerning an occurrence of cysticercosis in the tendon sheath of tendoachilles.

Keywords: Cysticercosis; Tendon sheath; Tendoachilles; Muscles

INTRODUCTION

Cysticercus cellulosae (the larval form of Taenia Solium) has been found to infest the brain, musculoskeletal system, ocular muscles, and subcutaneous tissue (1-13). Here, we report an unusual case in which an infestation of the tendon sheath of the tendoachilles by cysticercus presented as a swelling. While working on other differential diagnoses in patients presenting with swelling in the region of the tendoachilles, such as villonodular synovitis, calcific achilles tendonitis, and synovial sarcoma, the possibility of infection by cysticercus cellulosae should also be considered as a potential diagnosis, especially in individuals who live in endemic areas.

CASE PRESENTATION

We are presenting the case of a patient who went to the outpatient clinic at the Department of Orthopedics & Trauma at NEIGRIHMS Shillong with the complaint of swelling in the posterior ankle region for the last two years. Initially, the swelling was approximately the size of a pea, and it remained so for about 18 months. Then, it gradually increased in size and was associated with pain during walking and limited ankle motion. On examination, the size of the swollen area was 6 x 4 cm with irregular margins, bosselated, and firm in consistency. It was mildly tender with no fluctuation or pulsations and was attached to the tendoachilles with extension to its sides. The overlying skin was freely mobile with normal temperature and had no venous prominences. The patient was a non-vegetarian and a teetotaler with no history of trauma, abnormal bowel habits, weight loss, fever, cough, urinary complaints, seizures, vomiting, and loss of appetite, eye problems or other joint involvement. Plain radiographs showed enhanced soft-tissue shadow in the region of the tendoachilles. A hemogram showed eosinophilia with increased Erythrocyte Sedimentation Rate (ESR) without leucocytosis. Fine needle aspiration and cytology revealed chronic inflammation with no cellular atypia or malignant cells. It showed the possibility of villonodular synovitis of the tendon sheath. The case was planned for excisional biopsy.

During surgery, the growth was found to be arising from the tendoachilles sheath and extending into the surrounding soft tissues. The growth was excised completely with partial excision of the posterior sheath of the tendoachilles, and the wound closed and tissue samples were sent for histopathological analysis. The patient recovered uneventfully. The pathological analysis showed chronic inflammatory tissue with larva within the cyst. This confirmed the diagnosis of cysticercosis. Subsequent stool examination was done for the ova of Taenia Solium, but it was found to be negative. To confirm the presence of antibodies against Taenia Solium, serological estimation of the antibodies was advised. The report correlated well with the clinical and histological findings. Subsequently, the patient was given Albendazole (a benzimidazole derivative) at a dosage of 400 mg twice daily for a month and remained asymptomatic thereafter in subsequent follow-ups.

DISCUSSION

Swelling of the synovial sheath of the tendoachilles can occur for several different reasons. The differential diagnoses include villonodular synovitis, degenerative calcific Achilles tendonitis, and synovial sarcoma, to name a few. Here, we have reported an unusual case of cysticercosis presenting as a swelling of the sheath of the tendoachilles. Neurocysticercosis (2), cardiac muscle (3,4 and 5), brown syndrome – cysticercosis involving the ocular muscles (6,7 and 8), cysticercosis involving biceps brachii muscle (9), temporalis muscle (10), psoas muscle (11), tongue (12) flexor digitorum profundus muscle (13), or subcutaneous tissue in the region of the ankle have been described. However, we could not find any report of the tendon sheath cysticercosis of the tendoachilles in the literature. It is documented that, while the larvae grow inside the cyst, they may remain minimally antigenic until the host response or chemotherapy causes gradual death of the cyst accompanied by marked inflammation and pericystic edema. Immunodiagnostic tests in serum are useful as a screening procedure for epidemiological studies but not as a diagnostic tool for individual cases such as patients with granulomas and calcifications who are frequently sero-negative. Indirect haemagglutination (IHA), indirect fluorescent antibodies (IFA), Enzyme-Linked Immuno Sorbent Assay (ELISA) and Enzyme-linked Immunoelectro Transfer Blot (EITB) can be used for demonstration of specific antibodies in the serum (1). The immune response is intense in some patients, but some show a remarkable tolerance. The serum Enzyme-linked Immunoelectro Transfer Blot (EITB) assay has nearly 100% specificity and 94-98% sensitivity. However, the sensitivity is only 50% if live cysts are present, and it is also low in patients with only calcified cysts. When the EITB test is not available, the older ELISA (enzyme linked immunosorbent assay) test can be done, which has 63% specificity and 65% sensitivity with serum (2).

CONCLUSION

It seems logical to infer that the individual who presents with a tumor-like growth in relation to the tendon sheath of the tendoachilles in endemic areas of tapeworm infestations, the differential diagnosis of cysticercosis should be kept in mind. This will help us to undertake relevant investigations, such as EITB and ELISA tests to confirm the diagnosis and give appropriate medical management for the infection. This may eliminate the need for surgery.

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