

An Unusual Clinical Case of Cysticercosis Mimicking a Triceps Enthesitis

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Abstract

We present a case report of a middle age female with a cysticercosis with a clinical feature resembling a triceps enthesitis. The absence of improvement with conventional enthesitis treatment and the inflammatory signs conducted to perform an ultrasound scan. It demonstrated two rounded lesions and an intense inflammatory reaction. Two cysticerci were surgical removed after antibiotic and antiparasitary treatment.

Introduction

On the life cycle of *Taenia solium*, cysticercosis is defined as the development of cysts or vesicles into diverse tissues of many animals, including humans [1]. The life cycle of this parasite requires two different hosts: The adult worm is attached to the small intestine of the human host and releases eggs or gravid proglotids to the environment. When they hatch, the oncospheres are ingested by the intermediate host and relocate into pig muscle developing cysticerci. The same phenomenon is observed when humans ingest the oncospheres. Clinical features of cysticercosis depend of its location. We present a unusual clinical case of cysticercosis which clinical manifestations resembled a triceps enthesitis [1,2].

Clinical Presentation

A 41 years old female, born in Bolivia and resident in Spain since she was 30 years old, consulted several times to her primary care physician due to mechanical discomfort to reach a full extension of the right elbow while working. She was working as a cleaning lady for 15 years. Her last trip to Bolivia was around 3 years ago and told she was raised in a rural environment. Due to her frequent complains, she was prescribed Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) and physical exercises after a diagnosis of "triceps tendinitis" was established. She presented in our clinic due to a recent exacerbation of discomfort, pain and swelling of the distal region of the dorsal aspect of the right arm. Flexor passive movement was limited at last degrees while active extension was clearly limited at the very first degrees of movement. Pain was located in the distal portion of the dorsal aspect of the arm and inflammatory signs such as erythema and local heat were evident two centimeters proximal to the olecranon fossa. An Ultrasonographic Scan (USS) showed no alteration of synovial capsule of the elbow and the olecranon fossa was unoccupied by fluid. The triceps enthesis showed no insertion irregularities, enlargement, power Doppler signal nor cortical proliferation. Into the fat strata, superficial to the enthesis, there were identified two rounded structures of 1.8 and 2.2 cm of diameter. Both had an anechoic content and had a "half moon" shape echoic structure inside the biggest (Figure 1 and 2). It was appreciated a notable hyperchoic fat tissue condensation around both rounded structures. A serological study was conducted and resulted positive to cysticercosis. After six days of antiparasite and antibiotic treatment (albendazol 400 mg/12 horas and Cloxacilina 500 mg c/6 horas), a surgical extraction of both lesions was performed. The bigger lesion had lost their external membrane integrity and caused an intense inflammatory adjacent reaction. Treatment was prolonged until 21st day. Also, a Computerized Tomography (CT) scan demonstrated multiple intracranial calcifications lesions which did not produced any clinical manifestation in the past and which was considered as inactive (Figure 3).

Patient was followed up until 12 months after discharged. During that period, we ruled out other cysticerci in her body with a full body CT scan.

Discussion

This is an exceptional clinical case of a cysticercosis resembling a very common work-related problem such as triceps enthesitis. It is not expected to include cysticercosis into the differential diagnosis of triceps enthesitis but, as in many other conditions, the consideration of uncommon

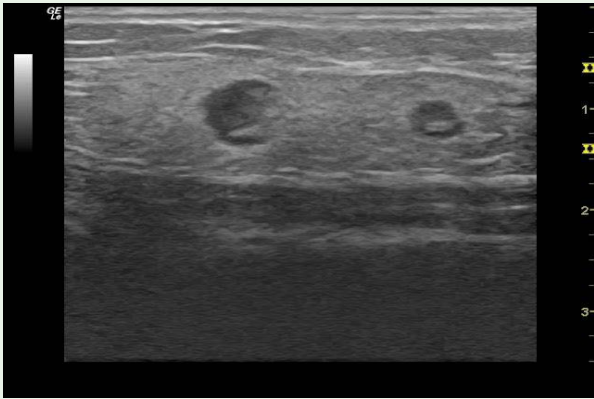


Figure 1: Ultrasonography image of the longitudinal view of the internal aspect of the distal portion of the triceps. An anechoic structure is observed to the left of the image inside the fatty area over the tendon with an echoic half-moon shaped structure inside. A second rounded structure is visible to the right of the image.

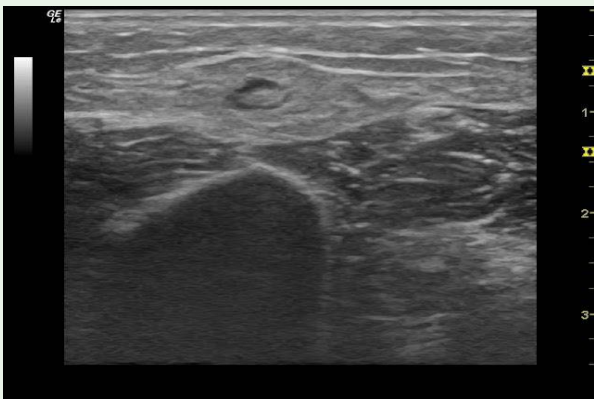


Figure 2: Transversal view of the biggest structure. It is visible its independence to the tendon fibers and also the intense inflammatory reaction around the lesion.

diagnosis should be taking in count when conventional therapies does not solve common mechanical problems. Secondly, this clinical case underlines the relevance of US scan as a tool to stand an appropriate diagnosis even in early stages of mechanical diseases. The formal indication of US scan in enthesitis could be summarized as when a mechanical cause is not identified, there is a poor response to NSAIDs or there is a sustained suspicious of an inflammatory etiology [3]. Cysticercosis is usually present in muscular tissue [4-6]. However its presence in extra muscular tissues has been reported previously, including fat [7-9]. Our patient presented with clinical manifestations highly compatible with a distal triceps tendinitis or triceps enthesitis [10,11]. The US scan demonstrated absence of enthesitis pathology and identified the primary lesions into the fat, however the close relationship between fatty tissue and tendon explains of the clinical feature. It is possible that the most recent pain exacerbation may have been the result of inflammation caused by the rupture of one of the cysts.

Ultrasonography studies are quite useful when assessing patients with musculoskeletal pain and a suspicious of infection diseases. The detection of inflammatory tissue reaction, presence of collections of even cortical bone lesions are common indicators of processes that

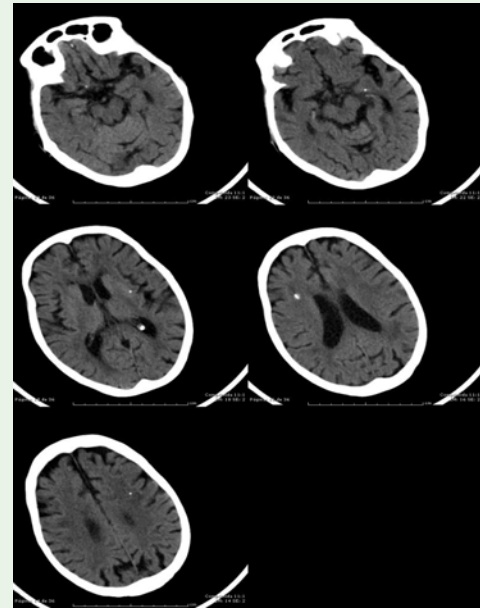


Figure 3: CT scan. There are visible many calcifications along different layers of the study. The radiological report, based into the immunologic and pathological diagnosis, considered them as inactive neurocysticercosis.

could be directly related to infectious diseases located in soft tissues [8,12,13]. As we stated previously, the use if an ultrasonography scan at the very first assessment in this patient could saved the further consultations and many avoid the tissue infection related to the disruption of the cyst integrity. Magnetic Resonance (MR) and CT scans are also useful for the study of intracranial cysticercosis. Both techniques can locate the lesions and give information about inflammatory activity. MR can also be used to assess therapy effects better than CT [14-16]. Extracranial cysticerci can be assessed by US scan when their location is accessible by the probe. Intraabdominal or thoracic cysticerci could be efficiently identified by MR or CT scans [7,15]. Benefits of MR over other techniques in such studies includes better definition of the limits of the lesion, information of inflammation phenomena over related tissues and the activity of the lesion even when the lesions are near bone territories [4,6,15-18].

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