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Original article

CYSTICERCOSIS AND STERNOCLEIDOMASTOID MUSCLE: A CASE REPORT.

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ABSTRACT.

Background:
Cysticercosis is a parasitic infection caused by the larval form of the tapeworm Taenia solium, typically characterized by cystic formations within various human tissues, most commonly found in the brain and orbit. However, cysticercosis occurring in the craniofacial region, aside from the cerebral and orbital regions, is considered a typical.

Case Presentation:
In this report, we present an unusual case of a patient who presented with lateral neck swelling. Upon thorough evaluation, the patient was diagnosed with solitary cysticercosis of the sternocleidomastoid muscle (SCM). This case is exceptional due to its infrequency and highlights the importance of considering parasitic infections in the assessment of neck swelling cases. Effective management of this medical condition is achievable through medical interventions. High-resolution sonography has proven to be a reliable diagnostic tool and is valuable for ongoing surveillance.

Conclusion:
This case report emphasizes the significance of timely identification and proper treatment of cysticercosis, even in atypical anatomical sites such as the SCM.

Keywords: Tapeworm, Cysticercosis Cellulose, Sternocleidomastoid.
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INTRODUCTION.
Cysticercosis is a parasitic infection resulting from the infestation of *Taenia solium*'s larval form, known as cysticerci [1]. Typically, the manifestation of this condition leads to the development of cystic structures within diverse human tissues, with the brain and orbit being the most commonly affected anatomical locations. Cysticercosis manifesting in the craniofacial region, except the cerebral and orbital regions, is an infrequently observed phenomenon. The present study aims to investigate a case of notable peculiarity that has been encountered, involving a 17-year-old female patient who exhibited lateral neck swelling. Subsequent evaluation unveiled the presence of solitary cysticercosis within the sternocleidomastoid muscle, thereby emphasizing the infrequency of such incidents within this particular anatomical locale.

CASE PRESENTATION.
A severe left-sided isolated lateral neck swelling that has been reported for 21 days was present in a 17-year-old female patient. There was no history of tuberculosis or other related illnesses in her family, and she had no prior cough, fever, throat pain, injuries, insect bites, or any neck swellings.

A single, 8.7 x 3 mm enlargement with ill-defined edges was seen during examination in the upper portion of the left sternocleidomastoid (SCM) muscle. However, it was not movable or tender vertically. The SCM muscle's contraction limited the swelling's range of motion but did not alter its size. The nose, ear, throat, and basic physical examination were ordinary, and there were no subsequent skin changes.

Clinical suspicion of an imminent suppurative cervical lymphadenitis developed as a result of these findings. Investigations were started, and therapy with wide-spectrum antibiotics and anti-inflammatory medications started. A clearly defined intramuscular cystic lesion with eccentric echogenic nodules was found in the left sternocleidomastoid muscle during neck ultrasonography (USG). The lesion was 8.7x3.3 mm in size, did not exhibit aberrant vascularity when tested with a Doppler, and lacked substantial cervical lymph nodes on either of the sides. These features suggested cysticercosis.

When eosinophilic amorphous fibrillary material with spherical parasite nuclei and localized refractile hooklets was aspirated using a tiny needle under sterile conditions, it was discovered against a necrotic background. There were no large cells, abnormal cells, or granulomas to be seen. Blood testing revealed a higher absolute eosinophil count and a high eosinophil count. The results of the chest X-ray, Mantoux test, and stool testing for ova/cysts were all negative. The results of the CT scans of the abdomen and brain were normal, and the retina, vitreous, and anterior chamber of the eye did not contain any signs of cysticercosis. As a result, the patient was diagnosed with isolated cysticercosis of the left SCM muscle and given a prescription for 400 mg of albendazole twice a day for four weeks.

DISCUSSION.

Cysticercosis in human beings is a pathological condition that arises due to the presence of encysted larvae originating from the tapeworm species known as *Taenia solium*. This affliction exhibits a significant prevalence in various nations, including Chile, Brazil, Ecuador, India, and South Africa, [2]. The primary mode of transmission to human individuals occurs through the oral ingestion of eggs, which can be found in food or water that has been contaminated. Additionally, inadequate hand hygiene practices and consumption of undercooked pork can also contribute to the transmission of the disease. The mentioned pathology exhibits a high prevalence in underdeveloped nations characterized by suboptimal healthcare infrastructure and inadequate sanitary practices. The clinical manifestations of cysticercosis exhibit variability contingent upon the quantity and placement of cysticerci, as well as the magnitude of inflammatory response. The pathogen frequently infiltrates the central nervous system, ocular structures, subcutaneous tissue, skeletal musculature, and cardiac tissue. Within the realm of muscular pathology, there exist three discernible clinical presentations, namely myalgic, mass-like pseudotumor, or abscess-like, and the less common pseudohypertrophic types [3]. Henceforth, it is imperative to contemplate parasitic etiology as a plausible factor in the management of cervical swelling [4].

Diagnostic modalities commonly employed for the identification of cysts and scolex encompass computed tomography (CT), ultrasonography (USG), and high-resolution sonography [5,6]. Albendazole and praziquantel are the preferred pharmacological agents for therapeutic intervention, commonly prescribed for four weeks, and may elicit untoward effects [7].

The management of myocysticercosis may involve the administration of a combination therapy consisting of oral albendazole and prednisolone. Additionally, the use of serial ultrasonography (USG) can be beneficial in monitoring the progress of the therapeutic intervention [8]. Surgical intervention is typically unnecessary in the management of muscular cysticercosis unless ocular or neurocysticercosis is present.

Cysticercosis is infrequently considered the primary differential diagnosis for neoplasms affecting the head and neck region, thereby rendering solitary muscular cysticercosis an uncommon phenomenon [9]. The avoidance of this preventable ailment can be achieved through the implementation of proper personal hygiene practices, efficient disposal of fecal matter, and a proactive avoidance of human intestinal infections [10].

CONCLUSION.

When managing neck swellings, it is imperative to take into consideration the potential involvement of parasitic etiology. The diagnosis of cysticercosis cellulose can be confidently established through the utilization of high-resolution sonography. The condition can be effectively managed through the implementation of appropriate medical interventions. Serial follow-up sonography can be employed to validate the resolution of the ailment.

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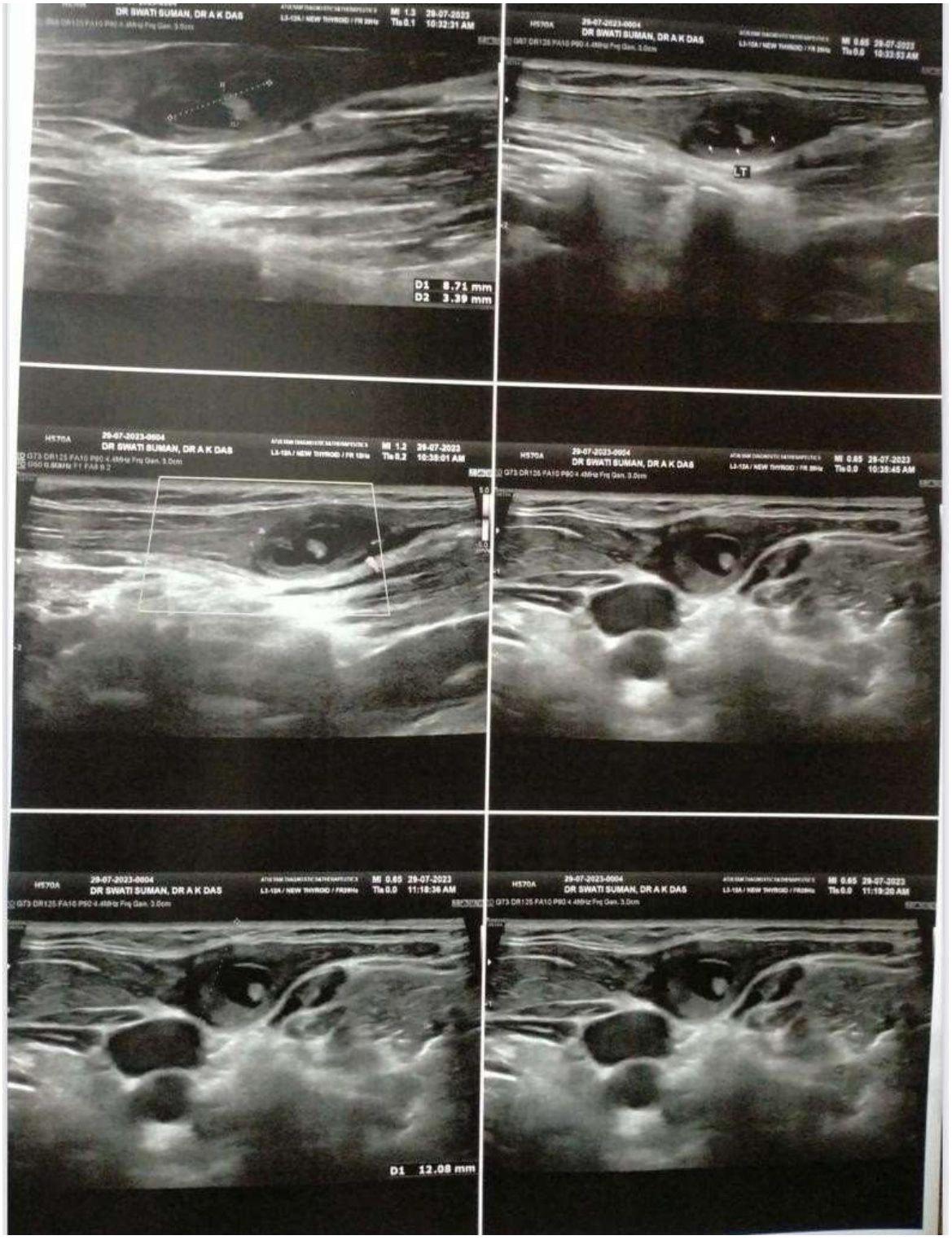

Figure 1: USG picture of cysticerosis in left SCM muscle.

Investigations	Result(s)
FNAC	
Specimen type / collection method	F - 28 USG guided FNAC
Clinical history	Swelling in the left sternocleidomastoid muscle
Gross	Received 8 air dried slides.
Specimen preparation & stains	**Stains** :Giemsa
Specimen Adequacy	Adequate
Microscopic	USG guided fine needle aspiration aspiration smears prepared from left sternocleidomastoid swelling is cellular and show eosinophilic amorphous fibrillary material with round parasitic nuclei embedded within, focal refractile hooklets seen against a dirty necrotic background No granuloma, giant cell, atypical cells seen
General categorization :	Negative for malignancy / Benign
Impression:	**Cytomorphological features are suggestive of Parasitic infestation (??cysticercosis)**
Comments/ Recommendations	clinical , radiological and histopathological correlation.

END OF REPORT

SIGNATURE LAB TECHNICIAN

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Figure 2: FNAC report

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