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Case Report

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SOLITARY TEMPORALIS MUSCLE CYSTICERCOSIS DIAGNOSED BY FINE NEEDLE ASPIRATION CYTOLOGY: A CASE REPORT OF A RARE SITE

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ABSTRACT

Cysticercosis is a helminthic infection endemic in Indian Subcontinent caused by the larval form of Cysticercus cellulosae (pork tape worm *Taenia solium*). It is common in human beings and has a wide variety of presentations depending upon the site involved, most common being the central nervous system, striated muscles and the subcutaneous tissue. However solitary involvement of the temporalis muscle is extremely rare. We present a case of left side temporalis muscle cysticercosis diagnosed on Fine needle aspiration cytology, thus emphasizing its importance as a preferred diagnostic modality for conservative management of patients with cysticercosis.

KEYWORDS: Fine needle aspiration cytology, Cysticercosis, Intramuscular, Temporalis.

INTRODUCTION

The most common location of cysticercosis in humans is central nervous system followed by subcutaneous tissue, striated muscles, eye and rarely other sites.[1] Diagnosis of intramuscular cysticercosis is challenging because of its non-specific manifestations.[2] We report a case of cysticercosis which was diagnosed on Fine needle aspiration cytology (FNAC) thus, emphasizing its utility as a primary diagnostic tool for this disease in a secondary level care hospital like ours due to its low cost benefits. Literature survey also showed that this is the first case of temporalis muscle cysticercosis diagnosed on FNAC, therefore making it of even higher significance.

CASE HISTORY

A 21 year old male patient was referred to our department with a swelling on the left temporal region since the past three months. The patient otherwise had no complaints. The clinical diagnosis offered was lipoma and the patient was sent to the pathology department for FNAC. He was a pure vegetarian. On examination the swelling was well defined, non-tender, cystic in consistency measuring two by one centimetres. FNAC was performed by a 24 gauge needle with aspiration by a twenty millilitre syringe. It yielded two millilitre of clear watery fluid. The smears were air dried and stained with Giemsa stain. On microscopy, smears showed scant mixed inflammatory infiltrate comprising of neutrophils, lymphocytes and macrophages along with a solitary fragment of bladder wall of Cysticercus cellulosae in a fairly clean background. It was composed of multiple small pyknotic nuclei interspersed in bluish fibrillar material showing honeycombing and rounded wavy folds (Fig. 1). Despite extensive search in multiple smears, no scolex or hooklets were seen. The cytological diagnosis of Intramuscular cysticercosis with superadded infection was made. Then the patient was referred to the Radiology department for supportive investigations. Ultrasonography showed a well defined cystic lesion in the intramuscular plane of temporalis muscle. It had an echogenic nidus with surrounding hypoechoeic area (Fig. 2). The patient also underwent Magnetic Resonance Imaging in a private centre which revealed a ring configuration lesion with T2W hyperintense centre and hypointense rim, with eccentric T2W hypointense nodule in the temporalis muscle (scalp). A radiological diagnosis of an Inflammatory granuloma (possibly cysticercosis) was given. The patient was treated successfully with anthelminthic and anti inflammatory drugs by the clinicians and is presently asymptomatic.

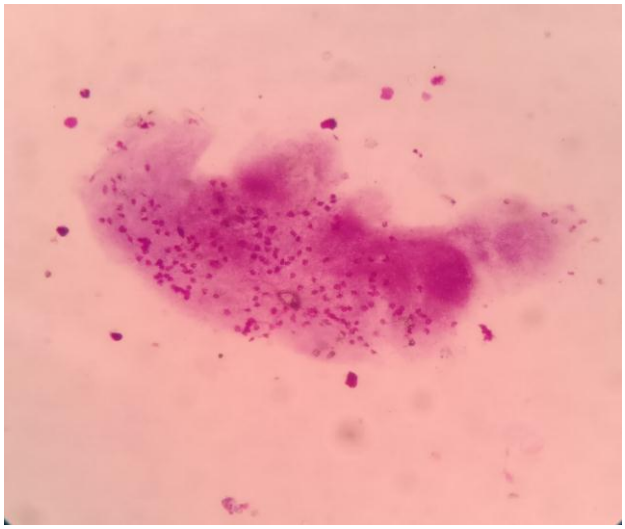

Figure 1: Parts of bladder wall of Cysticercus cellulosae composed of multiple small pyknotic nuclei interspersed in fibrillar material (Giemsa 400x).

Figure 2: Well defined cystic lesion in the intramuscular plane having an echogenic nidus with surrounding hypoechoeic area

DISCUSSION

Cysticercosis of human beings is a common infestation caused by larval stage of helminth Taenia solium (tape pork worm).[1] It is difficult to differentiate clinically from lymphadenitis or a benign mesenchymal tumour as it presents as a nodule commonly residing in the subcutaneous tissue and striated muscles.[3] Cyticercosis is diagnosed cytologically when parts of larva parenchyma, scolex, or cuticle are seen.[4] Kung et al in the year 1989 first described the role of FNAC for diagnosing cysticercosis.[3] Very few cases of cysticercosis involving the temporalis muscle have been reported in literature. In the year 2013 Shah P N et al reported one case and Singh S et al reported two cases of cysticercosis of temporalis muscle.[5,6] Some other diagnostic tools are also used in present scenario like serology and radiological imaging. Radiologically, Ultrasonography is considered to be better than Magnetic Resonance Imaging in muscular lesions as the scolex is better visualized in it.[7] But this can only be seen by an expert on high resolution ultrasonography. Immunodiagnostic tests in serum are useful as a screening procedure but not as primary diagnostic tool as they are generally seen to be negative in patients with live cysts or only calcified cysts. [8] Due to this limitation serology may not offer a definitive diagnosis. Hence detection of parasite on cytology remains the diagnostic modality of choice.

CONCLUSION

Diagnosis of isolated intramuscular cysticercosis of temporalis muscle is tricky as it clinically mimics various conditions. FNAC thus is a cost effective and less invasive procedure for early diagnosis of such cases.

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