International Journal of Medical Research Professionals
P-ISSN: 2454-6356; E-ISSN: 2454-6364
DOI: 10.21276/ijmrp

IJMRP

Case Report .

Cysticercosis of the Parotid Gland: A Case Report

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ABSTRACT

Cysticercosis is a parasitic infestation caused by the larval stage of Taenia solium, a cestodic parasite. It is a common disease in developing countries where it is also endemic. In humans, cysticercosis rarely involves the oral region, and often is seen as a diagnostic problem for the clinician. The present case is of interest because of the unusual site of the disease. It is stressed that in endemic areas, cysticercosis should be included in the differential diagnosis of solitary nodular lesions of the oral cavity. Also, use of FNAC as a confirmatory diagnostic aid for cysticercosis has been emphasised.

Keywords: Cysticercosis, Parotid, FNAC, Oral, Taenia Solium.

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Article History:

Received: 16-03-2017, **Revised:** 04-04-2017, **Accepted:** 24-04-2017

Access this article online	
Website: www.ijmrp.com	Quick Response code
DOI: 10.21276/ijmrp.2017.3.3.058	

INTRODUCTION

Cysticercosis is a systemic parasitic disease caused by the larval form of Taenia solium.[1-3] It is endemic in many countries like Russia, China, India, Pakistan, Philippines, Indonesia and Mexico.[4] It is often subcutaneous. Other tissues affected by cysticercosis in order of frequency are brain, muscle, heart, liver, lungs, and peritoneum.[5]

In humans, cysticercosis is rarely seen in the oral region, the incidence in the endemic areas being around 4.1% according to some studies.[3,6] Tongue is most commonly involved, followed by the upper and lower lips, the oral mucosa, and the submandibular and submental tissue.[5]

Diagnosis of cysticercosis was earlier made post-operatively through histopathological examination of the excised lesion or was suspected at the time of surgery due to identification of the cyst. Fine needle aspiration cytology is now available for the pre-operative diagnosis and hence, in treatment planning.[4]

Here, through the medium of this paper, we report a case of cysticercosis in the parotid gland which is a rare site for the pathology and is a diagnostic problem for the dentist.

CASE REPORT

A 45 year old male presented to the Department of Oral Medicine and Radiology with a slow growing, painless swelling in the left lower cheek region for the past 7-8 months. There was no associated history of fever, weight loss or any other relevant medical history. Local examination revealed the presence of a solitary, circular to oval mass which was non tender in nature, soft-to-firm in consistency, measuring approximately 2.5 x 2 cm^2 with overlying skin showing no signs of inflammation. Lymph nodes in the surrounding area were not palpable. A provisional diagnosis of fibroma was given by the clinician.

Investigations included routine haematological and urine investigations, ultrasonography (USG) of the left cheek region and FNAC. Results of the hematological and urine examination were within normal limits. Ultrasonography revealed few anechoic cystic lesions measuring approximately 2.2 x 1.2 x 1.8 cm^3 showing internal echoes within depending portion.

Aspiration of fluid from the swelling yielded few drops of blood tinged fluid with granular particles. Smears were then made, air dried and stained with May-Grunwald-Giemsa (MGG) stain. On microscopic examination, inflammatory cells like neutrophils; lymphocytes; histiocytes, and degenerated cells were seen against a granular background. Parasitic fragments resembling the morphology of cysticercosis cellulosae were evident. Bluish-red fibrillar material with small nuclei and scolex of the parasite were also seen. Final diagnosis of cysticercosis of parotid gland was made based on the cytopathological investigation.

Since the patient was asymptomatic, intervention of medical treatment was not required. The mass was later excised and removed surgically. Histopathological examination of the tissue mass confirmed our diagnosis as cysticercosis of the parotid gland.

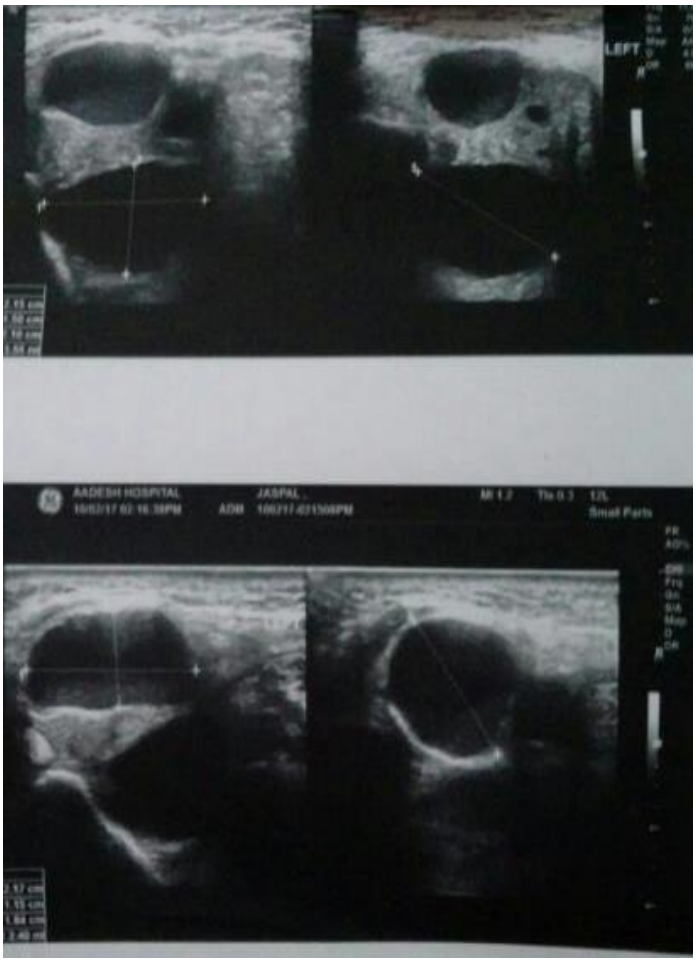

Figure 1: USG of Cystic lesions

DISCUSSION

Cysticercus cellulosae is the larval form of Taenia solium and represents the second most common larval infection in humans produced by cestodes.[7] Saran et al stated that about 45 cases of cysticercosis of the oral cavity and other adjacent areas have been recorded in the literature.[4] Nigam et al according to a Medline search revealed only 38 cases of oral cysticercosis published in the literature.[5]

The tapeworm (Taenia solium) is composed of a scolex (head) and several hundred proglottids, each of which containing approximately 40,000 eggs. These eggs may be consumed by the intermediate host (pig) from the human faeces.[4] Ingestion of T. solium eggs in humans (definitive host) happens by consumption of faecally contaminated vegetables, food or water, as well as self contamination by reflux from the intestine into stomach or by contaminated hands.[8] Eggs develop into oncospheres that penetrate the intestinal wall and reach a destination via lymphatic or vascular circulation where the larvae develop and become the cysticerci or "Bladder worm", i.e., a fluid-filled cyst.[9]

Cysticercosis is clinically characterized by the presence of a solitary or multiple submucosal/cutaneous firm nodules, which are circumscribed, movable, usually asymptomatic measuring 1-1.5 centimeters.[1,7] Oral cysticercosis may be clinically mistaken for a variety of benign lesions because of its relatively rare occurrence. Differential diagnosis of an oral lesion here depends on the site involved. In case of a solitary nodule on the tongue, lined by normal mucosa, differential diagnosis would be a benign neoplasm of neural tissue origin such as neurofibroma and benign schwannoma, granular cell myoblastoma, vascular neoplasm, vascular leiomyoma, fibroma or lipoma. In case of labial and buccal cysticercosis, differential diagnosis would be mucocele, benign tumors of mesenchymal origin, benign tumors of minor salivary gland like pleomorphic adenoma.[1,2,4,10,11]

Previously, oral cysticercosis was diagnosed postoperatively by histopathologic examination of an excised specimen or was suspected after surgery by examination of the cyst.[5,12] Fine needle aspiration cytology (FNAC) is a well-accepted procedure now for reliable and quick preoperative diagnosis of cysticercosis.[5,12] Newer diagnostic aids such as radiologic imaging and serology are also being used. Other modalities of imaging found effective in Cysticerci detection include computerised tomography, ultrasonography and magnetic resonance.[10]

CONCLUSION

Earlier histopathological examination of the excised lesion was done post-surgery for a confirmatory diagnosis of cysticercosis. With advances in cytopathology, a definitive diagnosis can now be made based on FNAC. This is being increasingly accepted as a reliable, out-patient diagnostic procedure for pre-operative diagnosis and hence in planning the treatment appropriately thereafter.

Considering the rare site of the pathology in our case, it can be concluded that cysticercosis should be considered in the differential diagnosis of a parotid lump or mass in an endemic area with FNAC as the reliable diagnostic tool.

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Source of Support: Nil. **Conflict of Interest:** None Declared.

Cite this article as: PD Sharma, Manpreet Kaur. Cysticercosis of the Parotid Gland: A Case Report. Int J Med Res Prof. 2017; 3(3):291-93.DOI:10.21276/ijmrp.2017.3.3.058