

Oral Cysticercosis: A Case Report.

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Abstract: Cysticercosis is a condition that occurs when a host is infected by the larvae of taenia solium, acting as an intermediate host instead of definitive. Oral cysticercosis is a rare event, and it represents a difficulty in clinical diagnosis. A case of oral cysticercosis in a 28 year old male who presented a painless swelling in the lower right corner of lip is reported.

An excisional biopsy was performed and histopathological examination revealed a cystic cavity containing the tapeworm.

Keywords: Oral cysticercosis; Taenia solium; Cysticercus cellulosae; Taeniasis.

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I. Introduction

Cysticercosis is a parasitic infection caused by Taeniasolium. These Platyhelminthes have a life cycle characterised by 2 stages; first as a larva, and then as an adult worm, besides an egg phase. Each of these phases requires a different host. Cysticercus cellulosae, the larval stage of T.solium, resides in muscles and other tissues in pigs that serve as intermediate hosts. Taenia eggs may be ingested through the consumption of raw or undercooked pork, contaminated water or vegetables or by autoinfection caused by egg reflux in the stomach in people infected with adult T.solium.^{1,2} The most frequent sites of cystercosis occurrence are subcutaneous layers, brain, muscles, heart, liver, lungs and peritoneum. When it affects the mouth; it preferably occurs in the tongue, labial or buccal mucosa and in some cases floor of the mouth.

Diagnosis can be obtained by surgical removal of the oral lesion followed by histopathological analysis which can identify the T.solium larvae.^{3,4} Although, the exact incidence is still unknown, oral cystecercosis is considered a rare event and a precise clinical diagnosis is not usually established.

Here we present a case of cystecercosis on the buccal mucosa of an Indian male patient.

Case report:

A 28 year old Caucasian male patient with good general health presented with a painless nodule in the lower right corner of the lip.

The nodule was approximately 2*2cm in diameter, firm, freely moveable and the overlying mucosa was normal. patient has mixed diet and had this swelling since 2 years but it gradually increased to the present size.

No palpable lymph nodes were present in head and neck region. Under a differential diagnosis of a mucocele, fibroma, and salivary gland neoplasia an excisional biopsy was performed under local anesthesia. During the surgical procedure the lesion was seen as encapsulated. Excisional biopsy was carried out and it was whitish and fibrous on palpation, and it was encucleated.

Light microscopy revealed a cystic space containing a T.solium larvae wrapped by a double glycoprotein membrane. The external capsule was fibrosed with intense mononuclear cell infiltrate. In the internal capsule a discrete polymorphonucleus infiltrate rich in eosinophils was observed. The cranial end of the larvae containing the scolex with suckers and a double crown of hooks (rostellum) which attach the worm to the intestinal wall could be identified. The caudal end presented a homogeneous invaginated basophilic segment, formed by linear spaces and inverted papillary projections. These histopathologic characteristics enable the definitive diagnosis of cystecercosis.

Questioned again later, the patient denied any history of convulsions or alteration in faeces. The patient was referred for medical evaluation. Lab tests (blood, urine and stool studies) and a cranial computerised tomographic scans were performed which showed no alterations that could suggest the involvement of other areas. Periodical appointments were scheduled at the dental clinic and after a year of follow up, the patient showed no signs of any other oral lesions.

II. Discussion

Oral cysticercosis is a rare infection with more than 30 cases of oral involvement reported in the English literature.⁵ There was no sex or age predilection. Risk factors for the human cysticercosis include frequent consumption of pork, poor personal hygiene and history of passing tapeworm proglotids feces.⁶ Once a person becomes the intermediate host, cysticercosis can develop in various organs and tissues. The tissues most frequently affected are subcutaneous layers, brain, muscles, heart, liver, lungs and peritoneum.⁷ Signs and symptoms of cerebral cysticerci including headaches, acute obstructive hydrocephalus and epileptic seizures depending on the number of invasive oncospheres present and their anatomic location. The diagnostic aids necessary to confirm the diagnosis of cysticercosis include computerised tomography (CT), magnetic resonance imaging (MRI), serology and tissue biopsy.⁸ Parasitological examination is the most reliable in revealing *Taenia solium* eggs in the stool sample. Other immunologic examinations include the ELISA (enzyme linked immunosorbent assay) or enzyme linked immunoelectrotransfer bolt (EITB); which is highly sensitive and is also superior to the ELISA.⁹

Traditional treatment of cysticercosis has been palliative before the advent of anti-helminthic drugs. Recent clinical trials for treatment of neurocysticercosis have been showed that albendazole and praziquantel can be effective in reducing the number of cerebral cysticercosis lesions as seen in the MRI and CT scans.⁸ Since future ocular and cerebral cysticercosis can't be ruled out, these patients should be kept under regular follow-up for any occurrence of symptoms. If any appear, further investigations and appropriate surgical intervention may have to be performed. Intraorally, the favoured sites for the development of cysticercosis are the lips, cheeks and tongue. Most oral presentations are in the form of painless, well-circumscribed, soft swellings that may mimic fluctuant lesions like the mucocele.¹⁰

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