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A rare case of isolated lingual cysticercosis. How radiological diagnosis helped resolve clinical dilemma

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Abstract
Cysticercosis is a common parasitic disease in developing countries, commonly seen is neurocysticercosis, however oral manifestations of cysticercosis are rare due to high muscular activity and metabolic rate of tongue which prevents larval development, thus posing a difficulty in clinical diagnosis. We present a case of a 6 year old patient, with complaint of swelling on the lateral aspect of tongue. Magnetic resonance imaging (MRI) diagnosed a cyst with nidus within, a characteristic Magnetic resonance imaging (MRI) appearance of cysticercosis.
Cross-sectional imaging is done to reach the diagnosis and only in rare instances like in our case further histopathological confirmation is beneficial.

Keywords: Cysticercosis, lingual cysticercosis, oral cysticercosis, cysticercosis cellulosae, taeniasis, MRI, USG

Introduction
Human cysticercosis is a tropical parasitic infection caused by the pork tapeworm *Taenia solium*. The disease gets its name from the larval stage of the tapeworm, known as cysticercus cellulose. It occurs when humans accidentally ingest the eggs of *Taenia solium*, typically through contaminated water, vegetables or due to autoinfection from the regurgitation of eggs in the stomach. The incubation period for cysticercosis varies and infected individuals may remain asymptomatic for years. The condition can have severe health consequences, as the larvae (cysticerci) can develop in various organs such as muscles, skin, eyes, the central nervous system, heart, liver, lungs, and peritoneum. Involvement of the oral cavity and surrounding areas is uncommon in humans, but when it does occur, the tongue, buccal mucosa, and the upper and lower lips are the most frequent sites affected.
This case highlights the significance of radiological cross-sectional Imaging, MRI for painless oral swellings or nodules that do not subside.

Case report
A 6 year old Indian female presented with a painless oral swelling over the left lateral border of tongue noticed since at age of 2 years. The lesion was painless and slowly growing in size. The patient had no complaints of fever or difficulty in swallowing. On clinical examination the swelling was pink, soft to firm, non-tender and covered with normal mucosa. No evidence of cervical or submandibular lymphadenopathy was observed. Pain and contrast MRI tongue was done MR Ingenia 3.0T Philips machine.

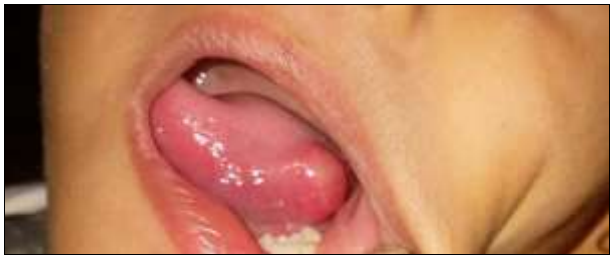

Fig 1: Pink, soft to firm nodule on the left lateral border of the tongue

Correlation with ultrasonography (USG) of the nodule was done using a LOGIQ P7 high frequency 8 MHz probe.

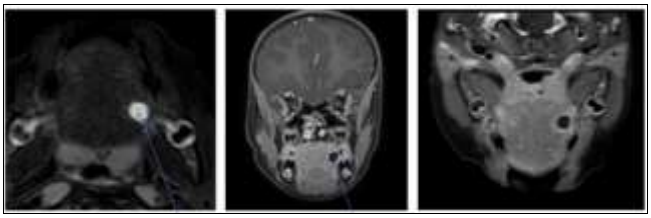

Fig 2: An approx. 7.0 x 7.0 x 7.8 mm (AP x ML x SI) well-defined oval T2 hyperintense lesion noted involving intrinsic muscle on left lateral border of the tongue with a tiny T2 hypointense focus within, likely suggestive of scolex (blue arrow). Mild peripheral post-contrast enhancement seen with enhancing T2 hypointense scolex

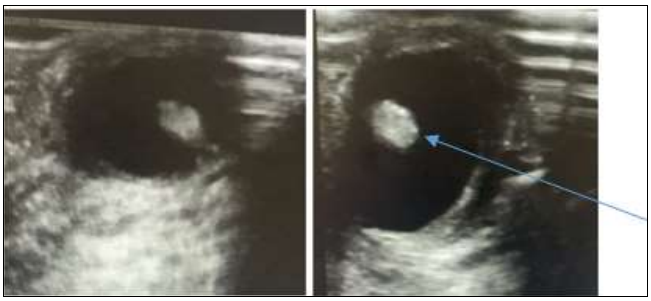

Fig 3: A well-defined oval anechoic thin-walled cystic lesion with a echogenic eccentric located structure, likely scolex

Discussion

Although its rare, cysticercosis should be considered as part of the differential diagnosis for oral nodular non-ulcerative lesion, in areas where the disease is endemic. When evaluating any oral nodular swelling, the common differential diagnosis to be kept in mind include mucocele and benign mesenchymal tumors, such as hemangioma, lipoma, and fibroma. Clinically, in our case also hemangioma was suspected. Due to lack of intense post contrast enhancement haemangioma appeared unlikely. The lesion did not appear heterogeneous and was not hypointense on T1/T2, as seen in fibroma. After the diagnosis of cysticercosis the patient was referred for head to toe clinical evaluation, coprological tests and chest X-ray showing no systemic involvement. Patient lived in an area of high incidence of parasitic diseases so serological investigations were not advised since these tests have no diagnostic value in populations frequently exposed to contamination. Main stay in diagnosis of cysticercosis is cross sectional imaging like CT and /or MRI or USG with adjunct serology. In rare instances a biopsy may be needed to confirm the same.

Conclusion

Cysticercosis should be included in the differential diagnosis of oral nodular non-ulcerative lesions in endemic areas. Ultrasound and MRI has the critical role in detection and characterization.

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Conflict of Interest

Not available.

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