

Case Report

Ulcerative lesion over tongue: a diagnostic dilemma

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ABSTRACT

Tuberculosis (TB) even today remains as the most common infectious disease affecting lungs in India despite having advanced diagnostic testing and a national programme to eradicate this disease. It is caused most commonly by *Mycobacterium tuberculosis*. Along with pulmonary involvement it may present with various extra pulmonary presentations, of them incidence of tongue tuberculosis is rare and was rarely described in the literature. Clinically as the condition mimics malignant lingual neoplasms they are misdiagnosed in most cases and should be considered in differential diagnosis of non-healing ulcers of tongue due to its high prevalence in India. It can be primary or secondary to pulmonary tuberculosis. Mostly seen in immune compromised individuals and HIV patients. In this article we are presenting a 69-year-old patient with TB of tongue presented as a chronic painful non healing ulcer, so far very few cases reported.

Keywords: Tongue, Tuberculosis, Painful oral ulcer, Chronic solitary ulcer, Oral tuberculosis

INTRODUCTION

Chronic solitary ulcers over tongue are challenging to diagnose as they are caused by various etiological factors. Differential diagnosis are chronic traumatic ulcers, ulcers due to squamous cell carcinoma, syphilis, fungal, viral, tuberculosis (TB).¹ High suspicion for tuberculosis to be looked at as the prevalence is so high in India. Especially in specific risk groups such as human-immunodeficiency virus (HIV) patients and immune compromised individuals. Tuberculosis is caused by *Mycobacterium tuberculosis*, the most common infectious disease affecting the lungs in India till date. In 2019 total TB infected cases are estimated about 10.0 million people by the World Health Organization (WHO) in its 2020 global TB report.² According to WHO, TB statistics in India gave an estimated incidence of 2.64 million cases, there is rate of 199 per 100,000 population.³ Not just lungs, disease may manifest initially with extra pulmonary symptoms affecting other organs such as bones, skin, genito urinary, gastrointestinal rarely oral cavity. TB of the tongue is one

of those rare occurrences of extra pulmonary TB with an incidence of 0.5-1%.³ It was very rarely described in the literature. It can be primary without the involvement of any other organs or secondary to pulmonary TB.

CASE REPORT

In this article, we report a case of a 69-year-old male presented to our ear, nose and throat outpatient department (ENT OPD) with chief complaints of painful ulcerative lesion over the tongue for 6 months. The lesion was insidious in onset, gradually progressive not relieved by medications. Patient mentioned a history of cough, loss of appetite with weight loss. The patient had been a bidi smoker for the past 5 years, smoking 4 bidis per day. On examination, the tongue was oedematous with ulcerative lesion measuring 4×3×2 cm involving right lateral border of tongue and dorsum of tongue till midline, firm on touch, tender, bleeds on touch with everted edges and induration (Figure 1). Tongue mobility was normal. Bilateral level Ib, II, and V lymph nodes palpable. Complete blood count is done before taking biopsy in which only abnormality

found was erythrocytic sedimentation rate (ESR) 45 mm in the first hour.



Figure 1: Ulcerative lesion over right lateral border of tongue.

First biopsy of ulcerative lesion of tongue showed epithelial hyperkeratosis with chronic inflammatory changes and infiltration by lymphocytes. MRI tongue done revealed the presence of a lesion in the right half of anterior tongue sparing posterior tongue, the floor of the mouth, and major neurovascular bundles with suspected neoplastic lesion. Then a repeat deep biopsy done after 15 days revealed lymphocytes, Langhan's type of giant cells, and epithelioid cells forming granulomas, few granulomas showing central caseous type of necrosis (Figure 2).

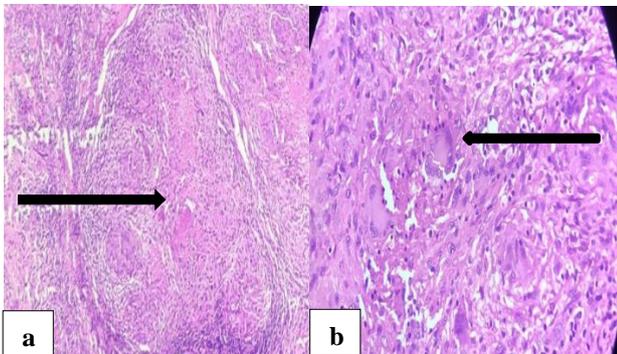


Figure 2: Tongue biopsy showing (a) lymphocytes and (b) Langhan's giant cells, with granulomas showing caseous type of necrosis.

After biopsy report patient was advised chest X-ray, high-resolution computerized tomography (HRCT) of chest, sent sputum for cartridge based nucleic acid amplification test (CBNAAT). Chest X-ray showed bilateral multiple cavities in upper and middle lung fields with multiple infiltrates (Figure 3a).

HRCT chest which showed a thick-walled cavitary lesion in apicoposterior segment of left upper lobe communicating with adjacent subsegmental bronchi with adjacent patchy consolidation, multiple centrilobular nodules arranged in linear branching pattern with a tree in

bud appearance in bilateral lung parenchyma predominantly in bilateral upper lobes (Figure 3b). The patient's sputum sent for CBNAAT was positive for acid-fast bacilli. Then conclusion was made of tubercular lesion and the patient has been started on anti-tubercular treatment (AKT) with 4 drug regimen rifampicin, isoniazid, pyrazinamide, ethambutol as per guidelines. The lesion started to heal 7 days after starting AKT, tongue completely healed within 2 months of starting AKT.



Figure 3: (a) X ray showing bilateral infiltrates with multiple cavities and (b) HRCT chest showing multiple centrilobular nodules with tree in bud appearance in bilateral upper lobes.



Figure 4: 7 days after starting AKT.



Figure 5: 1 month after starting AKT.

DISCUSSION

Even today despite having advanced diagnostic techniques globally TB still stands as a major infectious cause affecting lungs which spread through aerosol droplets, commonly seen in immunocompromised individuals and HIV patients. Asymptomatic latent TB is seen in the majority of the population. Usually present with symptoms of cough with expectoration of more than 3 weeks, fever associated with chills and rigors, loss of weight and appetite, easy fatigability. Whereas extra pulmonary spread accounts for 20% of TB infection cases may affect the lymphatic system, central nervous system in head and neck also affects genitourinary system, bones, and joints in Pott's disease of the spine, usually they coexist with infectious pulmonary TB, it could be either primary or secondary to a pulmonary location.⁴ Cervical lymphadenitis is its most common presentation in head and neck, seen in about 95% of ENT cases.⁵

Among extrapulmonary spread TB of the oral cavity is an unlikely site, of which tongue involvement is rare. Tongue involvement could be due to contact from infected sputum or haematogenous route with the typical presentation of ulcerative tender lesion mimicking lingual neoplasm, poses a challenge in making a diagnosis as in this case 1st biopsy was non-specific which stress upon the need for taking a deeper biopsy from the edge of ulcer (as done in 2nd biopsy) helps in arriving at a diagnosis. As indurated tongue ulcers include neoplastic lesions such as oral cancer (squamous cell carcinoma), metastatic deposits lymphoma, salivary gland tumours and non-neoplastic such as traumatic ulcerations, aphthous ulcers, and certain infections (like primary syphilis, histoplasmosis, and blastomycosis).⁶ Tongue TB most commonly affects the lateral borders, the tip and the posterior third of the tongue, rarely ventral and anterior surface.^{7,8} Granulomatous conditions such as sarcoid, Crohn's disease, deep mycoses, cat, foreign-body reactions are other histopathological differential diagnosis.^{8,9}

To make a proper diagnosis a set of investigations to be done such as complete blood count, ESR, biopsy, sputum for acid-fast bacillus (AFB) staining and culture/polymerase chain reaction, chest X-ray, HRCT of chest. A deeper biopsy is essential to rule out malignancy as the clinical appearance misleads. Further investigations

are to be done depending on the site of extrapulmonary involvement. Screening with tuberculin testing or Interferon-gamma release assay to rule out active disease. Oral TB lesions especially tongue tuberculosis shows a very good response to AKT it may take months to resolve completely. 2 months of rifampicin, isoniazid, ethambutol, pyrazinamide (HRZE) therapy followed by 4 months of isoniazid and rifampicin in total 6 months of AKT is standard of care as per revised national tuberculosis control programme (RNTCP) guidelines which should be given until sputum AFB smears are negative. This case report emphasizes the fact that tuberculosis is to be considered as a differential diagnosis in patients presenting with oral lesions especially in immunocompromised patients.

CONCLUSION

TB of the tongue is a rare entity among the extra pulmonary presentation of TB, as it mimics lingual neoplasm it should be properly investigated before arriving at a diagnosis. Radiological imaging gives suspected diagnosis whereas deep biopsy gives definitive diagnosis of lesions over the tongue. This case report highlights the fact that TB of tongue should be considered as a differential diagnosis of chronic oral lesions especially tongue lesions even if its presentation is rare, it is suspected due to high prevalence of TB in India. It could be primary or secondary, which is why other sites affected due to TB to be ruled out.

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