



**ORIGINAL RESEARCH PAPER**

**Medicine**

**TUBERCULOSIS OF TONGUE**

**KEY WORDS:**

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**ABSTRACT**

Tongue is a vital organ within the oral cavity that has varied function, and it may act as an index for underlying systemic diseases. The investigation of tongue disease may begin with mere clinical examination and extend to the use of few specialized tests. This article is an attempt to highlight the special investigations of tongue lesions with emphasis on tuberculosis of the tongue.

**INTRODUCTION**

Tuberculosis is a chronic granulomatous disease caused by various strains of mycobacteria, usually Mycobacterium Tuberculosis in humans. Robert Koch, a German physician, discovered the Tuberculosis bacillus in 1882. It has been a worldwide major health problem for centuries. India accounts for nearly one third of global burden of tuberculosis. Oral manifestations of tuberculosis has a rare occurrence and usually secondary to pulmonary tuberculosis but it has been considered to account for 0.1-5% of all TB infections.<sup>1</sup>

Saliva is considered to have a significant role which explains the paucity of oral lesions, despite the large numbers of bacilli present in sputum contacting the oral mucosa in a typical case of pulmonary tuberculosis. Other attributing factors to relative resistance of oral cavity for TB are presence of saprophytes, resistance of striated muscles to bacterial invasion, and thickness of protective epithelial covering. It is believed that the organisms enter the mucosa through small breaches in the surface epithelium which makes it a favourite site for colonization of bacteria. Local factor that may facilitate the invasion of oral mucosa includes poor oral hygiene, leukoplakia, local trauma, and irritation by clove chewing, etc. These lesions are usually secondarily inoculated with infected sputum or due to hematogenous spread. Conditions that predispose to Tongue & Taste Disorders the disease include crowded urban living, drug abuse, poor health and hygiene, poverty. Viral infections like HIV with or without the development of AIDS, cause immunosuppression which has lately emerged as a very significant risk factor for development of TB.

**Clinical Features-**

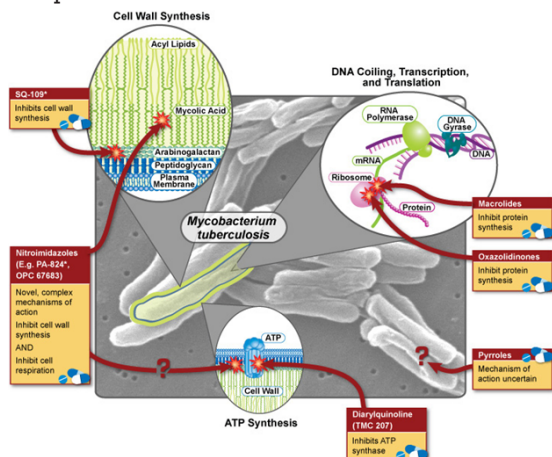
Oral TB lesions may be either primary or secondary in occurrence. The tuberculous ulcer is the most common feature. Primary lesions are uncommon, seen in younger patients, and present as single painless ulcer with regional lymph node enlargement. The secondary lesions are common, often associated with pulmonary disease, usually present as single, indurated, irregular, painful ulcer covered by inflammatory exudates in patients of any age group but relatively more common in middle-aged and elderly patients.

Oral TB may occur at any location on the oral mucosa, but the tongue is most commonly affected. Other sites include the palate, lips, buccal mucosa, gingiva, palatine tonsil, and floor of the mouth. Salivary glands, tonsils, and uvula are also frequently involved. Primary oral TB can be present as painless ulcers of long duration and enlargement of the regional lymph nodes.<sup>2</sup>

The oral lesions may be present in a variety of forms, such as ulcers, nodules, tuberculomas, and periapical granulomas of all these oral lesions, the ulcerative form is the most common. It is often painful, with no caseation of the dependent lymph nodes. Oral lesions of TB are nonspecific in their clinical presentation and often are overlooked in differential diagnosis, especially when oral lesions are present before systemic symptoms become apparent.

Primary gingival involvement is more common in children and adolescents than adults. It usually presents as a single painless indolent ulcer, which progressively extends from the gingival margin to the depths of the adjacent vestibule and is often associated with enlarged cervical lymph nodes. They may be single or multiple, painful or painless and usually appear as irregular, well-circumscribed ulcer with surrounding erythema without induration and satellite lesions are commonly found.

When oral TB occurs as a primary lesion, an ulcer is the most common manifestation usually developing along the lateral margins of the tongue which rest against rough, sharp, or broken teeth or at the site of other irritants. Patients with oral tubercular lesions often have a history of preexisting trauma. Any area of chronic irritation or inflammation may favor localization of the Mycobacterium associated with the disease. Deep tubercular ulcers of the tongue are typical in



appearance with a thick mucous material at the base. These tongue lesions are characterized by severe unremitting and progressive pain that profoundly interferes with proper nutrition and rest. Classically, tubercular ulcers of the tongue may involve the tip, lateral margins, dorsum, the midline, and base of the tongue. They are irregular, pale, and indolent with inverted margins and granulations on the floor with sloughing tissue

The oral manifestations of TB can also be in the form of superficial ulcers, patches, indurated soft tissue lesions, or even lesions within the jaw that may be in the form of TB osteomyelitis or simple bony radiolucency. Confirmatory diagnosis of tuberculosis is the presence of Acid Fast bacilli in the specimen or can also be confirmed by culture of tuberculosis bacilli.

Sputum culture and radiographic evidence are other supportive modes of confirmatory diagnosis. Deeper biopsies are always advocated for ulcers of the tongue; a superficial biopsy may not reveal the aetiology due to epithelial hyperplasia and fine needle aspiration cytology is a highly specific and sensitive tool for identifying parotitis and/or TB in major salivary glands. Mandatory steps should be followed to rule out systemic TB like a chest x-ray and a Mantoux skin test.<sup>3</sup>

**Treatment-**

The treatment of oral tuberculosis lesions is the same as the systemic tuberculosis. Currently, the most effective regimens require a combination of four drugs (isoniazid, rifampicin, pyrazinamide, and ethambutol) administered daily for the first two months, followed by an additional four months with only two drugs (isoniazid and rifampicin). The complexity of this regimen prompted the World Health Organization (WHO) to launch a new global strategy for TB control known as directly observed therapy, short course (DOTS) in 1997. The central component of this strategy is direct observation, by trained personnel, which both ensures patient compliance with the drug regimen and reduces the likelihood of drug resistance.

Resistance to a single drug does not render therapy ineffective, multidrug resistant strains make TB much more costly and difficult to treat. For this reason, the need for newer and more effective drugs that achieve multiple goals in improving TB control is imperative.

There are two types of resistance usually observed in the context of TB; MDR (multidrug resistant TB), XDR (Extensively drug resistant). MDR-TB is defined as Mycobacterium tuberculosis (*M. tuberculosis*) resistant to the most potent first-line anti-TB medications, isoniazid and rifampicin, while XDR-TB has additional multidrug resistance to the most active second-line agents, injectable drugs (aminoglycosides and/or cyclic polypeptides-capreomycin, kanamycin and amikacin) and fluoroquinolones.

Potential new agents should reduce treatment duration, have an acceptable tolerability profile, be active against MDR/XDR TB, be of use in HIV-infected patients with TB, and be active against latent TB. Numerous novel drugs have been introduced in the market in recent times which promise to be a better alternative like Nitroimidazoles group (PA 824, OPC 67683), Diarylquinolines (TMC 207 or Bedaquiline or J compound) [23], Oxazolidinones (PNU-100480 and AZD5847), SQ109, Phenothiazines (Thioridazine), LL3858 foreffective treatment of TB.<sup>4</sup>

**CONCLUSION**

We conclude by stating that incidence of oral lesions in tuberculosis cases is very less, so each and every persistent and atypical oral lesion must be examined carefully to intercept and prevent the disease early. Intercepting the

disease early will increase the morbidity and mortality of the patients.

So it becomes the duty of the dentist to include tuberculosis in differential diagnosis of suspicious oral lesions to avoid the needless delay in the treatment of this disease.

**REFERENCES :**

1. Jain P, Jain I. Oral Manifestations Of Tuberculosis: Step Towards Early Diagnosis. *Jcdr* 2014;8(12)
2. Woods RG, Amerena V, David P, Fan P, Heyde H. Additional Precautions For Tuberculosis And A Self Assessment Checklist. *FDI World* 1997;6(3) 7-10.
3. Menon GA, Khushk IA. Primary Tuberculosis Of Tongue. *J Coll Physician Surg Park* 2003;139(110).
4. Zumla A Et Al. Tuberculosis. *NEJM* 2013. 744-755