

Primary Lingual Tuberculosis: A Diagnostic Dilemma

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ABSTRACT

Tuberculosis is an infectious disease caused by mycobacterium with mycobacterium tuberculosis being the commonest strain. This disease is prevalent in developing countries like India but oral lesion of tuberculosis is a rare condition even in areas and countries in which tuberculosis is endemic and tongue is the most common site of its involvement in the oral cavity. Tuberculous lesions of the tongue have become so infrequent that they are virtually a forgotten disease entity and usually pose a diagnostic problem. The disease can present itself in a variety of clinical appearances, most of which may mimic malignant neoplasm clinically. Lingual tuberculosis is usually associated with tuberculosis of the oropharynx, lungs, lymph nodes, and miliary tuberculosis. Primary tuberculosis of the tongue is extremely rare and is seldom reported. Here is a case report of a 50 years old male with non healing ulcer which was suspected to be malignancy on clinical examination but turned out to be tuberculous ulcers on histopathology and ZN staining. The case reported in this paper emphasizes the importance of including primary tuberculosis in the differential diagnosis of any chronic oral ulcer.

KEYWORDS: Malignancy, Tuberculosis, ZN staining

INTRODUCTION

Tuberculosis incidence in India is 168/100 000 population/ year and prevalence is 312/ 100000 population/ year.¹ Oral sequelae of tuberculosis, whether primary or secondary, is rare with an incidence of 1.4% of total tuberculosis cases.² Floor of mouth, soft palate, lips, and hard palate can be involved, however tongue [tip, dorsum, lateral borders, and base] and palate are the most common sites of involvement for oral lesions.³ First case of lingual tuberculosis was recognized in 1888.⁴ The clinical diagnosis is often very difficult as it is rare to suspect that an ulcer, fissure or mass in the tongue will be tuberculous in origin. It is commonly secondary to contact with infected respiratory secretions or hematogenous dissemination of Mycobacterium tuberculosis.⁵⁻⁸ Direct inoculation of mycobacterium tuberculosis in tongue is rare. Primary oral tuberculosis is commonly seen in younger patients.^{5,9} Diagnosis requires searching for M.tuberculosis in lingual biopsy or searching for other sites of tuberculosis.^{5,9,7,8} We report a rare case of primary lingual tuberculosis with an unusual presentation.

CASE REPORT

Fifty year old poultry farm worker presented in ENT OPD with chief complaints of fever (on & off) since 2 months and non healing painless ulcer of 5mmx3mmx2mm on right lateral border of tongue (Fig 1) and another non healing ulcer of 3mmx2mmx1mm on left

lateral border of tongue (Fig 2) since 1 month. Fever was continuous, low grade, associated with evening rise of temperature and with complaints of anorexia, malaise and weight loss not responding to medical treatment. The patient was a chronic smoker with no history of cough or night sweats.



Fig 1: showing a ulcer on right lateral border of tongue

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Fig 2 showing a ulcer over left lateral border of tongue in the same patient.

On clinical examination, both the ulcers had irregular margins, undermined edges and had thin slough on the floor. Adjacent teeth were normal. No focus in nasopharynx and oropharynx were found. It was not associated with cervical lymphadenopathy. Chest X-ray was normal. Laboratory tests including complete blood count, coagulation profile, urea and electrolytes, as well as renal and liver function tests were reported to be within normal limits. Serological tests for HBV, HCV, HIV and syphilis were normal. ESR was 55mm at the 1st hour by Westergren method. As the patient was a heavy smoker and alcoholic in addition to the presence of an ulcerated tongue mass lesion, an initial clinical diagnosis of squamous cell carcinoma of the tongue was strongly suspected.

With due consent for confirmation, punch biopsy of both the ulcers were taken under local anaesthesia and sent for histopathology which revealed granuloma consisting of caseous necrosis, epithelioid cells, Langhans type of giant cells and lymphocytes (Fig 3). Presence of acid fast bacilli was confirmed by Zeil & Nelson staining (Fig 4).

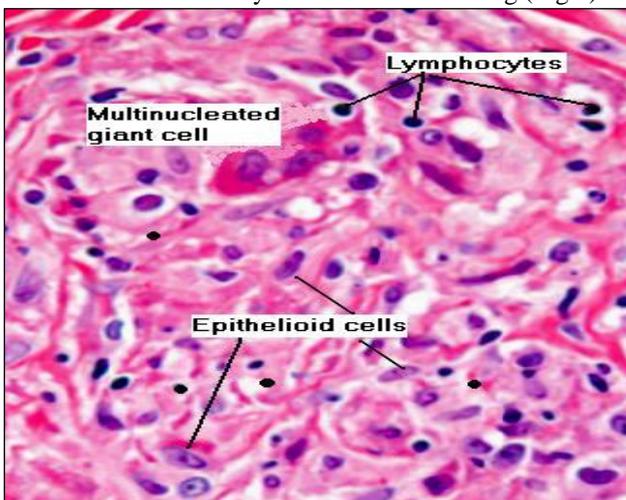


Fig 3 showing histopathological picture of the biopsy specimen

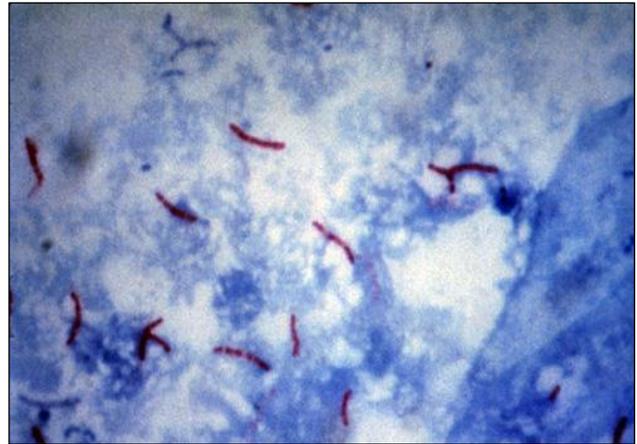


Fig 4 confirming presence of acid fast bacilli by ZN staining

A final histopathological diagnosis of primary lingual tuberculosis was made. Anti-tubercular treatment was started with 4 drugs including Rifampicin 450 mg, Isoniazid 300 mg, Pyrazinamide 1500 mg and Ethambutol 800mg. Considerable decrease in the size of the ulcers on the tongue, and fever after 1 month of anti-tubercular treatment was noticed.

DISCUSSION

The World Health Organization (WHO) estimates that one third of the world's population are infected with tuberculous bacilli, and the global tuberculosis incidence is growing at 1% a year.¹⁰ In India, even after the National tuberculosis control programme [NTCP], tuberculosis still remains a major health hazard with a mortality rate of 30 deaths/100000 population/year.¹ Such lesions are suspected to be caused by the implantation of infected sputum into a break in the mucosal surface during coughing episodes. A chance of transmission during dental practice has also been described.¹¹ Tuberculosis can affect every organ or tissue in the body. Most commonly involved organ is the lung but tuberculosis of tongue is rarely described entity with a rate of occurrence of 0.1%.^{4,12,13} Most cases of oral tuberculosis are mainly secondary to pulmonary tuberculosis and rarely primary in origin.^{9,14} Primary tuberculosis of oral cavity including tongue caused by direct inoculation of *M. tuberculosis* is very rare because of continuous cleaning of oral mucosa by saliva, the presence of submucosal antibodies which gives the buccal mucosa a normal resistance and absence of lymphoid follicles in tongue.^{15,16} The most common site of lingual tuberculosis described in the literature is lateral border followed by the tip, posterior third, middle third, ventral surface and the anterior surface.¹⁷ The most common presenting symptoms of lingual tuberculosis is pain on deglutition, followed by burning sensation and otalgia.¹⁸ Lingual tubercular lesions may present in different forms like: painful shallow tubercular ulcer, tuberculoma, tubercular fissure, tubercular papilloma and tubercular cold abscess.^{3,17,19,20} The ulcer is usually formed by the breakdown of tubercles and usually has undermined edge¹⁷ as seen in our case. Tubercular ulcers are usually more irregular than punched out lesions of

carcinoma.^{19,21} Differential diagnosis of oral ulcers includes traumatic ulcer, aphthous ulcer, actinomycosis, syphilitic ulcer, Wagener's granuloma and carcinoma. Diagnosis is confirmed by identification of a caseating granuloma on biopsy. Deeper biopsies are advocated for ulcers of the tongue because superficial biopsies may not be the true representative of the lesion; furthermore, multiple biopsies may be needed.²⁰ Regarding duration of treatment in patients with extrapulmonary TB involving the oral cavity, the mean time from available reports ranged from 6 to 15 months.⁵

CONCLUSION

The differential diagnosis of tongue ulcers includes traumatic ulcerations, aphthous ulcers oral malignancies (squamous cell carcinoma), lymphoma, salivary gland tumor and certain infections such as primary syphilis, histoplasmosis, tertiary syphilis, etc. Other rare histological differential diagnosis includes granulomatous conditions such as sarcoidosis, tuberculosis and deep mycosis. A detailed clinical history and tissue biopsy remains the key for confirmation of diagnosis. Lingual non-healing ulcer clinically may resemble malignant ulcer but the possibility of lingual tuberculosis should be ruled out as with early diagnosis and treatment patient is benefited. Surgery is not required in cases of lingual tuberculosis and prognosis is excellent after anti-tuberculous therapy. The role of publishing this case report is to emphasize the importance of tuberculosis in the differential diagnosis of any chronic oral ulcer.

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