

Case Report

An Oral Ulcer- Unraveling the MysteryN. Rajesh¹, D Ayesha Thabusum^{2*}, R. Sudhakarareddy³, M. Ravikanth⁴, U. Shivaji Raju⁵¹Assistant professor, Department of Oral medicine and Radiology, Vishnu Dental College, Bhimavaram, Andhra Pradesh²Assistant professor, Department of Oral medicine and Radiology, Drs. Sudha & Nageswararao Siddhartha institute of Dental sciences, Gannavaram, Andhra Pradesh³Professor and Head, Department of Oral medicine and Radiology, Vishnu Dental College, Bhimavaram, Andhra Pradesh⁴Professor, Department of Oral and Maxillofacial Pathology, Vishnu Dental College, Bhimavaram, Andhra Pradesh⁵Reader, Department of Oral and Maxillofacial Surgery, Vishnu Dental College, Bhimavaram, Andhra Pradesh***Corresponding Author:**

D Ayesha Thabusum

Email: drayashaomr@gmail.com

Abstract: Tuberculosis is a chronic infectious disease affecting humans of all ages in all parts of the world. The primary site of infection commonly involves lungs, although it can affect any part of the body, including oral cavity. Although oral manifestations of tuberculosis are very rare, the disease can present itself in a variety of clinical appearances which may mimic malignancy clinically. Thus the oral physician plays a pivotal role in the identification and control of this condition by early recognition of lesions that may precede the detection of pulmonary form. Tuberculous involvement of oral cavity is a very rare finding even in areas and countries where Tuberculosis is endemic. We present one such case of 36 year old female who presented with non-healing ulcer in the right lateral surface of the tongue and floor of the mouth. This paper deals with the case of tuberculosis diagnosed on the basis of oral manifestations, there by emphasizing the importance of the oral physician in diagnosis of multisystem disorder.

Keywords: Tuberculosis, Oral cavity.

INTRODUCTION

Tuberculosis(TB) is a chronic granulomatous multisystem infectious disease caused by Mycobacterium tuberculosis and is a major cause of ill health [1]. Pulmonary tuberculosis is a most common form of the disease. However, it can occur in lymphnodes, meninges, kidneys, bone, skin and in the oral cavity. Secondary tuberculosis occurs from a healed primary focus or due to endogenous spread of the infection. Both primary or secondary can occur in the oral cavity. Primary lesions of tuberculosis are extremely rare with the tongue being the most commonly affected site. Incidence has usually been reported as less than one percent of all cases of extra pulmonary tuberculosis [2].

A case of primary tuberculosis manifesting as a chronic ulcer in the lateral surface of tongue and floor of the mouth is described here to emphasize the role of oral physician in early diagnosis of such lesions.

CASE PRESENTATION

A 36 yr old female patient reported to the Department of Oral Medicine, Oral Diagnosis and Radiology with a chief complaint of ulcerations and

burning sensations in the mouth since one year. History reveals that patient developed a small ulcer on the tongue and floor of the mouth around a year back which has progressively increased to attain the present size. The ulcerations were accompanied by pain and burning sensation. The patient had taken topical medications for the ulcer prescribed by the physicians, but there was no relief.



Fig-1: Extra oral picture of the patient

There was an associated medical history of progressive weight loss (around 2.5kgs) in past 2 months. This condition does not seem to have affected other family members and history of no known allergies

as reported by the patient. Past history revealed extraction of the tooth in right lower back tooth region one month back.

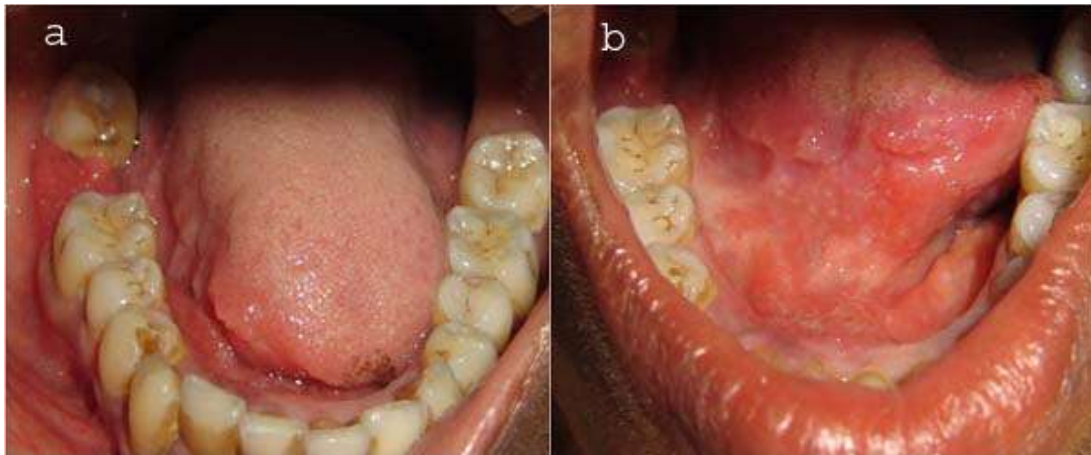


Fig-2: Intra oral picture showing ulcer on the right lateral border of the tongue

General physical examination showed the patient to be conscious and well oriented. On extra oral examination, the patient appeared malnourished. Right submandibular lymphnodes were found to be enlarged, nontender and mobile measuring 1.5x1cm approximately. Further intraoral examination revealed an erythematous ulcerated area located in the floor of the mouth seen extending anteroposteriorly from the lingual aspect of 32 involving floor of the mouth and extending upto the 46 tooth region and mediolaterally from right lateral border of tongue involving floor of the mouth to lingual sulcus, with irregular margins. Floor of the ulcer contained yellowish granulation tissue which obscured the edge of the ulcer. On palpation, the ulcer was tender, indurated, and with an undermined edge.

was arrived. The other differential diagnosis that were considered included traumatic ulcer and malignant ulcer.

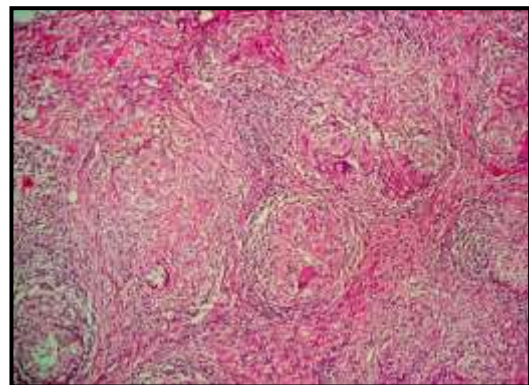


Fig-4: Multiple well circumscribed granuloma formation with admixed lymphocytes and multinucleated giant cells(10x)



Fig-3: Chest radiograph showing no evidence of opacifications

Based on the history reported by the patient and clinical findings, a provisional diagnosis of tuberculous ulcer of the tongue and floor of the mouth

The patient's hematologic workup did not show any abnormality other than raised WBC count (13,400cell/cumm). Serologic tests for HBV, HCV, HIV and syphilis were negative. Incisional biopsy was performed under local anaesthesia. Histopathological features revealed fibro collagenous tissue with caseating granulomas composed of epithelioid cells, Langerhans cells and foreign body type giant cells with lymphocytes, features consistent with the diagnosis of Tuberculosis.

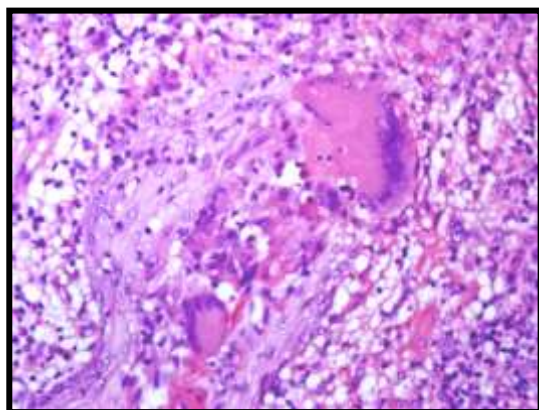


Fig-5: Giant cells containing multiple nuclei arranged in horseshoe pattern. Lymphocytic infiltrate is also seen.(40x)

Further investigations included Mantoux test, Sputum Acid Fast Bacilli (AFB) and chest X-ray, all of which were negative for the diagnosis of Pulmonary tuberculosis thus confirming the diagnosis of primary tuberculosis of the tongue and floor of the mouth in our case.

DISCUSSION

World Health Organization estimates that 2 billion or one third of the population are infected with tuberculous bacilli. Despite this tuberculous involvement of oral cavity is very rare with an incidence rate of 0.05% -5% of all cases.

Oral lesions may be primary or secondary to tuberculosis elsewhere in the body [3]. It is believed that rarity of tuberculous is due to continuous cleansing of oral mucosa by saliva. Other factors that attribute to relative resistance of oral cavity for tuberculosis are resistance of striated muscles to bacterial invasion and thickness of protective epithelial covering [4]. However break in the epithelial continuity in the form of abrasions facilitates inoculation by the bacilli present in sputum which is brought in intimate during coughing or speech.

Local factors that may facilitate the invasion of oral mucosa include poor oral hygiene, local trauma and presence of preexisting lesions like leukoplakia, periapical granuloma, abscess and periodontitis [5]. Other systemic predisposing factors may be due to lowered host resistance. The most vulnerable areas include gingiva, extraction sockets, buccal folds and tongue [6]. Self inoculation by the patient usually results from infected sputum by hematogenous or lymphatic dissemination.

In the case described the lesion manifested in lateral border of the tongue and floor of the mouth and in the present case patient gave a past history of extraction one month back which might have caused

minor break in the oral mucosa and favoured the deposition of mycobacteria through infected sputum.

Oral lesions have a non-specific presentation varying from ulcers to granulomas and fissures and may be overlooked. The typical presentation is that of a single painful ulcer with irregular borders covered by inflammatory exudates but atypical cases with multiple lesions or asymptomatic ulcers have also been described [5, 7]. In the present case the patient presented with painful ulcer having undermined edges and indurated pinkish white base at the floor of the mouth and tongue.

Oral tuberculosis is difficult to differentiate from other conditions on the basis of clinical signs and symptoms alone. While evaluating a chronic, indurated ulcer, clinicians should consider both infectious process such as primary syphilis and deep fungal diseases and non-infectious processes such as chronic traumatic ulcer and squamous cell carcinoma. If there is no systemic involvement, one should go for excisional biopsy for tissue diagnosis and bacteriologic examination with culture for a definitive diagnosis [8].

The identification of a tuberculous lesion in any location in the mouth is an unusual finding and its discovery is usually indicative of underlying pulmonary disease. This was true in our case also where pulmonary tuberculosis was asymptomatic. This helps not only in complete diagnosis but also in better patient management.

In conclusion though rare, Tuberculosis should be included in the differential diagnosis of chronic ulcers of the tongue. The dentist should realize the importance of his role in detection of TB in patients who have asymptomatic oral lesions and are unaware of the disease. Identification of TB is of significance not only to the patient himself, but also to the dental team that comes in contact and the community at large where the patient can be a potential source of spread of infection.

REFERENCES

1. Memon, G., A., & Khushk, I. A. (2003). Primary Tuberculosis of tongue. *J Coll Physicians Surg Pak*, 13, 604-5.
2. Sareen, D., Sethi, A., & Agarwal, A. K. (2006). Primary tuberculosis of the tongue: a rare nodular presentation. *British dental journal*, 200(6), 321-322.
3. Yepes, J., F., Sullivan, J., & Pinto, A. (2004). Tuberculosis medical management update. *Oral Surg Oral med Oral Pathol Oral Radiol Endod*, 98(3), 267-73.
4. Thilander, H., & Wennestrom, A. (1956). Tuberculosis of mouth. *Oral Surg*, 9, 858-70.
5. Rinaggio, J. (2003). Tuberculosis. *Dent Clin North Am*, 47(3), 449-65.

6. Iype, E. M., Ramdas, K., Pandey, M., Jayasree, K., Thomas, G., Sebastian, P., & Nair, M. K. (2001). Primary tuberculosis of the tongue: report of three cases. *British Journal of Oral and Maxillofacial Surgery*, 39(5), 402-403.
7. Ajay, G. N., Laxmikanth, C., & Prashanth, S. K. (2006). Tuberculous ulcer of tongue with oral complications of oral antituberculosis therapy. *Indian Journal of Dental Research*, 17(2), 87.
8. Dimitrakopoulos, I., Zouloumis, L., Lazaridis, N., Karakasis, D., Trigonidis, G., & Sichletidis, L. (1991). Primary tuberculosis of the oral cavity. *Oral surgery, oral medicine, oral pathology*, 72(6), 712-715.