the Journal of CONTEMPORARY DENTAL PRACTICE at www.thejcdp.com
Volume 8 Number 4 May 1, 2007

Primary Tuberculosis of the Tongue: A Case Report

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Abstract

Aim: The purpose of this article is to report a rare case of primary tuberculosis of the tongue.

Background: Tuberculosis is an infectious, chronic granulomatous disease that can involve almost any organ in the body, but primary lesions are usually confined to the lungs. Oral lesions are an infrequent occurrence in tuberculosis, and tuberculosis of the oral cavity is often a consequence of active pulmonary tuberculosis. Although primary tuberculosis in the oral cavity has been documented, it is a rare occurrence.

Report: A 42-year-old male patient presented with chief complaints of severe pain and ulceration on the ventrolateral surface of the left side of the tongue, measuring about 1.25×1.50 cm with surrounding erythema and induration of one-month duration. The ulcer was initially painless but became painful later with increased severity over time. The sore tongue caused difficulty in eating, drinking, swallowing, and even talking. The patient also complained of malaise for some duration, but there was no history of fever, cough, weight loss, and his bladder-bowel habits were normal. An excisional biopsy differentiated the lesion from squamous cell carcinoma and confirmed the diagnosis.

Summary: Even though primary tuberculosis in the oral cavity is a rare finding, it must be included in the differential diagnosis of mucosal lesions. This case provides a clinical example of the importance of this inclusion for the well being of the patient and for the community due to the communicable nature of the disease.

Keywords: Granulomatous disease, primary tuberculosis, tongue, tuberculosis of the tongue

Citation: Garg RK, Singhal P. Primary Tuberculosis of the Tongue: A Case Report. J Contemp Dent Pract 2007 May;(8)4:074-080.

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Introduction

Tuberculosis is primarily a pulmonary disease. At times, it may also be extra-pulmonary involving the brain, eyes, bones, skin, genitourinary system and upper respiratory tract, and the gastrointestinal tract including the oral cavity. Tubercular lesions of the oral cavity are relatively uncommon[1] and only 0.1% of patients show evidence of oral tubeculosis.[2] Oral mucosal lesions of tuberculosis are mainly secondary to pulmonary tuberculosis and rarely primary in origin.[3]

When oral tuberculosis 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.[4] Patients with oral tubercular lesions often have a history of pre-existing 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. This case report reviews a rare case of primary tuberculosis of the tongue.

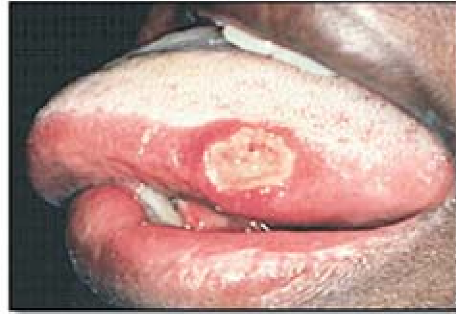

Figure 1. A large tubercular ulcer on the left ventrolateral margin of the tongue.

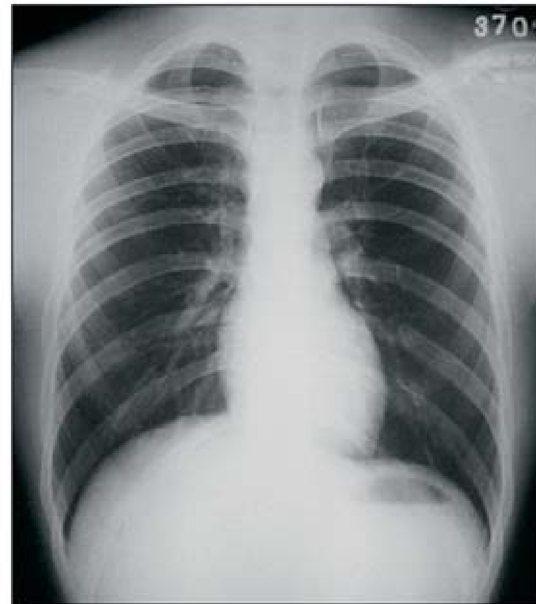

Figure 2. Chest radiograph (PA view) showing normal findings.

Case Report

A 42-year-old male patient presented with chief complaints of severe pain and ulceration on the left side of the tongue of one-month duration. The ulcer was initially painless but became painful later with increased severity over time. The sore tongue caused difficulty in eating, drinking, swallowing, and even talking. The patient also complained of malaise for some duration, but there was no history of fever, cough, weight loss, and his bladder-bowel habits were normal. He had a history of smoking for the last 25 years. Examination of the oral cavity revealed poor oral hygiene, chronic periodontitis, and multiple carious teeth. There was a single large deep ulcer on the ventrolateral surface of the left side of the tongue, measuring about 1.25×1.50 cm with surrounding erythema and induration (Figure 1).

The margins of the ulcer were inverted, and the ulcer was covered with sloughing tissue. The lesion was firm and tender upon palpation. There was no cervical lymphadenopathy. A provisional diagnosis of squamous cell carcinoma of the tongue was made.

Fine needle aspiration cytology (FNAC) was undertaken, and it presented the picture of some underlying chronic granulomatous pathology. Taking the FNAC report into consideration, a chest radiograph (PA view) (Figure 2) and Mantoux test were done but both were inconclusive.

As a result, an excisional biopsy of the ulcer was done under local anesthesia. The histopathological examination of the biopsy specimen revealed the presence of granulation

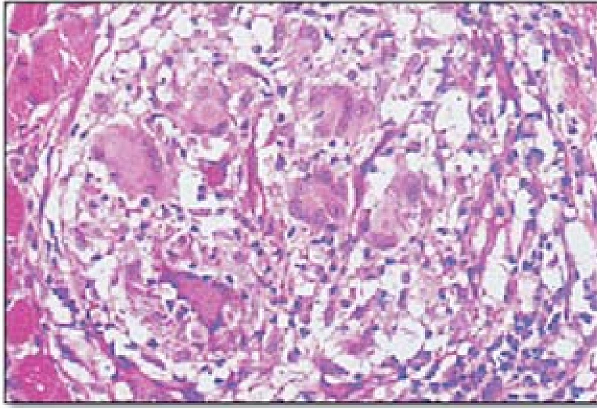

Figure 3. Histopathological examination of the ulcer showing typical findings of a tubercular granuloma.

tissue with epitheloid cells, Langerhans type of giant cells, and mononuclear inflammatory cells with areas of caseation (Figure 3).

With a diagnosis of primary tuberculosis of the tongue, the patient was referred to the Chest & TB Hospital in Jaipur, India where he was treated with a standard antitubercular regimen for six months. The patient was kept on regular follow-up for a period of 12 months, which proved to be uneventful with no recurrence.

Discussion

Primary tuberculosis is very rare in the oral cavity.[1] However, if primary lesions occur, the tongue is the most common site.[3] About 93% of tubercular oral lesions are ulcers and 50% of them affect the tongue.[5] In primary tuberculosis of the oral cavity microorganisms are directly inoculated onto the oral mucosa of a person who has not been infected before and has not acquired immunity against Mycobacterium tuberculosis.[6]

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[7] as was present in this case.

The intact oral mucosa is usually resistant, and it acts as a barrier to invasion by acid-fast bacilli with the saliva also imparting an inhibitory effect by flushing away the microbes mechanically.[4,8] Any traumatic defect in the oral mucosa can provide an opportunity for the organisms to gain access into deeper tissues.

Tuberculosis of the oral cavity frequently simulates cancerous lesions and others like traumatic ulcers, aphthous ulcers, actinomycosis, syphilitic ulcer, or Wegener's granuloma.[9] The differential diagnosis is made with the identification of a caseating granuloma with associated epitheloid cells and giant cells of the Langerhans type during histological evaluation of biopsied tissue. Deeper biopsies are always advocated for ulcers of the tongue; a superficial biopsy may not reveal the etiology due to epithelial hyperplasia.[5]

Most often complete remission of tubercular ulceration of the tongue takes place after standard antitubercular chemotherapy using antibiotics such as Isoniazide, Rifampicin, Pyrazinamide, and Ethambutol for six months.[3,5,10]

Although rare, an early suspicion and timely intervention can lead to a favorable outcome in such cases, both for the patient and the community.

Summary

Even though primary tuberculosis in the oral cavity is a rare finding, it must be included in the differential diagnosis of mucosal lesions. This case provides a clinical example of the importance of this inclusion for the well being of the patient through timely intervention, which can lead to a favorable outcome as well as for the community due to the communicable nature of the disease.

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