A RARE PERIODONTAL MANIFESTATION OF TUBERCULOSIS: REPORT OF TWO CASES

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Article Info: Received 24 August 2019; Accepted 22 September, 2019
DOI: https://doi.org/10.32553/ijmbs.v3i9.536
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Conflict of interest: No conflict of interest.

Abstract

Tuberculosis (TB) is one of the world’s deadliest communicable diseases. TB ranks the second leading cause of death from infectious diseases worldwide. It usually affects the lungs, TB bacilli can spread hematogenously to other parts of the body and this also includes mandible or maxilla. It can occur in the mouth involving the tongue with very unusual features and forms. So oral lesions, although rare, are very important for early diagnosis and interception of primary tuberculosis.

Keywords: Tuberculosis, Tuberculous Osteomyelitis, Ulcers

Introduction:

Tuberculosis is a chronic granulomatous disease caused by various strains of mycobacteria, usually Mycobacterium Tuberculosis in humans [1]. Robert Koch, a German physician, discovered the Tuberculosis bacillus in 1882 [2]. It has been a worldwide major health problem for centuries. Although the disease’s prevalence reduced decades ago, it still has extremely high prevalence in Asian countries. India have nearly one third of global burden of tuberculosis. It may take any form clinically, but with decline in number, these tuberculosis lesions of oral cavity have become so rare that they are frequently overlooked in the differential diagnosis of oral lesions [3,4].

Although, oral manifestations of tuberculosis has a rare occurrence, but it has been considered to account for 0.1-5% of all TB infections and may be either primary or secondary lesions. Primary forms generally are uncommon and occur in younger patient with frequently associated caseation of the draining lymph nodes. Secondary lesions are more common and are seen mostly in older persons[5]

Oral manifestations of tuberculosis:

Oral TB may occur at any sites 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, uvula and tonsils and are also frequently involved. Primary oral TB can be present as painless ulcers of long duration and enlargement of the regional lymph nodes [6]. The oral lesions may be present in a variety of forms, such as ulcers, nodules, tuberculomas, and periapical granulomas [6,7,8].

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 [8,9]. Of all these oral lesions, the ulcerative form is the most common [9,10]. Often it is painful, with no caseation of the dependant lymph nodes.

Case Report

Case 1: Tuberculous Osteomyelitis
A 25-year-old female patient with a chief complaint of pain in lower right back teeth region since last 3 years reported to Department Of Periodontology, GDCH Nagpur with medical history of Tuberculosis and was under medications i.e. DOTS treatment for the same. Mantoux test was positive.

On clinical examination, stains+ and calculus+ were present. Alveolar bone was exposed with respect to 46 and 47 with deep tissue pouch. Exposed bone was non vital.

On radiographic examination, ground glass appearance with respect to 48, 47, 46 and 45 was present with loss of PDL space and loss of lamina dura.

Case 2: Gingival Lesion in Tuberculosis

A 81 year old female patient with a chief complaint of ulcer on palate since last 1 year reported to Department Of Periodontology, GDCH Nagpur with medical history of Tuberculosis with Mantoux test was positive.

On clinical examination, stains+ and calculus+ were present. Ulcerative lesion was present on palate extending upto attached gingiva with respect to 26 and 27 & it appeared erythematous with tenderness and was covered by minute white patches that were scrapable. Recession with tender on percussion positive with respect to 26 and 27. Xerostomia was present.

Discussion

The factors which causes oral tuberculous lesions include local or systemic factors. Local factors include the poor oral hygiene, trauma, the presence of pre-existing lesions such as leukoplakia, peri-apical granulomas, cysts, abscesses, and periodontitis. Lowered host resistance due to primary or secondary immunosuppression and nutritional deficiencies form the group of systemic predisposing factors.[11]

This report suggests that none of the patients reported with healthy periodontal status and emphasizes that significant periodontal destruction is seen in the form of moderate to severe periodontitis; which can be considered as a common finding in TB patients. A majority of patients required periodontal therapy to revert back tissues to a normal state. This can be attributed to the fact that periodontal pockets may harbor tuberculous bacilli and contribute to the stimulation of pro-inflammatory (innate) cytokines, other inflammatory mediators, and series of matrix metalloproteinases (MMPs) which have a unique ability to degrade fibrillar collagen and other matrix
components, thereby causing significant periodontal tissue destruction.[12]

In addition, these bacilli can be opportunistically inoculated directly into the oral mucous membrane through minor tears, abrasions, tissue manipulation, and carious lesions, during dental procedures and thus can produce primary tuberculous lesions of the oral cavity.[13] Although secondary oral lesions are usually seen with pulmonary TB, according to Kumar, to a substantially higher incidence (48.03%) of distribution of oral lesions in TB patients in the form of fissures and ulcerations with tongue and soft palate being the most common sites of involvement.[14]

The gingival lesion may present as exuberant and granulating or as mucosal erosions. Sometimes, these lesions may be seen simultaneously with marginal periodontitis.[15] Differential diagnoses include traumatic ulcer, aphthous ulcer, Wegener’s granulomatosis, malignancy, and syphilis.[16] It is essential to rule out TB in patients with chronic oral ulcers, especially in tropical countries.

**Conclusion:**

A rare manifestation of TB oral lesions should be considered in the differential diagnosis of oral lesions. Early and accurate diagnosis is essential in the establishment of appropriate treatment aiming at curing the patient with TB.

**References:**