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TUBERCULOSIS OF THE ORAL MUCOSA: CASE REPORT

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SUMMARY

There is an increase in the incidence of extra-pulmonary tuberculosis (TB) despite decline in cases of pulmonary TB. Oral TB lesions are non-specific in their presentation and are often a forgotten differential diagnosis in oral lesions. This report presents a previously undiagnosed case of TB whose oral lesions led to diagnosis and treatment.

INTRODUCTION

TB is a chronic granulomatous disease which is caused by the acid-fast bacillus, *Mycobacterium tuberculosis*. It is transmitted primarily through the respiratory tract and majority of the infections are pulmonary. An estimated 10-25% of TB infections occur in extra-pulmonary sites with 0.2- 1.5% intra-orally (1). Despite the global decline in the prevalence and incidence of pulmonary TB, there is an increasing incidence in extra pulmonary TB and in spite of this, it is still an under diagnosed entity (2). Oral lesions of TB are non-specific in their clinical presentations and often are not considered in the differential diagnosis especially in the absence of systemic symptoms.

Oral TB usually results from inoculation of breached oral mucosa from infected sputum. Rarely, it may result from haematogenous dissemination from other infected sites (3). The lesions present as non-healing ulcers but may also occur as nodules, fissures or as tuberculous osteomyelitis of the jaw bones. The most common site is the tongue, followed by the palate, lips, buccal mucosa, and the gingiva (4). The ulcers are usually painful with indurated, irregular and undermined margins and a necrotic base (5). A case is presented of TB manifesting in tongue and buccal mucosa.

CASE REPORT

A 42 year old black man was referred by his primary medical clinic to the oral and maxillofacial surgery unit of the Kenyatta National Hospital (KNH) for management of chronic, painful non-healing oral ulcers which had been present for four months. As

a result of the discomfort during feeding the patient had developed significant weight loss. He had been treated over the four months using anti-fungals, antibiotics and various antiseptic mouthwashes with no response. He reported no history of chronic illnesses but was a heavy cigarette smoker and alcohol consumer for a long duration. Apart from a tender mobile left sub-mandibular lymph node the patient had no significant findings on general systemic examination. An Intra-oral examination revealed an irregularly shaped ulcer on the left buccal mucosa extending from the commissure (arrowed) and measuring about 3.5 cm in its largest diameter (Figure 1a) and on the right lateral border of the tongue measuring about 4 cm in length (Figure 1b). Both ulcers were deep, tender and surrounded by well-defined undermined margins and were covered by a yellowish membrane.

Figure 1a

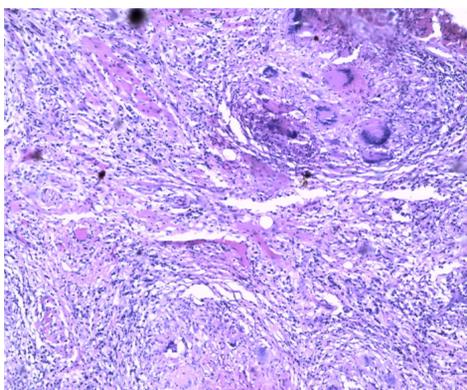
Clinical presentation of the buccal Fig.1b. Clinical presentation of the tongue lesion



A differential diagnosis of major aphthous ulcers and oral squamous cell carcinoma was made although the latter was considered less likely from the atypical features and multiple presentation. Apart from an elevated erythrocyte sedimentation rate of 20mm/hour all haematological parameters including full haemogram, urea, electrolytes and creatinine were within normal limits. He also tested negative for the Human Immunodeficiency Virus (HIV) 1 And HIV 2 infection. Incisional biopsies were done from the two sites and the specimen was fixed in 10% formalin. Histo-pathological examination revealed a granulomatous lesion with caseous necrosis, langerhans giant cells, epithelioid histiocytes and lymphocytes, features which are consistent with tuberculosis (Figure 2).

Figure 2

Photomicrograph of the Oral TB at low power showing granuloma (arrowed) with central necrosis and giant cells (H&E stain, X 100)



In view of this, a chest X-ray was done and it showed typical features of pulmonary TB including bilateral widespread patchy lung opacities (arrowed) with right lung interstitial ground glass appearance and small nodules, apical Small cavitations and right-sided pleural thickening (Figure 3).

Figure 3

Chest Radiograph of the patient



The patient was referred to the TB clinic where he was put on Rifampicin, Isoniazid, Pyrazinamide, Ethambutol Hydrochloride and Pyridoxine; and four weeks into the course of treatment had shown remarkable improvement with almost complete healing of the ulcers (Figures 4a and b).

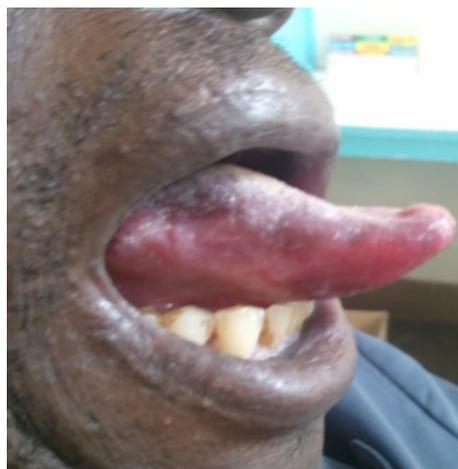
Figure 4a

Clinical presentation of the healing buccal lesion.



Figure 4b

Clinical presentation of the healing tongue lesion



DISCUSSION

Tb infection in the oral cavity is rare constituting 0.2 to 1.5% of all extra-pulmonary infections with the majority of these in the presence of pulmonary involvement(1). Intact stratified squamous epithelium of the oral mucosa usually resists entry of the tubercle bacilli. This together with the cleansing effect of saliva, relative paucity of lymphoid tissue in the tongue, and the antagonist oral commensals are all reasons for decreased virulence of TB in the oral cavity (5). Oral TB infection, in the absence of systemic symptoms may thus present diagnostic challenges to the clinician because of the atypical presentation and may result in delay in initiating treatment as exemplified in the current case. Tb ulcers may resemble oral squamous

cell carcinoma and should be considered in differential diagnosis especially in the presence of risk factors such as tobacco use. Although synchronous lesions of oral squamous cell carcinoma have been reported, they are very rare. Nevertheless, histological diagnosis must always be obtained for any ulcer that fails to heal within two weeks and which appears to increase in size. Furthermore, tissue biopsy has been found to be the most useful investigation in oral TB cases with published cases reporting 88% specificity (6).

Since oral TB is almost always secondary to pulmonary TB, radiographic evidence should always be sought. Breach of the mucosa by chronic use of tobacco could have contributed to the inoculation of myco-bacteria in the current case. It has been reported elsewhere that smoking coupled by poor oral hygiene has been shown to be a predisposing factor for oral TB among Immuno-compromised male smokers (7). The current case showed remarkable response to anti-TB chemotherapy underscoring the fact that in cases where diagnosis of an oral lesion is equivocal and in the absence of histo-pathological diagnosis, as seen in resource limited settings, trial treatment could be initiated. In conclusion, the current case is a reminder that oral TB should always be considered in the differential diagnosis of atypical lesions in the mouth and where resources are available a histological diagnosis must be obtained as soon as possible.

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