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Labial and Gingival Tuberculosis- A rare case report

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Abstract

Tuberculosis (TB) is an inflammatory granulomatous systemic disease that infrequently presents as primary lesions in the oral cavity. Merely a limited number of cases involve lip & gingiva. Here a case of primary tuberculosis is presented involving only gingiva and lip. A 21-year-old female patient presented with multiple lip and gingival ulcers with necrotic slough over the gingiva in maxillary arch. No signs and symptoms of TB was evident elsewhere. The diagnosis was confirmed with gingival biopsy. Medical treatment was curative and no recurrence even after 1-year follow-up. Conclusion is that tuberculosis is a systemic disease that seldom affects the gingiva. Hence the likelihood of gingival involvement as one of manifestation of the disease should be included in the differential diagnosis of gingival lesions for early and accurate diagnosis necessary for planning timely treatment and strategies to control the disease.

Keywords: Tuberculosis, Gingiva, Lip, Young patient, Antitubercular treatment.

Introduction

Worldwide, Tuberculosis (TB), an infectious disease is the second leading cause of death. TB, commonly caused by Mycobacterium tuberculosis, Mycobacterium bovis and atypical Mycobacteria is a chronic granulomatous disease that most commonly affects lungs but may involve any organ of the body including oral cavity.[1,2]Even though oral manifestations of TB have been reported, they are rare, affecting 0.05%-5.00% of infected patients[1,2,3]**.** Oral TB can be either primary or secondary. Majority of the cases are secondary to pulmonary disease, usually involve the tongue, followed by the palate, lips, buccal mucosa, gingiva and frenulum.[5,6,7,8]

Primary oral TB lesions are exceedingly rare, common in young adults and more often involve gingiva with an associated regional lymphadenopathy.[9,10] TB involving lip & gingiva is very rare and literature reports only a small number of cases which makes this case worthy of documentation. Here, a case of primary oral TB is presented, affecting the gingiva and lips in a 21 year-old

female patient which was the only presenting sign of tuberculosis.

Case Report

This patient reported with bleeding and burning sensation on the upper lip since 5 years. The patient was apparently asymptomatic 5 years back until she developed cracking of the upper lip in winter which lasted for 2 months after which she developed swelling of the upper lip which was sudden in onset, severe, painless and developed over night which lasted for a period of 1year following by crusting. The patient consulted a homeopathic doctor who prescribed medicines for 1 year with no improvement following which she developed fissuring and bleeding from the left side of the upper lip which encompassed the entire lip in a span of 2 to 3 weeks. This was followed by reduction in size of swelling then fissuring spread to the entire lip with severe pain in a period of one and a half years (Fig 1). Later on she consulted a general surgeon who advised plastic surgery but the patient discontinued seeing the surgeon after which she did not consult any doctor for 2 years. Subsequently she consulted an ENT specialist for bleeding from the nose and difficulty in breathing for which medicines were prescribed for a year and breathing difficulty improved. A year later she visited a Dermatologist who prescribed medicines for 2 months which did not provide any relief. As there was no improvement she was referred to the outpatient Department of Oral Medicine and Radiology. Her medical history revealed no systemic problems and she was apparently healthy with no cough or expectoration, fever, or weight loss. There was no cervicofacial lymphadenopathy or any other abnormal findings. A complete general examination revealed no other contributory abnormalities. Family history revealed pulmonary tuberculosis in Grandmother.

Extraoral examination revealed swelling of the upper lip with erosion and yellowish crusting of upper lip and also multiple erythematous ill defined patches were present over the right cheek and just above upper lip and right nasolabial fold. The lesion was slightly painful on palpation with spontaneous bleeding on manipulation. Intraoral examination showed gingival enlargement especially in the anterior labial area extending from canine to canine region. The gingiva was fiery red, papillary, pebbled and granular in appearance (fig 1) with minimal of local deposits. Intraorally, her oral hygiene was fair. Correlating history of ulcers of chronic duration and clinical features, a clinical differential diagnosis of acute necrotizing ulcerative Gingivitis, syphilis, human immunodeficiency virus infection (HIV), TB, was considered. The diagnostic workup included complete hemogram, enzyme-linked immunosorbent assay (ELISA) for HIV, antinuclear antibody (ANA), and intraoral periapical radiographs were advised. Results of all the tests were within normal limits and HIV test was negative. Mantoux test was positive (+25mm). The histopathology showed multiple confluent and discrete granulomas composed of epitheloid histiocytes and Langhans giant cells with central caseous necrosis confirming the diagnosis of TB(fig 3).

Following the biopsy report, a chest radiograph(Fig 4) and a routine medical consultation were advised both of which turned out negative results. The patient was then referred to a physician who initiated a WHO recommended category 1 anti-tubercular therapy DOTS (Directly Observed Treatment, Short Course) with rifampicin (450 mg), isoniazid (600 mg), ethambutol (1200 mg) and pyrazinamide (1500 mg) for two months with three times doses per week, followed with continuation phase with isoniazid (300 mg) and thioacetazone (150 mg) for six

months. There was no recurrence of the disease during 1-year follow-up.(Fig 5)

Discussion

One of the major health concerns in most of the developing countries is Tuberculosis. South East Asia has a disproportionately high 88% of the global burden of TB. Nearly one-third of the global burden of TB is seen in India. Poverty, malnutrition and economic recession, lack of awareness are the main reasons for susceptibility to TB in developing countries.[11,12]

Extra-pulmonary TB accounts for 25% of the cases with 10–35% detected in the head and neck region[13,14]. Even though literature has reported oral manifestations of TB they are rare, affecting 0.05%-5.00% of infected patients [1,2,3,4].

Clinically, oral TB can illustrate varying presentation. However due to nonspecific clinical presentation, decreased occurrence in the oral cavity and effective drug therapy, most of the oral TB lesions go unnoticed during routine intraoral examination and often not considered in the differential diagnosis of other oral lesions.[15,16]

Primary oral lesions are rare and occur as a result of the direct inoculation of oral tissues, the reason attributed is that the bacilli may reach the oral mucosa by hematogenous or lymphatic spread. Break in the continuity of epithelium due to chronic irritation or inflammation favours localization of TB bacilli, even with hematogenous spread.[17]

Both local and systemic factors favour oral infection in TB. The systemic factors include decreased host resistance and increased virulence of the organisms.The local predisposing factors may be poor oral hygiene[19], the presence of existing lesions like leukoplakia[21], periapical granuloma[22], dental cysts[23], dental abscess[24], jaw fractures,[25] and periodontitis[26]

Symptoms like cough, fever, weight loss, weakness, dysphagia were not evident in the present case which confirms that there was no lung or systemic involvement. Hence it was purely a case of primary gingival TB. This case is worth documenting as there were chronic non healing ulcers on the lip and gingival which led to the diagnosis. This was consistent with case report by Ebenezer et al.[17] who reported two cases of oral TB, one on labial mucosa and other one on gingiva, both presented as non healing ulcer. Dentists should consider such lesions in the differential diagnosis of non healing ulcers. Histopathological study is needed to exclude carcinomatous changes and to confirm the diagnosis of TB.

In the present case, the most likely differential diagnosis included traumatic ulcer, infections (bacterial, fungal and viral), drug reaction and malignancy, including primary squamous cell carcinoma, lymphoma and metastases. A negative history about trauma, systemic medication, tobacco habit helped to rule out traumatic, ulcer due to drug reaction and carcinoma respectively. This article highlights the importance of oral tuberculosis diagnosis in the dental surgery: early detection, prompt treatment and appropriate infection control methods.

Conclusion

Oral tuberculosis lesions are relatively rare, difficult to diagnose and could be a possible infectious hazard to the healthcare personnel. So it is vital to rule out oral TB in asymptomatic patients especially in tropical countries which helps to recognise and prevent further spread of the disease to other organs of the body, and other members of the community. An early diagnosis with prompt treatment will usually result in a complete cure.

Legends of Figure

Figure 1 Lip encrustations and erythematous& granular gingiva with slough

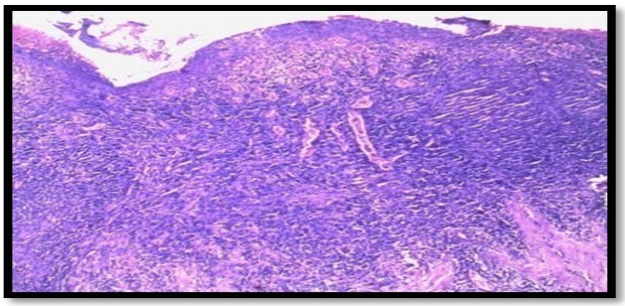

Figure 2. Microscopic picture showing granulomatous lesion with Langhan's giant cells and epitheloid cells

Figure 3 Normal chest radiograph

Figure 4 follow up of 6months showing normal lip & gingival.

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