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Chronic Oral Ulcer- Marker of Unvoiced Tuberculosis

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Abstract

Background : Tuberculosis primarily a disease of pulmonary involvement is not considerably documented for oral cavity as primary lesions and hence results in deferred or misdiagnosis. Present article aims to well document a case chronic oral ulcer diagnosed to be primary tuberculosis in an adolescent female and discuss consequence of the manifestation and diagnosis. It also establishes the role of dentist oral diagnostician witnessing the first encounter of many systemic diseases.

Keyword: oral ulcer, chronic ulcer, tuberculosis, granulomatous ulcer, oral tuberculosis

Introduction: Tuberculosis a chronic infectious granulomatous multisystem disease caused by mycobacterium tuberculosis affecting primarily lungs, reported rarely in oral cavity.(1,2) Another species mycobacterium bovis infects rarely, through ingestion of unpasteurized cow's milk(3). Tuberculosis is major health issue in developing countries and patients with low socioeconomic status. TB may be either a primary or a secondary infection.(4,3) Important clinical signs and symptoms of primary tuberculosis mainly involve pulmonary sites. Primary oral TB lesions, generally found in young patients and are associated with cervical lymphadenopathy. Primary lesions remain painless in the majority of cases and are manifested in immunocompromised conditions (e.g., HIV infection) more frequently than its secondary counterpart.(5)

Case Report

A 17 year old female patient of lower socioeconomic status reported with complaint of pain and swelling in upper front region of gums since 2 months. On taking detailed history patient reports trauma due to fall in anterior maxillary region a year back resulting in fracture crown of right incisor i.e., 11. Patient got it extracted 5 months back leaving behind the root stump in the socket. Patient also gave history of fever for last 2 months, for which she underwent treatment and was symptomatically relieved. Later she developed swelling of gums involving maxillary anterior region for which she underwent extraction of root stump of 11 and 12 and medication for same and was symptomatically relieved. On taking previous medical history patient reports that she was suspected of tuberculosis and was advised for treatment but patient has not undergone treatment for same. On extraoral examination, IIb group of lymph node, bilateral submandibular lymph node were palpable single in number, firm in consistency, non tender, movable, 3cm in diameter on right side and 2 cm diameter on left side. On intraoral examination, reddish pink multi lobulated ulcerated lesion covered with slough on surface involving the facial gingival from 14 to 24 region.(fig 1) Extending superio-inferiorly from marginal gingival to depth of

vestibule disturbing the contour of gingiva.(fig 2,3) Swelling extends towards palatal gingiva including residual ridge alveolar mucosa i.r.t. 11 12.(fig 4) Tender on palpation, with bleeding of sloughy surface. Also it was rubbery in consistency. On hard tissue examination, periodontal pocket present i.r.t. 21 22 23 24 13 14. Missing 11 12, grade I mobility i.r.t. 21 22.

Based on the clinical finding and history given by patient a provisional diagnosis of Granulomatous lesion involving gingival i.r.t. 14 13 12 11 21 22 23 24.

Differential diagnosis of Drug induced gingival enlargement, fungal infection involving gingiva was considered.

To confirm the diagnosis certain lab investigation i.e., exfoliative cytology, throat swab examination, complete blood examination, Mantoux test, incisional biopsy were advised. Exfoliative cytology report reveals sample negative for fungal strains. Throat swab stained for AFB could not detect tuberculous strains but there was positive Mantoux test and biopsy disclosed multiple giant cells in the connective tissue indicative of granulomatous lesion (fig 5). Chest radiograph did not gives very clear picture of involvement but shows multiple diffuse infilteration involving left lower lobe of lung suggestive of tuberculous involvement (fig 6).

Several radiographic investigations were done to examine extend of alveolar bone involvement. Maxillary occlusal (fig 7) view revealed incompletely healed extraction socket i.r.t 11 12, with ill defined borders and fine, thin radio opaque spikes perpendicular to the surface. Loss of alveolar bone height i.r.t 21 22 associated with widening of periodontal ligament space i.r.t 21 22 13(fig 8,9). On the basis of above investigations and clinical findings diagnosis of granulomatous lesion was given which was suspected to be primary tuberculosis involving oral cavity.

Discussion

Lungs are the primary site of involvement of tuberculosis whereas oral cavity is rarely involved (5) in case of primary infection and usually acquired as secondary infection site or due to haematogenous spread . Oral lesions usually coexist with the pulmonary infection and generally involves gingiva, mucobuccal fold, and inflammatory foci adjacent to extraction site in case of primary infection whereas tongue dorsum, followed by palate, buccal mucosa and lips in case of secondary involvement (4,5)

Oral cavity is generally resistant to pathological infections due to many physiological and histological barriers such as salivary flush, enzymes, thick mucosa, oral saprophytes, and tissue antibodies(1). Clinical presentation and past history of present case suggested trauma in oral cavity as site of entry for tuberculous infection. Intact squamous epithelium of oral mucosa serve as entry barrier for tuberculous bacilli (6,7) which in present case was interrupted due to trauma resulting in open socket serving as favorable site for bacterial colonization. Present case was showing systemic symptoms of tuberculosis such as long term recurrent fever, weight loss along with oral lesions however investigations done were suggesting tuberculous infection which could be confirmed by advanced investigations as TB Gold test, which was however not done in present case.

Tuberculosis primarily affecting oral cavity lacks literature support and is generally documented in case reports. Hence the present case can add on to the literature and can encourage further research in the arena. Also it suggests that the ideal prototype of pathology not always exist and variations are always there. So thinking out of the box with complete investigations can lead to a perfect diagnosis. Also role of an oral diagnostician in diagnosis

of this multisystem disease is crucial hence the oral mucosal lesions shouldn't be ignored by dental practitioners casually.

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Legends Figures

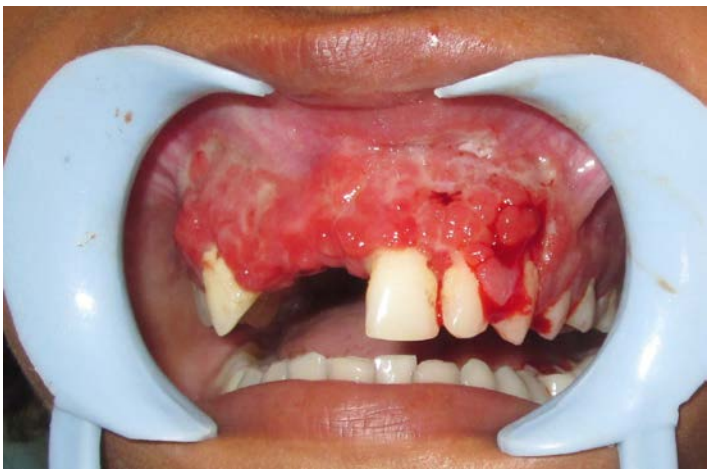

Figure 1: facial extend of gingival involvement

Figure 2: right side facial extend of gingival involvement

Figure 3: left side facial extend of gingival involvement

Figure 4: palatal extend of involvement

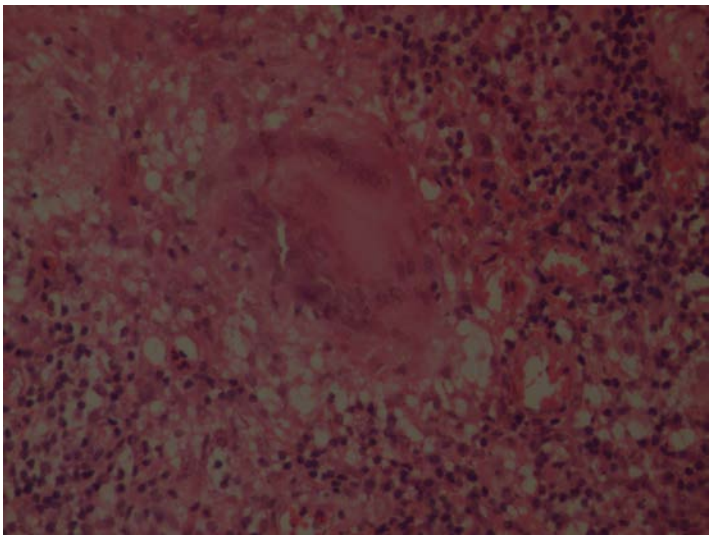

Figure 5: histopathological image showing presence of giant cells

Figure 6: chest radiograph showing diffuse involvement of left lobee

Figure 7: maxillary occlusal radiograph

Figure 8: IOPA of region 13 12 11 21 22 23

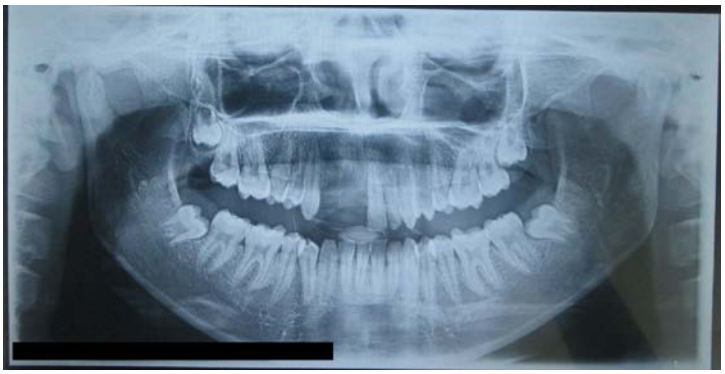

Figure 9: OPG