Primary lingual tuberculosis: a case report with review of literature

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Abstract: A case of primary tuberculosis of the tongue, an extremely rare entity is presented. The clinical manifestation, diagnosis and the response to antituberculous treatment are considered. The literature is also reviewed. (J. Oral Sci. 44, 55-57, 2002)

Key words: tuberculosis; tongue.

Introduction

Since the introduction of effective chemotherapy, tuberculous lesions of the oral cavity are rare (1-3). Oral tuberculous lesions may be either primary or secondary, although there are also reports of atypical cases in the literature (4). The most common intraoral lesion of tuberculosis is an ulcer and generally occurs in young patients with regional lymph node enlargement (5). Its infrequent clinical presentation and increased chance of being overlooked during routine intraoral examination, make it worthy of documentation. Primary lingual tuberculosis is extremely rare, as early diagnosis and treatment of tuberculosis elsewhere in the body may be the reason for its uncommon presentation (6). We report such a case with no regional lymph node involvement and who had no evidence of systemic tuberculosis.

Case Report

A 20-year-old male presented with a progressive, non-painful swelling of the right side of the tongue, of two months duration. There was no history of dental trauma, cough with expectoration, fever or weight loss and his appetite was normal. The patient had been a tobacco chewer for four years.

On examination, his general condition and vital signs were normal. There was no cervical lymphadenopathy. Systemic review was unremarkable. Local examination revealed an ulcerated nodule of about 2×2 cm on the right lateral border of the tongue (Fig. 1). It was non-tender and firm with an indurated base. The teeth and rest of the oral cavity was normal with good oral hygiene.

Investigations revealed a haemoglobin of 13 gm/dl, WBC count of 4.8×10^9/l, polymorphs 40 percent, lymphocytes 28 percent, and the ESR was 12 mm/h. Serological studies (ELISA for HIV and VDRL) were non-reactive. A chest x-ray was normal. A provisional diagnosis of malignancy was made and a wedge biopsy of the lesion was performed. Histopathological examination showed an atrophic ulcerated epithelium, caseating granulomas surrounded by lymphocytes, epitheloid cells and Langhans giant cells (Fig. 2). A diagnosis of tuberculosis was made.

On completion of six months course of antituberculous treatment (isoniazid, rifampicin, pyrazinamide, ethambutol) and during follow-up there has been no recurrence of disease.

Discussion

Tuberculosis is very common in India and Southeast Asia, where the prevalence rate is about four per 1000
people and the incidence rate of the disease is two percent. Fifteen percent of the tuberculous population of the world resides in India (7).

Lingual tuberculosis is caused by Mycobacterium tuberculosis, an acid-fast bacillus (AFB) and is usually associated with tuberculosis of the oropharynx, lungs, lymph nodes and miliary tuberculosis. Primary tuberculosis of the tongue as in our patient is extremely rare, although cases have been reported (3,6). A review of the literature of the last 35 years revealed only six cases of primary lingual tuberculosis. The majority of these patients had an associated cervical lymphadenopathy. In our patient, there was no neck node involvement secondary to the primary lesion.

The tongue leads all oral sites of involvement, with the most common regions being the tip, lateral borders, dorsum and base. Other sites include tooth sockets, gingiva, soft palate, floor of mouth, lips and buccal mucosa (3). Davis (8), described three forms of oral tuberculosis; acute miliary, chronic ulcerative and lupus vulgaris. The chronic ulcerative type is always secondary to advanced pulmonary tuberculosis and involves the tongue near the tip. The usual lesion is an ulcer, but atypical lesions e.g., diffuse glossitis, fissures or tuberculoma have been reported (9). Darlington and Salmon (10) classified oral tuberculous lesions into the following groups; Group 1 - tooth apex and socket cases; Group 2 - cases that involve the oral mucous membrane, and Group 3 - tuberculosis of the maxilla and mandible. Group 2 lesions are usually a manifestation of an advanced pulmonary infection.

The mechanism of entry of the bacilli into the tongue is not clearly understood. Primary lingual tuberculosis is thought to be uncommon because the tongue seems to have some local resistance to M. tuberculosis. Some of the factors responsible for the rare occurrence of tuberculosis of tongue (11) may be the local pH of oral cavity, regular cleansing of tongue by saliva that prevents settling of the bacteria on tongue, resistance of striated muscles and mucosa of the tongue to AFB and a relative paucity of lymphoid tissue in the anterior part of the tongue (for which the tubercle bacilli have greater affinity).

Differential diagnosis includes a traumatic ulcer, aphthous ulcer, actinomycosis, syphilitic ulcer, Wegener's granuloma, sarcoidosis and carcinoma (3,6). A biopsy, as in our patient, is necessary to confirm the diagnosis of tuberculosis and also to exclude malignancy. A chest x-ray and a Mantoux skin test are mandatory to rule out systemic tuberculosis. The usual treatment of the tuberculous ulcer is by antituberculous drugs or surgical excision followed by antituberculous drugs (7).

With the decreased incidence of tuberculosis, the unusual forms of tuberculous lesions of the oral cavity are likely to be missed. The dentist needs to be aware of this possibility and consider tuberculosis in the differential diagnosis of any nodular, ulcerated and indurated lesion of oral cavity.

References