

## CASE REPORT

# NON HEALING ULCER OF SOFT PALATE: A COMMON ENTITY RARELY SEEN

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### ABSTRACT

Oral Tuberculosis is a rare disease, accounting for less than 1% of all cases of tuberculosis. The most common manifestation is a non healing ulcerative lesion of the mucosa which is often misdiagnosed. The recent increase in the incidence of tuberculosis especially after the advent of HIV infection, combined with an emerging global resistance to anti-tuberculous drugs, warrants an increased awareness of the involvement of *Mycobacterium tuberculosis* in persistent or atypical lesions in oral cavity and oropharynx. Very few cases of oropharyngeal tuberculosis have been described in literature. We report a rare case of tuberculosis of soft palate secondary to pulmonary TB in an 8 year old child.

**Key words:** Tuberculosis soft palate, Oral and Oropharyngeal TB, Granuloma, Nonhealing ulcer

### INTRODUCTION

Tuberculosis, one of the oldest diseases known to affect humans, is caused by bacteria of *Mycobacterium tuberculosis complex*. It usually affects lungs, although other organs are involved in up to one-third of cases. Oral TB may be primary or secondary. Secondary TB is usually seen after pulmonary TB. In secondary oral/oropharyngeal TB, the route of spread is either hematogenous or lymphatic spread. In primary oral TB, there is direct inoculation of the mycobacterium due to break or loss of the natural barrier. Predisposing factors for primary oral TB are: trauma; inflammatory conditions like dental abscess; leukoplakia; tooth extraction, or poor oral hygiene. We report a rare case of oropharyngeal tuberculosis involving soft palate secondary to pulmonary TB.

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### CASE REPORT

An 8 year old female child presented to Otolaryngology department of our hospital with complaints of difficulty in swallowing and fever for past 3 months. Child also gave history of productive, mucopurulent cough for past 3 months. She had decreased appetite and weight loss for past 2 months. There was no past or family history of tuberculosis. Child was immunised for age. On examination, child appeared pale and weighed only



Figure 1. Clinical Photograph of Patients

15kgs. On oral cavity and oropharyngeal examination, 3x3cm irregular area of ulceration with granular surface was seen on uvula and soft palate (figure1). The rest of palatal mucosa was very pale. Rest of the oral cavity appears normal.

There was no significant cervical lymphadenopathy. In view of clinical presentation, a provisional diagnosis of granulomatous disease of soft palate with strong suspicion of tuberculosis was made. Complete blood count with ESR, montoux test, and chest x-ray were ordered. The results of investigations were: ESR was 77mm/hr, montoux test was positive (14mm), and chest x ray showed bilateral nodular and infiltrative opacities in upper zone (figure 2), suggestive of tuberculosis. Child was advised for sputum examination for acid fast bacilli but she did not cooperate for sample collection, hence sputum examination was not done. Serology for human immunodeficiency virus was negative. Her blood and urine culture were negative. Punch Biopsy of the lesion was done under local anesthesia and sent for histopathological examination. The biopsy showed multiple tubercular granulomas with areas of caseation (figure 3). Thus, a diagnosis of tuberculosis of soft palate secondary to pulmonary TB was made and child was started on ATT and has been on regular follow up.



Figure 2. Chest X-ray showing Infiltrative Opacities in upper zone

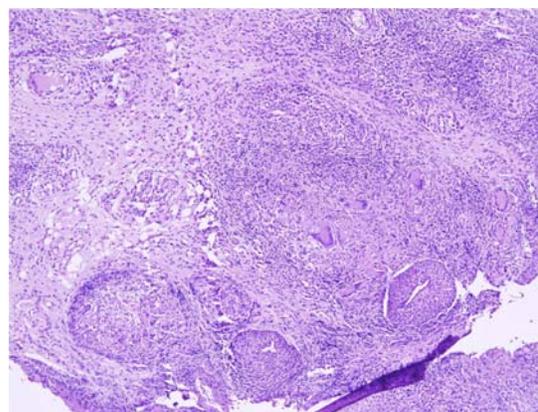


Figure 3. Histopathological Photograph showing Granulomas

## DISCUSSION

Pulmonary tuberculosis is the most common manifestation of TB. Extra-pulmonary sites most commonly involved are lymph nodes, pleura, joints and bones, genitourinary tract and meninges. The risk of developing disease after being infected depends on individual's innate immunological and non immunological defenses. A variety of diseases and conditions favor the development of active tuberculosis. The most potent risk factor for tuberculosis among infected individuals is HIV co-infection<sup>2</sup>, which suppresses cellular immunity. With the advent of HIV infection, extrapulmonary tuberculosis is being increasingly seen.<sup>2</sup> Other risk factors are chronic renal failure, diabetes, immunosuppressive treatment, intravenous drug abuse, post organ transplantation and severe malnutrition. A case of tuberculosis of soft palate has been described in a 40 year old female on immunosuppressive medication for rheumatoid arthritis.<sup>3</sup> In our case, the serology for HIV was found negative.

Tuberculosis of upper airways nearly always occurs as a complication of advanced pulmonary tuberculosis. The prevalence of oral TB in cases of pulmonary tuberculosis ranges from 0.8 to 3.5%.<sup>1</sup> Different areas of oral cavity like floor of mouth, soft palate, gingiva, lips, hard palate can be involved. However, hard palate and tongue are the commonest sites of involvement for oral tuberculosis.<sup>4</sup> In a review from 1950 to 2010<sup>5</sup>, secondary oral tuberculosis was found in 58% (54% pulmonary, 4% extra-pulmonary) of patients and as a primary in 42% of patients. Carcinomas are found to co-exist in the same lesion site in 3% of patients.

The lesions of oral and oropharyngeal tuberculosis manifest as non-healing ulcers, nodules, fissures, verrucous proliferation, erythematous patches or plaques, indurated lesions, or as jaw lesions.<sup>6</sup> The palatal lesions of tuberculosis may be seen as granulomas or ulcerations with undermined margins and are usually more common in the hard palate than in the soft palate.<sup>3</sup> In our case, lesion on the soft palate manifested as irregular ulceration.

Saliva plays a major protective role in oral tuberculosis. Very few cases of tuberculous oral lesions are seen, despite the large numbers of bacilli contacting the oral cavity mucosa in a typical case of pulmonary tuberculosis.<sup>7</sup> Other contributing factors are presence of saprophytes in oral cavity, striated muscles resisting bacterial invasion and thickness. Abbot *et al* were able to isolate the tubercle bacilli from mouth washings of 44.9 % of the patients with active pulmonary lesions, thereby signifying the importance of intact mucosal epithelium of oral cavity in providing protection against the disease.<sup>8</sup>

A distinct Indian social habit has been proposed for predisposing to primary uvular tuberculosis, not commonly seen in the rest of the world. The habit of doing "datoon" i.e. brushing of the teeth with neem twigs in rural India has been proposed to cause tuberculosis. It causes trauma on the palate thereby predisposing to seedling of the wound with mycobacterium tuberculosis.<sup>9</sup>

The differential diagnosis of ulcerative lesions in oral cavity includes infection (syphilis, leprosy, leishmaniasis, or fungal infection), Wegener's granulomatosis, sarcoidosis, neoplasms (salivary or squamous cell), drug abuse (cocaine), and midline lethal granuloma. In our case, the above differentials were unlikely due to associated pulmonary tuberculosis and histopathological report.

Since oral TB is usually secondary to pulmonary infection, therefore it is essential to find underlying primary infection in a case of tuberculous oral lesion. Therefore, in all cases of oral and oropharyngeal tuberculosis, search for primary site of the disease should always be considered even in the absence of any signs and symptoms.<sup>7</sup> A case of multiple oral ulcers leading to diagnosis of pulmonary tuberculosis has been reported.<sup>6</sup>

The treatment of oral and oropharyngeal tuberculosis is ATT for 6 months duration. Medical personnel are

also at risk, as elucidated by the case of a doctor who developed naso-labial infection after mouth-to-mouth resuscitation on a tuberculosis patient.<sup>7</sup> In the outpatient setup, caution is needed while dealing with such non healing chronic oral ulcers not only to miss an important medical entity but also to prevent transmission of infection to doctors.

## CONCLUSION

Primary lesions of tuberculosis manifest in the oral cavity and oropharynx as non healing chronic ulcers. When diagnosing such lesions with non healing tendency, tuberculosis should be considered in the differential diagnosis especially in developing countries of Asia and Africa where there is a high prevalence of tuberculosis.

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