

Primary Tuberculosis of Palate: Atypical, Nonhealing Ulcer mimicking Malignancy

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ABSTRACT

Context: It is estimated that 0.05 to 5% of tuberculosis cases have presented with oral manifestations. Primary oral tuberculosis may be the first indicator of HIV disease and can be a diagnostic challenge for the clinician.

Aims: To diagnose a patient with primary tuberculosis in the oral cavity and to refer for medical management.

Settings and design: The representative tissue, 0.5×0.5 cm in diameter, taken from the margin of the tongue, was formalin fixed, paraffin embedded, and processed.

Materials and methods: Sections obtained were stained with routine H&E stains and Ziehl–Neelsen stain for acid-fast bacilli. These stained sections were examined. Complete blood examination and sputum culture were done and chest X-ray taken.

Conclusion: Tuberculosis is a major cause of morbidity and mortality worldwide particularly in growing economies like India. It can involve any part of body, particularly lungs and lymph nodes. Involvement of palate is uncommon and often secondary to pulmonary tuberculosis. The purpose of this study is to describe the atypical nature of tubercular ulcer. Biopsy of the margin of ulcer revealed tuberculosis.

Keywords: Palate, Tuberculosis, Ulcer.

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INTRODUCTION

Tuberculosis is a chronic granulomatous disease caused by *Mycobacterium tuberculosis*, which can affect any organ of the body.¹ Tuberculosis is more common in developing countries due to its infectious nature and association with poor hygiene conditions.² India accounts for one-fifth of the global burden of tuberculosis. It commonly involves

the lungs; however, involvement of lymph nodes, intestine, meninges, bones, and joints are less common. Normally, oral tuberculosis is secondary to tuberculosis of the lungs, but some cases of primary tuberculosis occurring in the oral cavity have been reported in world literature.³⁻⁵ It is estimated that 0.05 to 5% of tuberculosis cases have presented with oral manifestations.⁵ Diagnosis is made on histopathological examination. The present study concludes that chronic nonhealing ulcer of upper aerodigestive tract may be of atypical nature and may mimic malignancy.

CASE REPORT

A 56-year-old male presented with chief complaint of pain while swallowing and presence of an ulcer in the oral cavity since 5 months. There were no symptoms pertaining to pulmonary tuberculosis. On examination, an ulcer with irregular margin, measuring 5×4 cm, pyramidal in shape, involving both the hard and soft palate, was seen. Edges of ulcer were variable including everted, sloping, and undermined. Proliferating granulation tissue with purulent discharge was present in the floor of the ulcer with tendency to bleed slightly on touch (Fig. 1). No other positive findings were present on examination of oral cavity, oropharynx, and neck. Based on the clinical examination, differential diagnosis of malignant ulcer particularly squamous cell carcinoma and granulomatous ulcer were made. Biopsy was done under local anesthesia from the margin of the ulcer.

Gross Examination

There was an ulcerative lesion of 6×5 cm involving hard and soft palate with irregular margin. The edges of ulcer were sloping, undermined and everted. Granulation tissue was present in the floor of ulcer with yellow slough, not bleeding on touch. Minimal erythema was noticed in surrounding mucosa (Fig. 1).

Microscopic Examination

Biopsy was done under local anesthesia from the margin of the ulcer. Chronic inflammatory cells, epithelioid cell granuloma, Langhans type of giant cell, and fibrovascular tissue (Fig. 2) were noted. The histopathological features were suggestive of tubercular granuloma.

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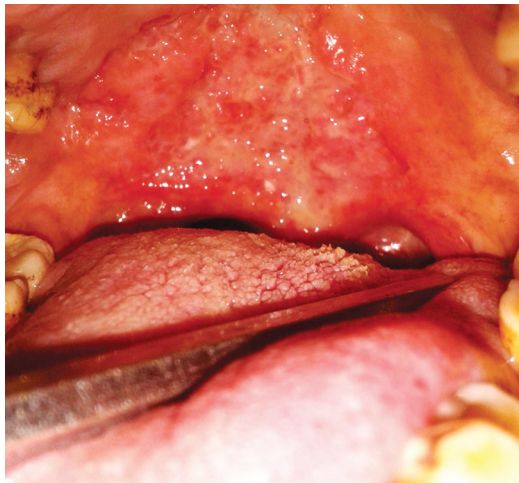


Fig. 1: Ulcer involving hard and soft palate, irregular margins and variable edges

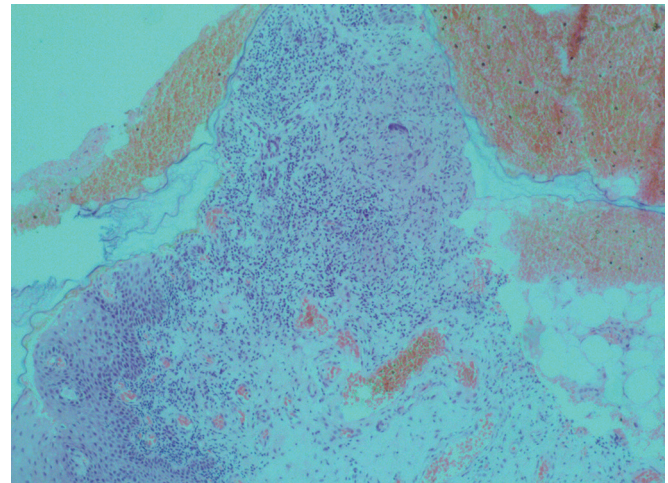


Fig. 2: Microscopic examination shows chronic inflammatory cells, epithelioid cell granuloma, Langhans type of giant cell and fibrovascular tissue

The patient was further investigated to rule out pulmonary tuberculosis.

Chest X-ray was normal and sputum examination was negative for acid-fast bacilli.

Blood investigations were within normal limits except elevated erythrocyte sedimentation rate.

HIV test was negative.

A diagnosis of primary tuberculosis of palate was made.

Patient was put on category-I antitubercular drugs [2RHZE/4HR] for 6 months [rifampicin (450 mg), isoniazid (600 mg), ethambutol (1200 mg), and pyrazinamide (1500 mg) for 2 months with three doses per week, followed by the continuation phase with isoniazid (600 mg) and rifampicin (450 mg) for 4 months with three doses per week]. At 2 months of follow-up, palate was free of the ulcerative lesion.

DISCUSSION

Tuberculosis, a chronic granulomatous disease caused by *Mycobacterium tuberculosis*, primarily affects the lungs but can also affect any organ of the body. It is estimated that about 2.2 million people develop tuberculosis every year in India, and about 330,000 deaths due to tuberculosis are reported every year.² In the oral cavity, tongue is the commonest site of tuberculosis. Other sites are palate, buccal mucosa, floor of mouth, and lips.⁶ Pathogenesis of primary tuberculosis of oral cavity is still unclear but may be due to direct inoculation of bacilli through intact mucosa or previously diseased mucosa following local trauma or poor oral hygiene. In disseminated tuberculosis involving palate, bacilli are carried in sputum to damaged oral cavity mucosa, leading to the manifestations of tuberculosis. Involvement of oral cavity manifests as ulcer, which is usually painless with irregular

margins, undermined edges and minimal induration.⁶ Other manifestations of oral tuberculosis are solitary nodules, plaques, vesicles, fissures, and tuberculomas.⁷ Perforation of hard palate and osteomyelitis of jaw have been reported in world literature as manifestations of oral tuberculosis.^{2,7} Oral tuberculosis may be a first indicator of HIV disease, though it can present at any stage of the disease.⁸ The differential diagnosis of a tubercular ulcer of the oral cavity includes traumatic ulcers, aphthous ulcers, granulomatous ulcer-like syphilis, and malignancy. Lesions of oral tuberculosis can be easily confused with malignancy particularly squamous cell carcinoma in which case biopsy is mandatory. Diagnosis of tuberculosis is only made when the histopathological examination reveals granulomatous lesion and presence of acid-fast bacilli on Ziehl-Neelsen staining. Diagnostic work-up should also include sputum examination for acid-fast bacilli, sputum culture, polymerase chain reaction, and chest radiography to rule out pulmonary tuberculosis.

Antitubercular regime is very effective and is given for long periods. Pulmonary and extrapulmonary tuberculosis are treated with the same regimen 2RHZE/4HR.⁹ Agents most commonly used include rifampicin in combination with isoniazid, ethambutol, and pyrazinamide usually for the first 2 months of treatment (3 days a week on alternate days). Continuation therapy with the two drugs rifampicin and isoniazid is usually given for a further 4 months, so that the total therapy is given for 6 months.

CONCLUSION

The present study concludes that tuberculosis can present as a chronic nonhealing ulcer of palate, without the typical characteristics of a tubercular ulcer. A differential

diagnosis of tuberculosis should always be kept in mind for such cases, apart from malignant and granulomatous ulcers.

CONSENT

Written informed consent was obtained from the patient for publication of this case report.

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