



## Case Report

# Tonsillar tuberculosis : Case report

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### ABSTRACT

Tuberculosis of the oral cavity which is an uncommon occurrence can be primary or secondary. In the absence of active pulmonary tuberculosis, isolated tonsillar tuberculosis is rare. Herein, we report two cases of bilateral tonsillar tuberculosis who presented as recurrent sore throat for which tonsillectomy was done. No active primary pulmonary lesion was found in these cases. Histopathological examination revealed caseating epithelioid granulomas with Langhans giant cells. Ziehl Neelson stain for acid fast bacilli was positive in one case. Tonsillar tuberculosis, though a rare entity, should be considered in the clinical differential diagnosis of tonsillar lesions. Histopathological examination with Ziehl Neelson stain should be performed for definite diagnosis.

## INTRODUCTION

Tuberculosis of the oral cavity which is an uncommon occurrence can be primary or secondary. Within the oral cavity, tongue and palate are the common sites but tonsillar tuberculosis is a rarity.<sup>1</sup> The incidence of tonsillar tuberculosis in the pre-pasteurization era was high due to infection with *Mycobacterium bovis*, but with the consumption of pasteurized milk and effective anti-tubercular therapy its incidence had decreased.<sup>2</sup> But an increasing trend of tonsillar tuberculosis is being seen these days due to emerging human immunodeficiency virus (HIV) infection and resistance to drug treatment.<sup>2</sup> Secondary form

of tonsillar tuberculosis is more common than primary. Herein, we describe two cases of bilateral primary and isolated tonsillar tuberculosis.

## CASE REPORT

Two cases of bilateral tonsillectomy were done of a 48 year old female and 24 year old male for recurrent tonsillitis. Histopathological examination of both the cases showed caseating granuloma with Langhan giant cells (fig.1). Ziehl Neelson stain for acid fast bacilli was positive in case 2 (fig. 2) whereas AFB was not seen in case 1. Both the cases had no active primary lesion in the lung, no family history of tuberculosis and no prior history of anti-tubercular therapy. They tested negative for HIV.

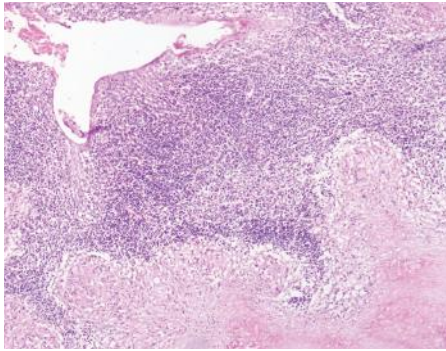
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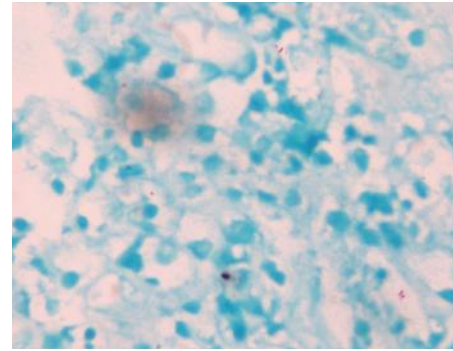
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**Figure 1:** Necrotizing granulomatous inflammation seen in the tonsillar parenchyma (HE stain, X20).



**Figure 2:** Acid fast bacilli seen on Z-N stained sections (Z-N stain, X100).

## DISCUSSION

Tuberculosis, an infective disease caused by Mycobacterium, can be pulmonary or extrapulmonary. Extrapulmonary tuberculosis accounts for 25% of all tubercular morbidity.<sup>3</sup> In extrapulmonary tuberculosis, the commonest site of involvement is the lymphnode. Other sites include pleura, skeletal system, CNS, abdomen, genitourinary tract and pericardium. In active pulmonary tuberculosis, upper respiratory tract will be involved in 2% of cases.<sup>4</sup> The common site of involvement in these cases is the larynx. Other sites are tongue, palate, tonsils, pharynx and buccal mucosa.<sup>4</sup> Incidence of <5% of tonsillar tuberculosis has been reported so far.<sup>5</sup>

Tonsillar tuberculosis can be primary or secondary. According to Irwin Moore, tonsillar lesion is primary if there is no lung involvement. It is classified as secondary where sputum positive pulmonary tuberculosis is documented.<sup>6</sup> Primary tuberculosis is caused by Mycobacterium bovis due to ingestion of unpasteurized cow's milk. Secondary tuberculosis is caused when the organ comes in contact with infected sputum from a primary focus in the lung. Some forms of primary tonsillar tuberculosis still have been reported.<sup>7</sup> This has been reasoned due to inhalation of tubercle bacilli which then reside in the Waldeyer's ring and cause active tuberculosis.<sup>7</sup>

Tonsillar parenchyma is composed of lymphoid tissue and due to its location it is in continuous contact with sputum and saliva. In spite of this, tonsillar tuberculosis is rare because of several protective effects such as :

- antiseptic and cleansing action of saliva.
- Resistance to infection provided by the thick stratified squamous epithelium of tonsils.
- Inherent resistance of tonsils to tubercular bacilli.
- Saprophytes in the oral cavity which make it difficult for

the tubercle bacilli to colonize there.<sup>7</sup>

No age or sex predilection for tonsillar tuberculosis is seen. Poor dental hygiene, dental extraction, periodontitis and leukoplakia are considered to be predisposing factors for tonsillar tuberculosis.<sup>8</sup> The rising incidence of tuberculosis in developing and developed countries is due to immunodeficiency state, bad living condition, poor nutritional status and increasing resistance to drug therapy.

Persistent sore throat, painful deglutition and hoarseness are the local common symptoms of tonsillar tuberculosis. Associated cervical lymphadenopathy can be seen in one third of the patients with tonsillar tuberculosis.<sup>9</sup> Tonsillar mass, unilateral or bilateral, especially in the elderly, can clinically simulate a malignancy. Hence, tissue diagnosis is mandatory. Histopathological examination, Ziehl Neelson staining and Mycobacterial culture, if possible, should be carried out for diagnosis. Chest X-Ray and sputum for AFB should be done to rule out primary pulmonary tuberculosis in all cases..

## CONCLUSION

Tonsillar tuberculosis, though a rare entity, should be considered in the clinical differential diagnosis of tonsillar lesions. Histopathological examination with Ziehl Neelson stain should be performed for definite diagnosis.

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