Primary Tuberculosis of Tonsils: A Case Report

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Abstract

Tuberculosis is a contagious disease mainly caused by *Mycobacterium tuberculosis*, often seen in underdeveloped or developing countries, and typically involves the lungs. Isolated tonsillar tuberculosis is a very rare clinical entity in the absence of active pulmonary tuberculosis. Tonsillar tuberculosis is an extremely rare form of extrapulmonary tuberculosis that frequently imitates tonsillar malignancy, particularly in elderly individuals. Clinically, it is very difficult to differentiate it from tonsillar malignancy; therefore, histopathological examination of the tissue is necesssary for the diagnosis of tonsillar tuberculosis, and antitubercular therapy is adequate for successful resolution. In the present study, we report a primary form of tonsillar tuberculosis in a 51-year-old female without pulmonary tuberculosis.

Keywords: Tonsil, tuberculosis, upper respiratory tract, infection

INTRODUCTION

Tuberculosis is a contagious disease mainly caused by *Mycobacterium tuberculosis*, often seen in underdeveloped or developing countries, and typically involves the lungs. It can occur in two main forms, namely, pulmonary and extrapulmonary. Isolated upper respiratory tract tuberculosis is a rare form in the absence of active pulmonary tuberculosis (1).

Extrapulmonary tuberculosis accounts for approximately 10%-15% of all tuberculosis cases and most frequently occurs in the lymph nodes followed by pleural involvement (2). Tuberculosis of the oral cavity and upper respiratory tract is rarely observed, and palatine tonsil tuberculosis is an extremely rare clinical condition. Incidence of tonsillar tuberculosis is relatively high due to *M. bovis* infection in the non-pasteurized milk consumption era (1, 3).

In the present study, we report a primary form of tonsillar tuberculosis, which is a rare clinical entity, in a 51-year-old female accompanied by the medical literature.

CASE PRESENTATION

A 51-year old woman without any chronic and systemic disease, non-smoker, was referred to our clinic with throat pain, dysphagia, and loss of appetite. There was no cough, pyrosis, fever, weight loss, or fatigue. On physical examination, asymmetrical growth in the left tonsil, ulceration, and bilateral cervical lymphadenopathy were noted. Skin over the lymphadenopathy was normal. Oral antibiotic therapy was started for 15 days for the patient, who showed normal lung examination and posterior-anterior thorax X-ray; however, there was no improvement. Therefore, unilateral diagnostic tonsillectomy was performed for asymmetric tonsillar hypertrophy and ulceration on the tonsils, and histopathological investigations were performed. Histopathological investigations revealed tonsillar tuberculosis, including several granulomas, Langhans-type giant cells, and caseous necrosis (Figures 1, 2). The patient consulted with the Pulmonology and Infection Disease clinics and was diagnosed with primary tonsillar tuberculosis without pulmonary tuberculosis. Treatment protocol was arranged by the Infectious Disease clinics.

Isoniazid+pyrazinamide+rifampicin+ethambutol combinational initial therapy was started for the first 2 months, followed by isoniazid+rifampicin for the last 4 months and was considered as cured on the 6th month of therapy.

DISCUSSION

M. tuberculosis, a primary tuberculosis pathogen, is a bacterium belonging to the Mycobacterium genus. The most

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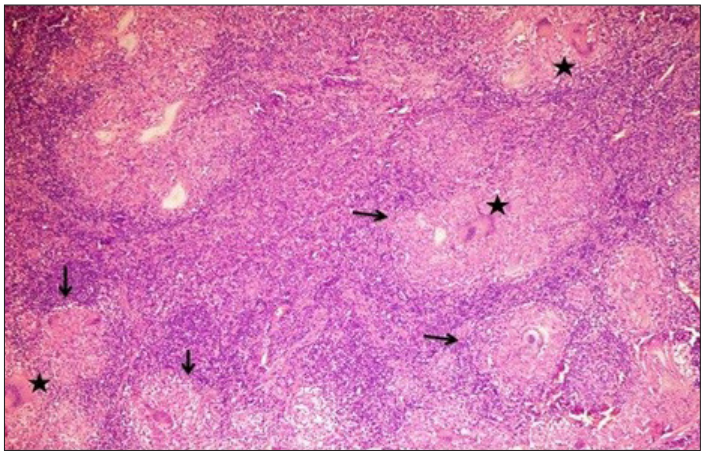

Figure 1. Several granulomas (arrow) and Langhans type giant cells (star) in the tonsil tissue (hematoxylin eosin ×100)

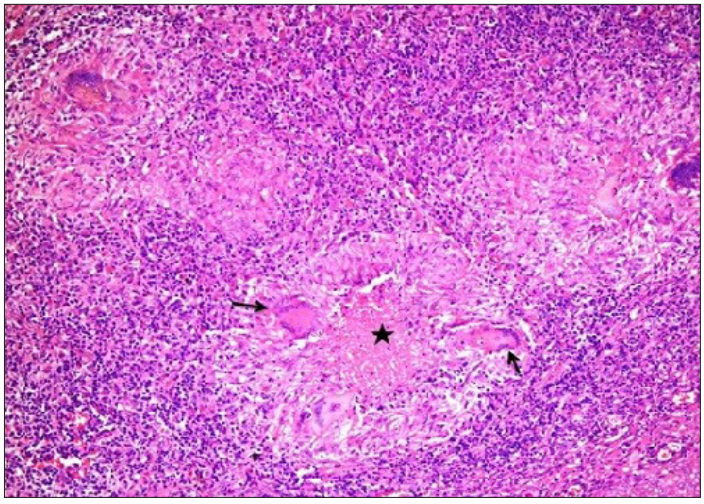

Figure 2. Langhans type giant cells in the granuloma (arrow) and caseous necrosis (star) (hematoxylin eosin ×100)

common affected organ is the lungs. Recently, extrapulmonary tuberculosis has increased, and entities such as lymph node tuberculosis, pleural tuberculosis, skeletal system tuberculosis, abdominal tuberculosis, genitourinary tuberculosis, miliary tuberculosis, and tuberculous pericarditis have accounted for 10%–37.5% of all tuberculosis cases. The most common extrapulmonary focus is the lymph nodes (4). Tuberculosis of the oral cavity is rare, and the lesions can be primary or secondary depending on pulmonary involvement. While tongue and palate are involved relatively common, the incidence of tonsillar tuberculosis is rare (1, 4). In the present case, the patient was diagnosed with primary tonsillar tuberculosis without pulmonary tuberculosis.

Tonsillar tuberculosis is caused by the contact of materials containing tubercle bacillus. This is either caused by drinking non-pasteurized cow milk and direct infection of *M. bovis* (primary form) or by the contact of sputum to the tonsillar tissue in patients with pulmonary tuberculosis (secondary form). Tonsillar tuberculosis usually presents with throat pain and cervical lymphadenopathy (3, 4). In the present case, there was also dysphagia that had started approximately 2 months ago and bilateral palpable cervical lymphadenopathies.

The observed symptoms in patients with tonsillar tuberculosis are hypertrophy of the asymmetric tonsils, tonsillar hypertrophy without exudate, tonsils covered by crypts, dysphagia, and mobile, enlarged jugulodigastric lymphadenopathies. The most common complaint is throat pain (5). The most common presentation form (85.4%) of tuberculosis in the head and neck region is lymphadenopathy. Additional to lymphadenopathy, involvement of the nasopharynx, parotids, tongue, and tonsil may occur (6). Oral tuberculosis can be seen in males and females and at any age and can be presented as ulcerated, nodule, and plaque-like lesions (7). In accordance with the literature, our case had throat pain, asymmetric left tonsillar hypertrophy, small ulcerated area on the tonsil, dysphagia, and cervical lymphadenopathies.

Tonsillar tuberculosis is rarely seen because of several resistance mechanisms, including the antiseptic and cleansing effects of saliva, resistance of the tonsils toward tuberculosis infection, saprophyte presence in the oral cavity, and a thick and protective layer on the tonsils that makes colonization difficult (8). Tonsillar tuberculosis is more often seen in patients with decreased immune response, such as those with alcoholism, HIV infection, and tonsil granulomas. The present case did not have any risk factor, and serology for HIV was negative. Predisposing factors for primary oral tuberculosis are poor oral hygiene, tooth extraction, periodontitis, and leukoplakia. The present case had a poor oral hygiene and periodontitis. Differential diagnosis for oral and pharyngeal tuberculosis should include actinomycosis, syphilis, traumatic or aphthous ulcers, hematological disorders, Wegener's disease, and other granulomatous diseases, lymphoma, and carcinoma. Diagnosis shall be built on the clinical suspicion with the support of histopathological and cytological definition of the bacillus. Therefore, this rare entity-primary tuberculosis of upper respiratory tract-shall be taken into consideration, particularly Turkey (1).

In the presence of clinical suspicion, tonsillar tuberculosis is diagnosed with histopathological findings and identification of tuberculosis bacillus. Histopathology shall be performed from the effected tissue, which is obtained via punch biopsy or tonsillectomy using Ziehl–Neelsen staining and mycobacterial culture (9).

In the present case, histopathological investigations of tonsillectomy specimen revealed tonsillar tuberculosis, including several granulomas, Langhans type giant cells, and caseous necrosis. To exclude pulmonary involvement, thorax roentgen and sputum test were performed. Tonsillar tuberculosis can be effectively treated using isoniazid+pyrazinamide+rifampicin+ethambutol combinational initial therapy for the first 2 months, followed by isoniazid+rifampicin for 4 months, and cure can be achieved without sequela (10). Antituberculotic therapy had been planned for our patient by the Infectious Diseases clinic. At the last control of our patient, on the 6th month of the therapy, no relapse or other finding suggesting extrapulmonary tuberculosis were observed.

CONCLUSION

Malignancy can be considered for patients presenting with throat pain and dysphagia and for whom asymmetric tonsillar enlargement, ulcerated tonsils, and cervical lymphadenopathy are noted on physical examination; however, tonsillar tuberculosis should be taken into consideration as a differential diagnosis. In the absence of pulmonary tuberculosis, isolated and primary tonsillar tuberculosis is a rare condition. Early diagnosis and treatment are very important for cure. To prevent this disorder, pasteurization of milk and elaboration of personal oral hygiene is required.

Informed Consent: Written informed consent was obtained from the patient who participated in this case.

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