

CLINICAL ASPECTS OF TONSILLAR TUBERCULOSIS

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Abstract. A clinical analysis of 6 patients with pathologically confirmed tonsillar tuberculosis was carried out retrospectively. The subjects comprised three men and three women, ranging in age from 20 to 74 years. All of the patients presented with a sore throat and 5 had lymphadenopathy. Ulcerations, masses and white patches characterized the tonsillar lesions; the pathological findings included caseous granuloma with positive acid-fast bacilli (AFB) in 5 patients and chronic granulomatous inflammation with negative AFB in one patient. Four of the six patients had pulmonary tuberculosis. The three patients who received complete treatment responded well. The presenting symptoms and abnormal tonsillar findings associated with tonsillar tuberculosis are similar to those of malignant tumors and therefore it is difficult to differentiate the two pathologies; moreover, tonsillar tuberculosis often occurs with pulmonary tuberculosis and AIDS and therefore, a chest X-ray and HIV-screening are recommended for all patients with tonsillar tuberculosis.

INTRODUCTION

Prior to the introduction of chemotherapy, 6.5% of all tonsils removed from asymptomatic patients were infected with tubercles (Thompson, 1919). The tonsils were usually infected with *Mycobacterium bovis* because the patients drank infected cow's milk. With the advent of effective antituberculosis therapy and the pasteurization of cow's milk, a considerable reduction in the worldwide prevalence of tuberculosis was achieved (Anim and Dawlatty, 1991) and related tonsillar tuberculosis became rare (Williams and Douglas, 1995). For example, Rohwedder (1974) documented only 16 cases of tuberculosis of the upper respiratory tract among 843 cases of pulmonary tuberculosis. Similarly, isolated pharyngeal lesions affecting the nasopharynx or palatine tonsils, without accompanying pulmonary disease, is infrequent (Cleary and Batsakis, 1995; Selimoglu *et al*, 1995). The purpose of our

study was to present the clinical manifestations of tonsillar tuberculosis.

MATERIAL AND METHODS

We reviewed the pathological database records at Srinagarind Hospital, Faculty of Medicine, Khon Kaen University, Thailand, of patients with tonsillar tuberculosis seen between January 1991 and December 2000. Data were retrieved on age, presenting symptoms, characteristic lesions of the tonsils, histological findings, HIV infection, response to therapy and evidence of concomitant tuberculosis infection of other organs. Of the 7 cases fitting our criterion, one was excluded because the records were incomplete.

RESULTS

The clinical features of the six patients (3 men and 3 women) are shown in Table 1. Age averaged 41.6 years, ranging from 20 to 74 years. The presenting symptoms included: sore throat (6/6), cervical lymphadenopathy (5/6), constitutional symptoms of malaise, fever, and/or weight loss (2/6) and cough (1/6).

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Table 1
Tonsillar tuberculosis : clinical features.

Case	Age/sex	Clinical features	Duration (months)	Tonsillar appearance	Chest X-ray	Tonsillar biopsy
1	20/M	Sore throat c. node	2	Mass	Active tuberculosis sputum AFB -ve	Caseous Granulomatous AFB +ve
2	35/F	Sore throat cough c. node, fever	1	White patch	Not done	Caseous Granulomatous AFB +ve
3	74/M	Sore throat	12	Ulceration	Active tuberculosis sputum AFB -ve	Caseous Granulomatous AFB +ve
4	37/F	Sore throat fever c. node	1	Ulceration	Active tuberculosis sputum AFB +ve	Caseous Granulomatous AFB +ve
5	20/M	Sore throat c. node	1	Ulceration	Active tuberculosis sputum AFB -ve	Caseous Granulomatous AFB +ve
6	64/F	Sore throat c. node	1	Mass	Not done	Chronic Granulomatous AFB -ve

c. node = cervical node enlargement

Four of the five patients with cervical lymphadenopathy had multiple bilateral lymph node enlargement; only one patient had isolated posterior cervical lymphadenopathy. The nodes were mostly of the middle cervical group (in 4 patients) and the posterior cervical group (in 2 patients).

The various tonsillar findings included: ulceration (3 of 6 patients), masses (2/6) and white patches (1/6). The histological findings were described as caseous granulomatous lesions with positive acid-fast bacilli (AFB) in 5 patients and chronic granulomatous inflammation with negative AFB in one patient.

Chest X-rays provided clear evidence of pulmonary tuberculosis, although, only 4 of the 6 patients had X-rays. Sputum AFB was positive in only one of those with a positive

chest X-ray.

One patient had negative sputum AFB despite having miliary infiltration of the right upper lung with minimal pleural effusion. This patient had tonsillar masses and ulceration of the nasopharynx. Histological findings of the tonsil and nasopharynx included caseous granulomatous lesions with positive AFB.

Three patients were tested serologically for HIV infection: the tests were negative.

Three patients received standard full-length antituberculosis treatment, which consisted of 2 months of isoniazid, rifampicin, ethambutol and pyrazinamide followed by 4 months of isoniazid and rifampicin. All patients responded to the first two months of treatment, as shown by a reduction in the size of the cervical lymph nodes and the disappearance of tonsillar le-

sions. Those who received the full course of chemotherapy showed complete resolution of cervical lymphadenopathy and tonsillar lesions. Three patients completed only 3 months of treatment and thereafter contact with them was lost.

DISCUSSION

Tuberculosis is regarded as the most common communicable disease worldwide (Robbins and Cotran, 1979). After the introduction of antituberculous therapy and immunization, the incidence of tuberculous infection declined dramatically (Adiego *et al*, 1994). The upper respiratory tract is generally resistant to tuberculosis, perhaps because saliva has an inhibitory effect on tubercle bacilli (Verma *et al*, 1989).

In our study, the most common presenting symptom of tonsillar tuberculosis was a sore throat. The abnormalities of the tonsils found - such as ulceration, mass, or white patches - are not easily differentiated from similar abnormalities seen in tonsillar carcinomas. Differential diagnoses of oral and pharyngeal tuberculosis includes traumatic ulcers, aphthous ulcer, Plaut-Vincent's tonsillitis, hematological disorders, actinomycosis, syphilis, midline granuloma, Wegener's disease and carcinoma (Adiego *et al*, 1994; Williams and Douglas, 1995; Selimoglu *et al*, 1995). To establish a definitive diagnosis a biopsy of tonsil tissue is mandatory.

Primary tuberculous infections of tonsils are rare (Selimoglu *et al*, 1995): and in our study those who underwent chest X-rays had pulmonary tuberculosis and one also had nasopharyngeal tuberculosis.

Tuberculosis tends to present in atypical forms, and extrapulmonary localizations are common in patients with a poor immune response *eg* alcoholics and those with HIV infections (Sunderam *et al*, 1986; Chaisson *et al*, 1987; Pedrol *et al*, 1989; Adiego *et al*, 1994). In our study, three patients were screened for HIV infection but the results were negative.

A larger sample might have demonstrated the association of tonsillar tuberculosis with HIV infection.

Tonsillar tuberculosis responds well to treatment with antituberculous drugs (Selimoglu *et al*, 1995). The three patients who underwent complete treatment experienced total resolution of tonsillar lesions and cervical lymphadenopathy.

CONCLUSION

Tonsillar tuberculosis commonly presents with a sore throat and cervical lymphadenopathy. These presentations, as well as the common abnormal tonsillar findings, make it difficult to differentiate tonsillar tuberculosis from a malignant tumor. Four of our six patients had secondary tonsillar tuberculosis from a pulmonary source and one of these patients also had nasopharyngeal tuberculosis. Since AIDS patients are prone to mycobacterial infection and an increased number of extrapulmonary tuberculous infections, we recommend that a chest X-ray and HIV-screening should be conducted whenever a patient is diagnosed with tonsillar tuberculosis.

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