CASE REPORT

Isolated Tuberculosis of Thyroid Gland

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Abstract

Involvement of thyroid gland with tuberculosis is extremely rare. The authors report a case of tuberculous thyroiditis.

Key Words

Tuberculosis, Thyroid gland.

Introduction

The thyroid gland is rarely affected by tuberculosis. It was once considered immune from the disease till Lebert in 1862 reported the involvement of the gland in a patient with disseminated tuberculosis. There have been relatively few cases reported in the literature since that time and almost all have been associated with tuberculosis elsewhere in the body. Isolated tuberculous involvement of the thyroid gland is extremely rare. The prevalence of the disease was first recognized when Coller and Huggins in 1926 discovered 5 cases of tuberculous thyroiditis in 1200 histopathological specimen of operated goiters (1). In India, where tuberculosis is so rampant, Bhadur *et. al.* (2) could find only five authentic cases, three of which were reported already from the same institution (3,4).

Case Report

A 40-year-old female presented to the ENT OPD of Sher-i-Kashmir Institute of Medical Sciences, Medical College, Srinagar, with a painless mass in the right side of the neck, which had been present for 2 months and was gradually increasing in size. The patient gave history of intermittent fever for the last 10 days. There was no history of cough, haemoptysis or weight loss and no past history of tuberculosis. Patient's brother had received treatment for pulmonary tuberculosis one year back. The patient was admitted for investigations in September 2001.

Clinical features: Local examination of the neck revealed a well-defined mass of the right lobe of the thyroid measuring 5 x 4 cms, attached to the pretracheal fascia. Other ENT examination revealed a normal pharynx, larynx and postnasal space. Both the vocal cords were fully mobile. Systemic examination of the patient was normal.

Radiological features: X-ray chest showed only prominent bronchovascular markings with no evidence of pulmonary tuberculosis or tracheal shift. X-ray soft tissue of the neck lateral view was also normal.

Laboratory investigations: revealed Hb-7 gms with moderate hypochromia, ESR-63mm, TLC, DLC, within normal limits and normal thyroid function tests. Fine needle aspiration cytology of the swelling showed granulomata with epithelial and giant cells against a caseous background (Fig. 1).

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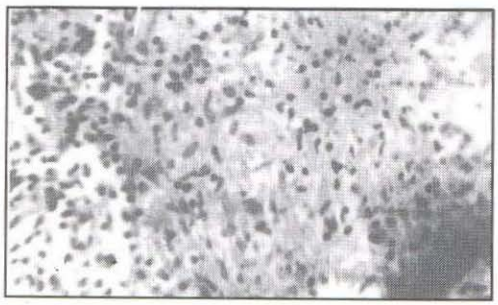

Fig : Smear showing epithelial cell granulomata with lymphocytic infiltrate and caseous background.

Discussion

Tuberculosis of the thyroid gland is very rare. The first case of tuberculous involvement of thyroid gland was reported in the late 1800s. In the autopsy series of Salvin and associates ,14 of 100 patients revealed evidence of tuberculous involvement of the thyroid gland (5). Rankin and Graham (1932) found a 0.1% incidence of tuberclosis in a series of 20,758 partial thyroidectomy specimens between 1920 and 1931 (6). Das *et. al.* reported an incidence of 0.6% tuberculous thyroiditis among 1283 thyroid lesions subjected to aspiration cytology (7), although tuberculosis is endemic in India.

The precise mode of spread of tuberculous infection to the thyroid gland is not exactly known. Mycobacteria may spread to the thyroid gland through the hematogenous route or from an adjacent focus, such as cervical or mediastinal adenitis (8).

Tuberculosis of the thyroid gland is usually associated with overt tuberculosis and may present in a variety of pathological forms like (a) multiple lesions throughout the gland in association with miliary tuberculosis (b) a goiter with much caseation (c) cold abscess sometimes presenting on the surface (d) chronic fibrosing tuberculosis, which is difficult to distinguish from DeQuervains thyroidits and (e) acute abscess formation (9).

Fibrosis and adherence to adjacent structures may occasionally give rise to pressure symptoms like dyspnoea, dysphagia, or recurrent laryngeal nerve palsy (10). There are only isolated case reports of thyrotoxicosis and hypothyroidism in association with the tuberculosis of the thyroid gland (11).

The diagnosis of thyroid tuberculosis should not be difficult if the possibility of the disease, though rare is kept in mind. Demonstration of mycobacterium tuberculosis within the thyroid gland, a necrotic gland having epitheloid cell granulomas with Langhans giant cells and central caseasion necrosis should confirm the diagnosis (7).

Though most reported cases of thyroid tuberculosis are found on the basis of surgical or autopsy specimens, fine needle aspiration cytology is currently used for the diagnosis of thyroid lesions and seems to be quite accurate (12).

In established cases patients respond adequately to anti tubercular therapy as in our case and usually no surgical intervention is required.

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