

Isolated Tuberculous Thyroiditis

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Abstract

Tuberculosis of the thyroid gland is an extremely rare condition. We report a case of a 62 year old male patient with isolated tuberculous thyroiditis, presenting as a solitary thyroid nodule. Fine needle aspiration cytology (FNAC) from the thyroid nodule revealed caseating epitheloid granulomas and acid fast bacilli.

Key words : Thyroid, Thyroiditis, Tuberculosis.

Introduction

Thyroid gland involvement in tuberculosis, though extremely rare, has been reported in literature. Thyroid tuberculosis is more commonly associated either with miliary, disseminated tuberculosis, or with contiguous involvement from the adjacent viscera and vertebral body. We report this case of "Isolated tuberculous thyroiditis" presenting as a solitary thyroid nodule.

Case history

A 62 year old gentleman presented to our department with two months history of a midline swelling of the neck, which was slowly increasing in size. He had no history of fever, anorexia, or weight loss. There was no past or family history of tuberculosis.

On examination, our patient had a single, non-tender, fluctuant swelling measuring 3 cm x 2 cm. It was 3 cm from the midline, in the region of thyroid gland. The swelling moved well with deglutition. A clinical diagnosis of a thyroid nodule was made. He had no associated cervical lymphadenopathy. Systemic examination, respiratory, cardiovascular, and per-abdominal examination was normal. The patient was clinically euthyroid.

Investigations

The patient underwent a series of investigations that included *ultrasound of the thyroid gland*, which revealed enlargement of the left lobe, with a large anechoic area in the upper pole and middle part measuring 4.3 x 3.9 x 3.0 cm, with internal echoes. This was suggestive of an

inflammatory mass, an abscess in the left lobe of the thyroid gland. The computerised tomography (CT scan) of the neck confirmed the finding of an inflammatory mass—abscess, involving the upper pole of the left lobe of the thyroid gland, with destruction of the left lamina of thyroid cartilage. There were no cervical lymph nodes. A fine needle aspiration cytology (FNAC) of the swelling was performed. It showed caseating epitheloid granuloma and acid fast bacilli (AFB), establishing a diagnosis of tuberculosis of the thyroid gland.

The patient's thyroid function tests were normal. His chest and spine skiagrams, 2 D echocardiogram, ultrasound abdomen were done to look for possible sites harbouring tubercular infection. Tuberculin testing using Mantoux test was 10 mm x 18 mm, while all other investigations including HIV serology did not reveal any abnormality.

The patient was put on standard short course anti-tuberculous therapy and abscess was not surgically drained, as it showed no signs of imminent rupture. He responded well with complete recovery.

Discussion

Tubercular involvement of the thyroid gland was first recognised in the 1860s. The true incidence of the tuberculous thyroiditis is difficult to determine. Klassen *et al* reviewed 130 cases reported in world literature before 1945, and concluded that there were considerable differences in the criteria used to establish the diagnosis in these cases¹. The majority of the diagnoses were based on histological demonstration of lymphocytic infiltrate and presence of granulomas without acid fast bacilli having been seen either on smear, or in tissue, or on culture. These changes are non-specific, and may be

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seen in sarcoidosis, subacute thyroiditis, goitrous autoimmune thyroiditis, or other non-infectious conditions. Thus, it is likely that some of these cases did not represent tuberculosis of the thyroid. Autopsy study of thyroid disorders (infectious and neoplastic) in 100 AIDS patients isolated *Mycobacterium tuberculosis* in 23% of cases².

Mondal *et al*, in their study of fine needle aspiration cytology (FNAC) of thyroid gland over a period of 9 years, observed that tuberculosis of the thyroid, though rare, is efficiently detected by FNAC. They isolated AFB in all 18 cases; of these only 11 cases had isolated tuberculosis of thyroid³.

The pathogenesis of thyroid tuberculosis is not clear. Many cases appear to be associated with disseminated or miliary tuberculosis, or extension from the pericardium, or adjacent vertebra.

Tuberculous thyroiditis, in contrast to bacterial thyroiditis, has a subacute history, and presents, as a non-tender thyroid nodule in most reported cases. A differentiation from thyroid cancer is essential to avoid unnecessary thyroid surgery⁴.

Resolution without residua usually follows appropriate anti-tuberculous therapy, or in case of a fluctuant abscess ready to drain spontaneously, the combination of surgical drainage (or resection) and anti-mycobacterial treatment is considered the treatment of choice.

Tuberculous thyroiditis has to be kept in mind in the differential diagnosis of a thyroid nodule, especially with resurgence of tuberculosis in this era of AIDS epidemic.

References

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