

Case Report

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Tuberculosis of Thyroid Gland Presenting as Abscess

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Introduction

Tuberculosis of thyroid gland is an extremely rare clinical entity [1]. It is very rare even in countries with a high prevalence of tuberculosis [2]. It is rare to suspect a thyroid swelling or nodule as being tuberculous on clinical examination, unless it has destroyed the gland and formed an abscess in a patient with known pulmonary tuberculosis [3]. We present a case of thyroid tuberculosis presenting as a solitary nodule and diagnosed on FNAC.

Case Report

A 20 year old female presented with a swelling in right lobe of thyroid (Figure 1) for 8 days. There was no history of fever, malaise, weight loss or any other generalized symptoms. It was not associated with difficulty in deglutition or change in voice. On examination there was a 3×3cm swelling in the right lobe of thyroid which was moving with deglutition. Surface was smooth and overlying skin was normal.

Routine hematological investigations and serum T₃, T₄ and TSH were within normal range. Chest X ray did not reveal any abnormality.

Neck ultrasonography showed a 46×42×21 mm thick walled cystic mass lesion involving right thyroid lobe (Figure 2). This cystic mass showed thick, irregular wall with central fluid and echogenic debris with peripheral vascularity.



Figure 1: Female presented with a swelling in right lobe of thyroid.



Figure 2: Neck ultrasonography showed a 46×42×21 mm thick walled cystic mass lesion involving right thyroid lobe.

FNA from right lobe of thyroid was performed which yielded purulent aspirate. Smears examined show degenerated inflammatory cells in a necrotic background (Figure 3). No follicular epithelial cells were seen in the smears. Ziehl Nelson staining with 20% H₂SO₄ was positive (Figure 4). Cytological diagnosis of tubercular inflammation was made. Patient was put on short course antitubercular treatment.

Discussion

Tuberculosis of the thyroid gland, primary or secondary, is an extremely rare disease. It spread either by lymphogenous route, hematogenous route or by direct extension from adjacent organs.

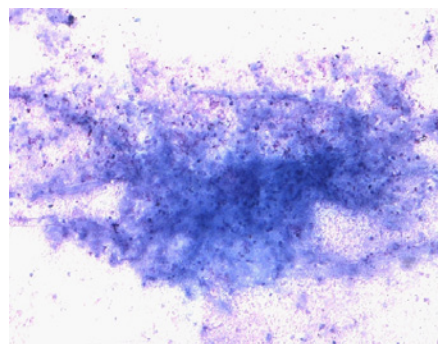


Figure 3: Smears examined show degenerated inflammatory cells in a necrotic background.

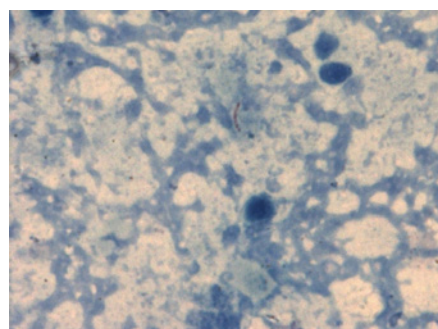


Figure 4: Ziehl Nelson staining with 20% H₂SO₄ was positive.

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Despite its rarity, thyroid tuberculosis has been the subject of periodic reviews. According to the literature, its frequency is 0.1-0.4% in histologically diagnosed specimens [4]. In the study by Das et al. [5], the incidence of tuberculous thyroiditis was 0.6%.

Symptoms are non-specific and variable resulting in the differential diagnosis of toxic goiter/hyperthyroidism, acute thyroiditis, riedel thyroiditis and benign nodules. The differentiation from thyroid cancer is essential to avoid unnecessary surgery [6]. Rarity of tuberculosis in thyroid may be due to: colloidal material in the thyroid gland possessing bactericidal action, high blood flow and excess of iodine, enhanced destruction of tubercle bacilli due to increased physiological activity of phagocytes in hyperthyroidism and possible antitubercular roles of thyroid hormone [7].

There are several pathological forms of tuberculous of the thyroid gland described and the most frequent are multiple lesions throughout the gland like miliary tuberculosis, goiter with caseating granulomas, cold abscess formation, sometimes associated with multiple sinuses, chronic fibrosing tuberculosis and acute abscess formation [8,9]. Criteria [10] for diagnosis of tuberculosis of thyroid are:

1. Demonstration of AFB in a necrotic or abscessed gland.

2. A definite etiological focus in the body, outside the thyroid. There is no doubt that the presence of AFB on cytological smear is confirmatory evidence of tuberculosis, but sometime it is not possible to demonstrate AFB then the diagnosis of tuberculous thyroiditis can be made only after histopathological examination.

Conclusion

Thyroid tuberculosis though rare but still exist and should be

considered in differential diagnosis of thyroid swelling presenting as abscess. Though most reported cases of thyroid tuberculosis were diagnosed on surgically resected specimens. Fine needle aspiration cytology also contributes in diagnosing thyroid tuberculosis in a thyroid nodule thus, avoiding unnecessary surgery.

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