International Journal of Research in Medical Sciences
Pandey SK et al. Int J Res Med Sci. 2026 Apr;14(4):1666-1668
www.msjonline.org
pISSN 2320-6071 | eISSN 2320-6012
DOI: https://dx.doi.org/10.18203/2320-6012.ijrms20260984

Case Report

Tubercular thyroiditis: a case report

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Received: 24 December 2025
Revised: 17 January 2026
Accepted: 09 March 2026

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ABSTRACT

Tuberculosis of the thyroid gland is a rare disease even in countries in which tuberculosis (TB) constitutes an endemic disorder. The diagnosis is often difficult as the clinical presentation has no distinct characteristics. We report a case of 29-year-old woman who presented following an eventful course over two weeks with a bilateral diffuse swelling of the thyroid gland. Ultrasonography disclosed colloid nodules with abscess over left neck region. Thyroid function tests were initially normal followed by phases of hyper and hypothyroidism in the absence of significant symptoms. There was no evidence of tuberculosis in any other organ. FNAC of abscess and thyroid parenchyma revealed necrotizing epithelioid granulomas with positive ZN staining for AFB. The diagnosis of thyroid tuberculosis was therefore made. The patient was put on Category II ATT with stormy but favourable outcome. Although rarely encountered, tuberculosis should be kept in mind in the differential diagnosis of nodular lesions of the thyroid in our country.

Keywords: Tuberculosis, Case report, Endemic

INTRODUCTION

Tuberculosis of the thyroid gland, whether primary or secondary, is an extremely rare disease with only isolated cases reported in the literature.[1] The reason for this rarity of thyroid TB is unknown. In majority of the cases, thyroid tuberculosis is secondary to infection elsewhere in the body. In such cases the thyroid gland is involved due to bacillus spread via the hematogenous, lymphogenous or contiguous route from the larynx or enlarged cervical lymph nodes.[2,3] TB primarily inflicting the thyroid gland is much more rare and, predictably, difficult to diagnose. Most frequently the patients are middle-aged females. Localized pain is a predominant symptom and facilitates differential diagnosis in such cases like infectious thyroiditis and subacute granulomatous thyroiditis such as De Quervain's and thyroid sarcoidosis.[4-6] The diagnosis is primarily made by ultrasound guided fine-needle aspiration cytology. Since granulomatous lesions are not pathognomonic of tuberculosis the caseating necrosis, if present, confirms the diagnosis of tuberculosis. The demonstration of AFB in the gland by Ziehl Neelsen stain can also validate the diagnosis.

CASE REPORT

A 29-year-old female presented to our hospital with history of fever, throat pain, difficulty in swallowing and left ear pain since 5 months with increased symptoms since past 15 days. She also had constitutional symptoms like malaise, weight loss and anorexia.

On examination patient was found to have goiter (grade 2, right lobe more prominent than left) which was 4×3cm in size diffuse, firm in consistency and tender. Thyroid function done one month prior to presentation showed low

TSH and normal levels of FT3 and FT4 levels. Routine investigations including chest radiograph were within normal limits. ESR was slightly raised being 28 (Westergren method) at first hour. Repeat Thyroid function test at presentation showed raised levels of FT3 and FT4 with low TSH values. A provisional diagnosis of subacute thyroiditis was kept. Both anti TPO antibody titre and ANA (quantitative) were normal. The patient was treated symptomatically with antibiotics and anti-inflammatory drugs initially for a week. After 2 weeks the patient presented with a swelling over left side of neck which was 5×3 cm in size, firm and without any signs of inflammation. CECT neck showed goiter of both lobes (R>L) and a large mass over left side of neck (Figure 1).

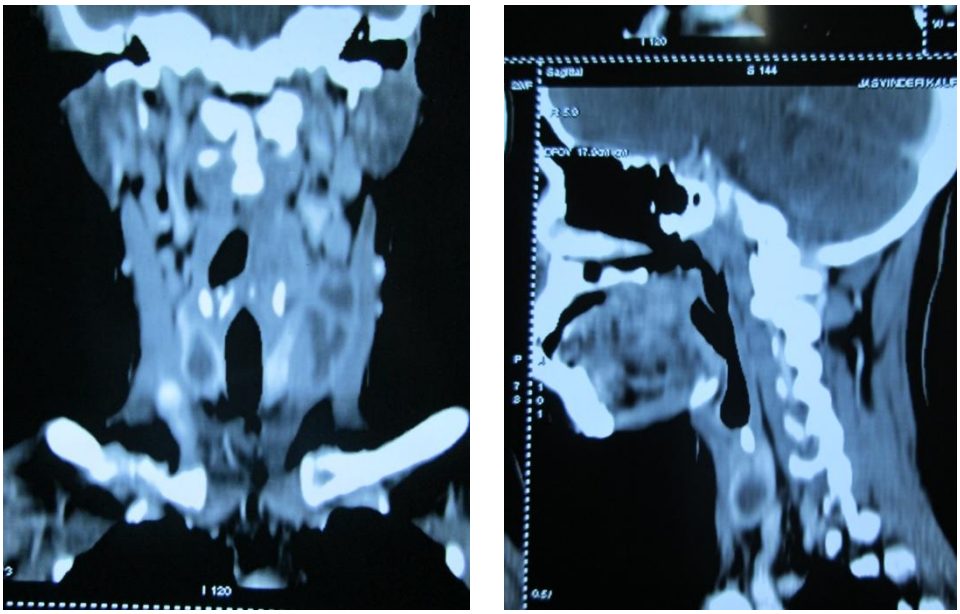

Figure 1: Anterior and lateral view of neck showing collection deep to sternocleidomastoid muscle with communication to tonsillar fossa.

FNAC of this neck swelling revealed pus and microscopic examination showed granulomatous necrosis suggestive of tubercular thyroiditis with abscess formation. AFB stain was positive. Patient was started on Tab thyroxine 50 µg/d in view of biochemical evidence of hypothyroidism. Patient was started on category II ATT as per FNAC and subsequent AFB positive status. After 2 weeks of ATT treatment patient showed marked improvement in symptoms. She was continued on ATT for 9 months with regular 2-4 weekly follow up in OPD. Subsequently patient had complete resolution of symptoms including thyroid swelling. The thyroid function test was within normal limits and 50 mcg of Thyroxine was continued with patient counseled for regular OPD follow up.

DISCUSSION

This patient had presented as subacute thyroiditis, a well-defined entity commonly due to infective or granulomatous etiology. It is likely that patient would have gone on with this diagnosis if she had not developed the subsequent overt clinical features. The significance of FNAC and USG in the final workup needs special emphasis. In our case the cause of thyroid involvement by tubercular bacilli was likely spread from the lymph node either directly or by lymphomatous route.

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. Bactericidal action of colloid, high blood flow, excess of iodine, colloidal material in the thyroid gland possessing bactericidal action, and physiological activity of phagocytes have been implicated in enhanced destruction of tubercular bacilli resulting in less involvement of thyroid tissue.[6] Symptoms are non-specific and variable resulting in the differential diagnosis of toxic goiter, acute thyroiditis, Riedel's thyroiditis and benign nodules. The differentiation from thyroid cancer is essential.[5]

Several pathological forms of tuberculosis of the thyroid gland have been 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.[7,8] Thus it may be inferred that tuberculosis of thyroid is mainly a secondary involvement by tubercular bacilli and tissue diagnosis of the same is required to ascertain the diagnosis.[9,10] Tuberculosis being endemic in our country, so tubercular thyroiditis in the setting of subacute thyroiditis must be actively searched for.

CONCLUSION

In conclusion, a high index of suspicion is a must in patients with constitutional symptoms presenting with goitre.Tuberculosis being endemic to India must be kept as a differential while evaluating such patients. Despite being a rare entity Tubercular thyroiditis must be ruled in patients with high index of suspicion.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Pandey SK, Tanya, Avasthi R. Tubercular thyroiditis: a case report. Int J Res Med Sci 2026;14:1666-8.