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## Pretracheal tuberculous abscess mimicking a thyroid swelling—A case report



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## ABSTRACT

**INTRODUCTION:** Pretracheal tubercular abscess is a rare presentation of extra pulmonary tuberculosis even in TB- endemic areas (WHO, 2014 [3]). It usually presents in posterior triangle group of lymph nodes (Baskota et al., 2004 [2]).

**PRESENTATION OF CASE:** We report a case of a lower midline swelling in anterior part of the neck of 6 months duration, with dysphagia of 1 month duration. Radiological diagnosis was established as tuberculous abscess and was drained. Patient was started on anti tuberculous treatment.

**DISCUSSION:** Swellings anatomically located in the area of anterior group of lymph nodes should be dealt with high degree of suspicion for tubercular etiology especially in TB-endemic areas (WHO, 2014 [3]). Anterior group of lymph node involvement is very rare. To differentiate, proper radiological assessment is needed to differentiate between thyroid nodule and lymph node pathology.

**CONCLUSION:** Pre operative assessment is often under estimated. Adequate evaluation will avoid major surgery for a benign pathology like tuberculosis.

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## 1. Introduction

The incidence of EPTB is increasing in India accounting for 20% of total TB burden in HIV negative individuals and 50% in HIV positive individuals [3,4]. It mainly affects the young and middle aged men and in immunocompromised individuals [7]. Common symptoms and signs may be masked due to reactivation of primary tuberculosis or better immunity in immunocompetent individuals. Presentation of the anterior group of lymph nodes mimics a thyroid nodule or thyroglossal cyst due to the location of swelling and signs associated with it [1]. This patient presented to and was managed in a teaching hospital.

## 2. Presentation of case

A 34 year old male was referred from primary health centre to the general surgery OPD with the swelling in the lower part of the anterior neck since 6 months. The swelling gradually increased in size for 2 months and was stable. He complained of dysphagia since 1 month. He had no other complaints. His past medical history was

unremarkable. No other relevant personal and family history could be elicited.

Physical examination revealed 4 × 3 cm firm swelling in the anterior part of lower part of neck, in the midline and extending to the right. There were no signs of inflammation, non tender, moving up with deglutition and not moving with protrusion of tongue.

Laboratory studies showed normal cell counts. ESR was 20 mm in 1st h. TSH was 3.18 μIU/ml. Patient is immunocompetent with negative viral markers. Chest roentgenogram did not show any pulmonary infiltrates. Ultrasonography showed heterogeneously enhanced lesion over the right paramedian region of the neck superior to right lobe of thyroid, with multiple calcific specks within.

CT scan of neck showed hypodense lesion with fluid attenuation and enhanced rim, in the midline and right paramedian plane anterior to trachea and right lobe of thyroid extending into the paralaryngeal space (Fig. 1). FNAC showed pus with necrotic debris with lymphocytes, multinuclear giant cells and neutrophils (Fig. 2).

## 3. Discussion

Tuberculosis is still a most prevailing disease in countries like India having 22.7% of global burden. Most common presentation of extrapulmonary disease is lymphnode, cervical group of lymph nodes (60–90%) being the most common [5]. Posterior triangle nodes accounts for 51% [5] followed by upper deep cervical and sub-mandibular nodes. Anterior group of nodes is very rare accounting for <1% [2]. They may present in one of the following stages:

*Abbreviations:* TB, Tuberculosis; EPTB, Extrapulmonary tuberculosis; OPD, Out patient department; HIV, Human immunodeficiency virus; RNTCP, Revised National Tuberculosis Control Program.

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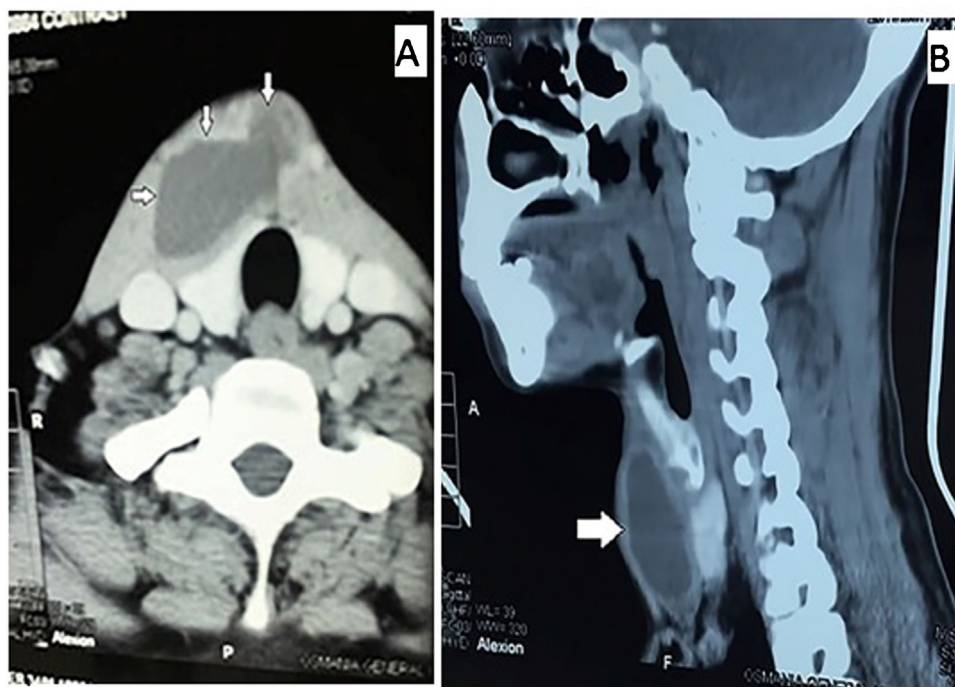


Fig. 1. CT showing the pretracheal node extending in front and to the right of trachea (arrow). A-Axial, B-Sagittal view.

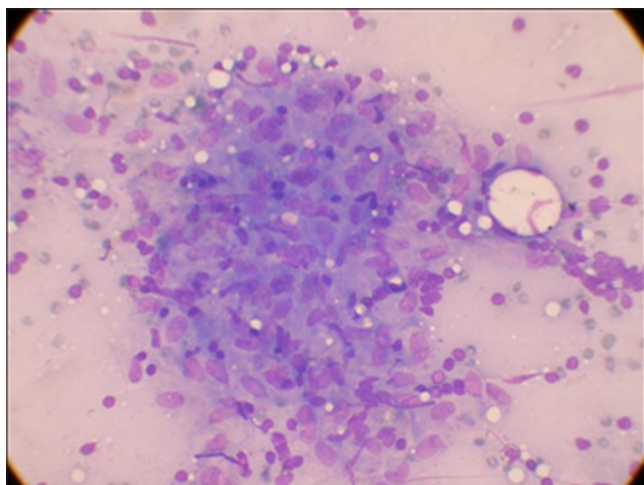


Fig. 2. Cytological picture of epithelioid granuloma and lymphocytes.

1. Lymphadenitis.
2. Periadenitis.
3. Cold abscess.
4. Collar stud abscess.
5. Sinus.

Commonly, they present in lymphadenitis stage [4,6], as single or multiple painless swellings. It spreads through primary focus in lungs, tonsil, adenoids or contiguous spread from the mediastinal, peri bronchial nodes or adjacent group of nodes.

Sonographic features of tuberculous node is a hypoechoic lesion, with intranodal cystic calcifications and necrosis, which is dense with posterior acoustic shadow [8]. Tuberculous nodes have displaced vascularity or avascularity due to necrosis [9,11]. Adjacent soft tissue edema and matting serve as ancillary features. CT features may be homogenous, or a node with central area of low attenuation with enhancing rim or a calcified node [12].

A thyroid nodule is a discrete swelling within the thyroid gland, sonographically distinguishable from adjacent parenchyma. Solid hypoechogenic mass with intranodal microcalcifications, irregular margins and intranodal vascularity indicate malignancy [10,11]. However pure cystic swellings without calcifications are more in favor of benign lesion. In our case, CT revealed a hypodense lesion with fluid attenuation and enhanced rim, anterior to trachea and thyroid extending into the parapharyngeal space on the right, likely a pretracheal tubercular abscess.

FNAC is definitively useful tool in establishing diagnosis of tubercular lymphadenitis [13]. It is minimally invasive, faster and cheaper when compared to excision biopsy. FNAC has a high diagnostic accuracy in detecting tuberculosis with sensitivity of 93.1% and specificity of 100% [13]. Cytological criteria include clusters of epithelioid cells with or without necrotic debris, mature lymphocytes and pleomorphic lymphoid cells [14,15].

There are very few reported cases of pretracheal tuberculous abscess. We diagnosed this case preoperatively using ultrasonography, CT scan and FNAC showing classical features of tubercular abscess. We did Incision and Drainage of the abscess under Short General Anesthesia in barking dog position, along with a biopsy from the wall of the cavity and the cavity was left open. It is necessary to take special care during operation to prevent spillage of contents. Scar healed well and post operative period was uneventful. Patient completed the course of anti tuberculous treatment Category 1 for 6 months as per RNTCP- Guidelines for TB control in India. Patient was explained and asked to watch for complications of anti tuberculous drugs. There was no recurrence or reactivation of the disease in 12 months follow up.

### 5. Conclusion

In conclusion, the occurrence of tuberculosis in the rarest of the sites should be dealt with high degree of suspicion in endemic countries. Pre operative diagnosis in such cases avoids major surgery and related complications.

**Conflict of interest**

There is no conflict of interest.

**Funding**

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**Informed consent**

Written informed consent has been taken from the patient.

**Ethical approval**

No ethical approval was required or obtained.

**Authors contribution**

Dr. G. Sambhi Reddy; performed the operation.

Dr Jerusha Daggolu; data collection, writing the manuscript, follow up.

**Consent**

Written informed consent was obtained from the patient for publication of this case report.

**Registration of research studies**

Researchregistry1459.

**Guarantor**

Dr. G. Sambhi Reddy.

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