

## Case Report

# A rare presentation of extra pulmonary tuberculosis in neck (isolated level-VI cervical lymph node tuberculosis)

Chandani D. Bhatt\*, Ishita Shah, Ramde Odedara, Nirali Modi

Department of Otorhinolaryngology, Guru Gobind Singh Hospital, Jamnagar, Gujarat, India

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### \*Correspondence:

Dr. Chandani D. Bhatt,

E-mail: [chandnibhatt22@gmail.com](mailto:chandnibhatt22@gmail.com)

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## ABSTRACT

One of the most common varieties of extra pulmonary tuberculosis is tuberculosis lymphadenitis. This was the case report of a 40-year-old female who presented with complaint of neck swelling and voice change and was later diagnosed with an isolated extra-pulmonary level-VI cervical lymph node tuberculosis. The diagnosis was made by histopathology and PCR and patient was then started with anti-tuberculosis therapy.

**Keywords:** Lymph node, Tuberculosis, Extra pulmonary

## INTRODUCTION

One of the most common presentations of extra pulmonary tuberculosis is tuberculosis lymphadenitis. It is common in children and woman than any other form of extra pulmonary tuberculosis. Other organs affected by extra pulmonary tuberculosis are pleura, genitourinary tract, gastrointestinal tract, central nervous system, musculoskeletal system and eyes. Tuberculosis lymphadenitis is particularly common in Asians and Africans and involves lymph nodes of neck and supraclavicular regions. Transmission will occur after silent dissemination through lymphohematogenous system to extra pulmonary sites including the cervical lymph nodes. In persons infected with HIV, cervical lymphadenitis is found in one third of the total cases.

## CASE REPORT

Our patient was a 40-year-old female with an average built presented to ENT OPD with complaint of voice change for 10-15 days and neck swelling for 5-10 days which was not associated with respiratory distress, throat pain or difficulty in swallowing. There was no family history or

past history of tuberculosis. Our examination revealed a single, firm, non-tender swelling of size (3×2 cm) present in left paramedian region of neck at the level of left lamina of thyroid cartilage that moves with deglutition but not with protrusion of tongue. Overlying skin had mild inflammation but no discharge, sinus or fistula. Oral cavity, oropharynx and nasopharynx were normal. 70-degree telescopic examination of larynx was done which revealed left vocal cord palsy with bulging in left pyriform fossa. Rest of laryngeal examination was found to be normal. Then patient was subjected for ultrasonography of neck that reveals conglomerated lymph node of size (1.8×2.8 cm) in left side level-VI of neck which inferiorly abuts the left lobe of thyroid with loss of fat plane. So patient was kept on antibiotics for 2 weeks but swelling did not subside. Following this, a USG-guided FNAC was done and FNAC report suggestive of suppurative inflammation with mixed population of inflammatory cells predominantly neutrophils and lymphocytes against a necrotic background. So patient was kept on injectable antibiotics for further one week respectively. No improvement was there in the patient's status. CECT-Neck was done showing neoplastic thickening involving left true vocal cord and left aryepiglottic fold with maximum strip thickness of 7 mm lying in close relation with left lamina

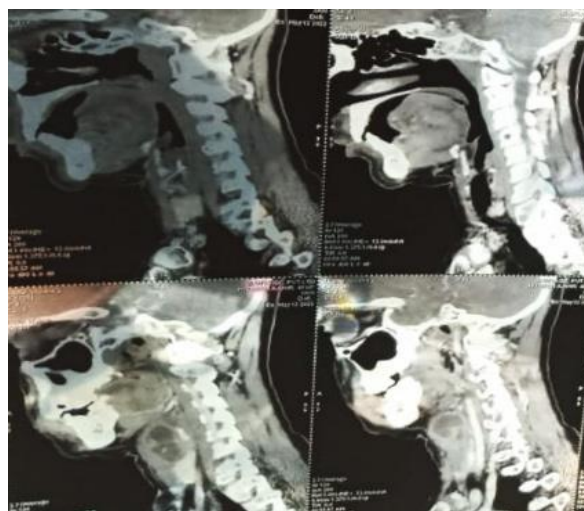
of thyroid cartilage causing sclerosis of it. A well-defined peripheral enhancing hypodense lesion with internal necrotic area involving left level-VI, left para-glottic space and prevertebral space at C5 level of size (20×22×31 mm) suggestive of conglomerated lymph node with normal thyroid gland and other laryngeal structures. Chest X-ray was normal and sputum- AFB and Mantoux test were negative. Pulmonologist then advised for CBNAAT of the lymph node excision biopsy specimen. Then excision biopsy was done and specimen of lymph node sent for histopathologic examination as well as PCR respectively. Histopathology report reveals reactive lymph node with presence of histiocytes, plasma cells with an ill-defined granuloma formation with giant cells and epithelioid aggregates. CBNAAT report came positive with confirmation of presence of mycobacterium tuberculosis in the specimen. Then patient was put on daily regimen of anti- tuberculosis treatment with isoniazid, rifampicin, pyrazinamide, and ethambutol for first 2 months and isoniazid, rifampicin and ethambutol for 4 months.



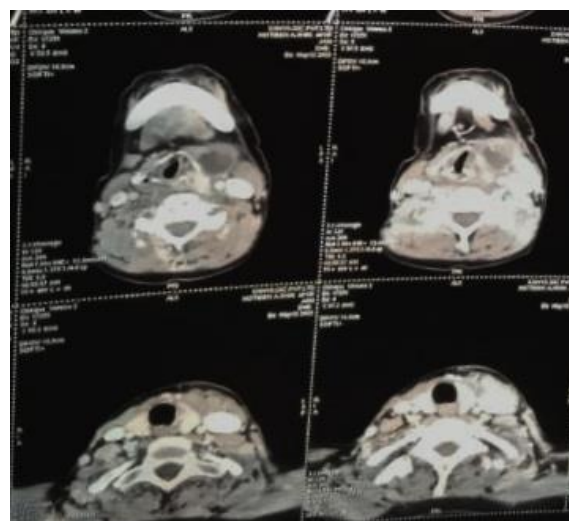
**Figure 1:** Pre-operative image with arrow showing swelling in left paramedian region of neck.



**Figure 2:** Arrow showing postoperative image after excision of swelling from anterior aspect of neck.



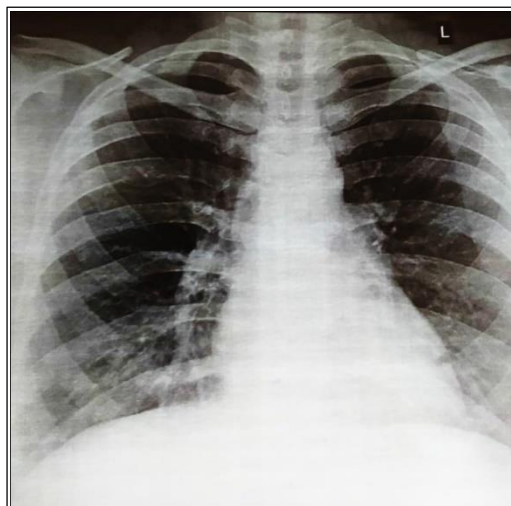
**Figure 3:** Sagittal section of CT-Scan of neck with arrow showing well-defined peripheral enhancing hypodense lesion with internal necrotic area.



**Figure 4:** Transverse section of CT- scan of neck with arrow showing lesion in left paramedian region of anterior aspect of neck.



**Figure 5:** Arrow showing gross specimen of excised lymph node with surrounding necrotic tissue.



**Figure 6: Chest X-ray of the patient with no any abnormality.**

## DISCUSSION

Patients with lymphadenitis due to *Mycobacterium tuberculosis* are usually adults presenting with constitutional symptoms like fever, fatigue, and weight loss and have associated pulmonary tuberculosis.<sup>1,2</sup>

Frequently, multiple lymph nodes are involved bilaterally, and there are draining sinuses.<sup>3,4</sup> The purified protein derivative (PPD) test is usually strongly positive. Lymph node tuberculosis is most common in children and women.<sup>7</sup> Our patient was a middle aged female 40 years old. The disease is more common in immune-compromised patients like HIV infected and diabetic patients.<sup>8</sup>

Our patient was non-diabetic, non-hypertensive and no any history of tuberculosis or HIV infection. The disease is mostly localized to anterior or posterior cervical group of lymph nodes (70-80%).<sup>9</sup> The jugulo-omohyoid region including cervical lymph node levels II- IV is the most common site of involvement.<sup>11</sup> Initially the overlying skin is usually normal which later presents with sinus that is usually non-healing.<sup>12</sup>

Final diagnosis is usually by histology which includes FNAC, but if FNAC comes to be inconclusive then we go for excisional biopsy of the specimen along with PCR of the specimen.<sup>10</sup> Once diagnosed, a six months anti-tubercular regimen is started which is sufficient for healing of sinus.<sup>13,14</sup>

## CONCLUSION

While extra pulmonary tuberculosis is fairly common, isolated lesions without any prior family or personal history of tuberculosis may be difficult to diagnose. It is particularly likely to get confused with metastatic or sometimes even reactive lymphadenitis. Hence any lymphadenopathy not subsiding after adequate antibiotic

therapy should be treated with suspicion and histopathological examination should be performed. At the same time it is vital to establish a clinical co-relation with the radiological and pathological findings to establish a diagnosis.

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