

## CASE REPORT

### ATYPICAL ISOLATED VOCAL CORD TUBERCULOSIS: CASE REPORT

Mohit Srivastava<sup>1</sup>, Sushant Tyagi<sup>2</sup>, Amit Singh<sup>3</sup>, Abhinav Srivastava<sup>4</sup>, Lalit Kumar<sup>5</sup>

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**ABSTRACT: BACKGROUND:** Tuberculosis of the larynx is a very rare form of tuberculosis and is mostly secondary to pulmonary tuberculosis. Patients usually present with hoarseness or dysphagia and other nonspecific constitutional symptoms like fever or localized pain. In this study, we present an atypical case of primary vocal cord nodular lesion with tuberculosis. **CASE PRESENTATION:** A 42 year old man presented with hoarseness of voice, low grade fever, and night sweating within three months duration. Laryngoscopic study showed bilateral nodular thickening of vocal cord and biopsy of the lesion showed granuloma with caseous necrosis. Chest x-ray was normal. The patient was treated with standard regimen of tuberculosis and was cured after 9 months of anti-tubercular therapy. **CONCLUSION:** Laryngeal tuberculosis should be considered in the differential diagnosis of patients with hoarseness with or without pulmonary involvement in endemic regions of tuberculosis and in poor socio-economic group of population.

**KEYWORDS:** Tuberculosis, Vocal cord, Hoarseness.

**INTRODUCTION:** Involvement of larynx in tuberculosis occurs as secondary to pulmonary tuberculosis. Primary involvement of larynx is rare. Exact mode of transmission from the lungs is not known. It is believed that contact with sputum containing tubercle bacilli plays an important role. The occurrence of tuberculosis of larynx has greatly decreased as a result of improvement in public health care and development of effective antitubercular chemotherapy. These patients usually present with the symptoms of cough, hoarseness of voice, pain in throat, dysphagia, haemoptysis which simulate malignancy and other granulomatous infections of larynx.<sup>[1]</sup>

Lesions vary from erythema to ulceration and masses resembling carcinoma. Direct laryngoscopy and biopsy are mandatory to establish a definitive diagnosis.<sup>[2]</sup>

**CASE PRESENTATION:** A 42 years old man presented to our hospital with chief complaints of hoarseness, low grade fever with decreased appetite for duration of three months. He had no history of cough or expectoration. The patient was non-smoker and with no history of alcohol intake. There was no family history of tuberculosis or any other chronic illness.

On general physical examination there was no cervical lymphadenopathy. There were no scars or sinuses in the neck. Indirect laryngoscopy had shown a nodular lesion on bilateral vocal fold (Figure 1).

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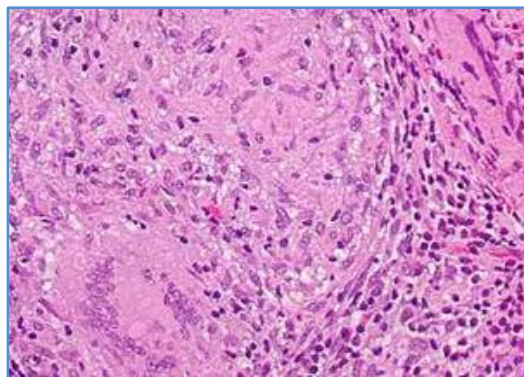
**Fig. 1: Vocal cord lesion at the time of presentation**

Vocal cords were bilaterally mobile with no signs of induration and infiltration. The chest x-ray were normal. PPD test showed 20 mm indurations after 48 hours. After age related physician fitness and pre anesthetic checkup, the patient underwent MLS under general anesthesia and biopsy was taken from vocal cords.



**Fig. 2: MLS and biopsy from lesion under GA**

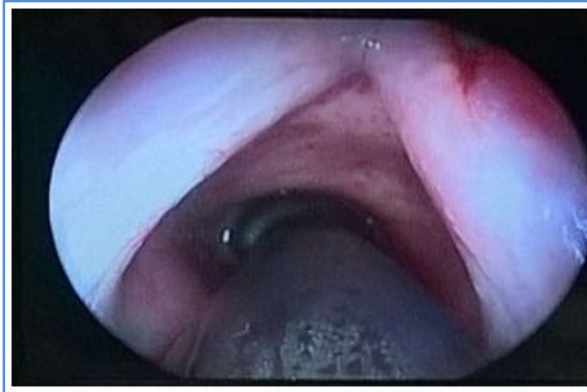
The histopathological examination revealed biopsy tissue lined by stratified squamous epithelium showing focal dysplasia. Underlying stroma showed diffuse infiltration by lymphocytes, plasma cells, occasional polymorphs along with epitheloid granulomas, Langhans giant cells and caseous necrosis (Figure 2). Histopathologic findings confirmed tuberculosis as the cause of his hoarseness and he was treated with standard regimens of therapy.



**Fig. 3: Histopathologic examination of sample of the right vocal cord**

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A standard six month treatment with a combination of isoniazid, rifampicin, pyrazinamide, and ethambutol was started. An additional 3 months of therapy was given. The follow up after treatment showed resolution of the symptoms and improvement of the mass (Figure 5).



**Fig. 4: Immediate post-operative image**



**Fig. 5: Vocal cords after completion of ATT**

**DISCUSSION:** Laryngeal tuberculosis is a granulomatous disease of the larynx and usually been results from pulmonary tuberculosis (PT). It may cause hoarseness, dysphagia and odynophagia. The granulomatous lesions may involve all parts of the larynx due to haematogenic and lymphatic spreading of the mycobacteria.<sup>[3]</sup> The effective use of isolation and the advances of antituberculous chemotherapy have led to a decrease in the incidence of tuberculosis. Albeit, the presence of Acquired Immuno Deficiency Syndrome (AIDS) or other immunosuppressive diseases and long-term use of corticosteroid drugs may result in the increased incidence of tuberculosis.<sup>[4]</sup> In larynx, the commonest parts involved are the vocal cords and the least affected is the epiglottis.<sup>[5]</sup> Laryngeal tuberculosis may be categorized to ulcerative lesions, nonspecific inflammatory lesions, polypoid lesions and ulcerofungative mass lesions.<sup>[6]</sup> Laryngeal tuberculosis should be considered in the differential diagnosis of patients with hoarseness with or without pulmonary involvement in endemic regions of tuberculosis and in poor socio-economic group of population.

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### **AUTHORS:**

1. Mohit Srivastava
2. Sushant Tyagi
3. Amit Singh
4. Abhinav Srivastava
5. Lalit Kumar

### **PARTICULARS OF CONTRIBUTORS:**

1. Assistant Professor, Department of Otorhinolaryngology, Saraswathi Institute of Medical Sciences.
2. Senior Resident, Department of Otorhinolaryngology, Saraswathi Institute of Medical Sciences.
3. Senior Resident, Department of Otorhinolaryngology, Saraswathi Institute of Medical Sciences.

4. Junior Resident, Department of Otorhinolaryngology, Saraswathi Institute of Medical Sciences.
5. Junior Resident, Department of Otorhinolaryngology, Saraswathi Institute of Medical Sciences.

### **NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:**

Dr. Mohit Srivastava,  
# 1153, 2<sup>nd</sup> Floor,  
Mohan Market Society,  
Sector-5, Vasundhara.  
E-mail: dr.mohit141180@gmail.com

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