

CASE REPORT

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# Primary Laryngo-Pharyngeal Tuberculosis Mimicking a Malignant Tumor: A Rare Entity

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## **ABSTRACT**

### **INTRODUCTION**

Primary laryngo-pharyngeal tuberculosis is a rare disease. It's often simulates malignancy on imaging and laryngoscopy. The final diagnosis is invariably based on biopsy.

### **CASE REPORT**

We report the case of a 25-year-old man who complained of dysphagia for six months. Clinical findings were suggestive of a malignant process. The patient was successfully managed anti tuberculosis treatment administrated for twelve months.

### **CONCLUSION**

Pharyngo-laryngeal tuberculosis is a misleading diagnosis. Malignant process should be always rules out.

### **KEYWORD**

Tuberculosis; Biopsy; Malignant; Dysphagia

### **INTRODUCTION**

Primary laryngo-pharyngeal tuberculosis is uncommon. It is almost always associated with pulmonary tuberculosis [1,2]. It occurs generally in adults without BCG vaccination or in cases of the acquired immune deficiency syndrome [1]. It often simulates malignant tumor on laryngoscopy and imaging and confirmation is histological [3].

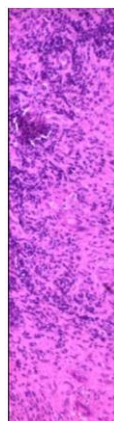
We report a rare case of primary laryngo-pharyngeal tuberculosis in a young man who presented to our hospital with dysphagia.

## **CASE REPORT**

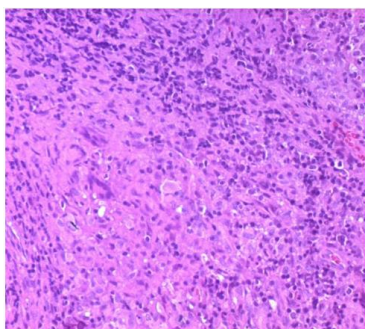
A 25-year-old man showed a chronic and progressive throat pain and dysphagia lasting six months. He had difficulty especially swallowing solids. There was no history of smoking, alcohol consumption, cough or any respiratory problem. Past and familial history are not significant. The patient reported anorexia and weight-loss. He had no fever, no night sweating, no dysphonia or haemoptysis. He had been on antibiotic treatment with the impression of bacterial infection but did not respond to them. On physical examination, the patient was emaciated. The examination of the nose, ear, oral cavity and oropharynx was found to be normal. He had palpable cervical lymph nodes. Routine tests were normal. The patient was HIV seronegative. Chest sputum test was also negative. X-ray of the chest was within normal limits. Laryngoscopic examination showed an ulcerative lesion infiltrate on the right aryepiglottic fold, medial and lateral walls of the right pyriform fossa. Laryngo-pharyngeal CT-scan revealed a heterogeneous mass of 20 mm × 22 mm × 45 mm involving the right aryepiglottic fold and the right pyriform fossa with no cartilaginous abnormalities (Figure 1). A biopsy was performed. Histopathology exam revealed a chronic granulomatous inflammatory process, with alcohol-acid resistant bacilli under Ziehl-Neelsen stain, matching tuberculosis signs (Figure 2 and Figure 3). We started with anti-tuberculosis treatment. The treatment consisted of rifampin, isoniazid, pyrazinamide and ethambutol administration for a period of 2 months, followed by rifampicin and isoniazid administration for 10 months. The patient responded dramatically to anti-tuberculous is treatment. The pathology disappeared in the laryngoscopy performed ten months later. He has been followed for one year now, without signs of disease recurrence.



**Figure 1:** CT scan showing a heterogeneous mass of 20 mm × 22 mm × 45 mm involving the right aryepiglottic fold and right pyriform fossa.



**Figure 2:** Giant cells and epithelioid histiocytes H&E stain (×100).



**Figure 3:** High power view of giant cells H&E stain ( $\times 200$ ).

## **DISCUSSION**

Laryngo-pharyngeal tuberculosis is due to *Mycobacterium tuberculosis*. It presents the most granulomatous disease, but a primary laryngo-pharyngeal location is exceptional. It is almost always associated with pulmonary tuberculosis [1,2,4]. It usually occurs due to reactivation of a laryngeal focus that may have appeared during hematogenous dissemination of a tuberculosis primary infection [2,4,5].

Pharyngeal and hypopharyngeal tuberculosis is more prevalent in the age range of thirty to sixty years [4,6].

Some factors that have been found to occur in these patients include the absence of the BCG vaccination, malnutrition, promiscuity, acquired immunodeficiency syndrome, immunosuppression and tobacco use [1-3].

The most common symptoms are dysphagia and odynophagia, often times make up the only complaint of the patient [3-5].

In the literature, dysphagia and odynophagia are reported in 45% to 90% of the cases, dry cough, globus pharyngeal and stridor in the more severe cases.

Hemoptysis and general body symptoms (weight loss, mild morning fever, sweat and asthenia) are less common [7].

Iravani K et al. reported one case of laryngo-pharyngeal tuberculosis with the initial symptom of dysphagia which is similar to the patient presented in our case report [4].

On laryngoscopy, tuberculosis may either present as a mass or as an ulcer. Currently, the infiltrating and pseudotumoral forms are more frequent than the ulcerated ones [8].

The location of the lesion is extremely variable. The vocal cords represent the most frequent site, followed by the ventricular strip, epiglottis, sub-glottic region and posterior commissure. A posterior location is known as well. The lesion is bilateral in 75% of the cases [3]. There are a wide range of differential diagnosis that causes difficulty in the diagnosis of tuberculosis. Pharyngo-laryngeal carcinoma is the main differential diagnosis, which is grossly very similar and has clinical manifestations similar to tuberculosis [3,4]. Other differential diagnosis includes minor salivary gland tumors, neurogenic tumors, lymphoma and Wegener's disease [4,9].

There are no specific features on CT scan for laryngo-pharyngeal tuberculosis. It can include edema alone, an ulcero-infiltrative mass, infiltrative and pseudo-tumoral appearance. Suspicion of tuberculosis should be raised when bilateral and diffuse lesions are encountered without destruction of the laryngo-pharyngeal architecture [3,10].

Diagnosis is based on the isolation of mycobacterium tuberculosis and histopathological confirmation [4].

Treatment is based on anti-tuberculosis chemotherapy. It includes isoniazid with a combination of two or three of rifampin, ethambutol and pyrazinamide drugs for a duration of six to twelve months. The surgery is indicated in the presence of laryngeal stenosis [3,4].

Clinical improvement and contagiousity of the disease are significantly decreased after two weeks of treatment [3,4]. Our patient also showed remarkable improvement of his symptoms. At least, twelve months of treatment is recommended to control the infection [4].

## **CONCLUSION**

Primary and isolated laryngo-pharyngeal tuberculosis is a rare entity. Tuberculosis should still be considered in the differential diagnosis of malignancy of the larynx and hypopharynx especially in countries where tuberculosis is endemic.

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