

## Laryngeal Tuberculosis: Case Report

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### Case Report

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**Abstract:** Isolated laryngeal tuberculosis is rare and presents less than 1% of the manifestations of this disease, it poses a problem of differential diagnosis with other affections mainly tumors. The aim of this work is to emphasize the diagnostic difficulty of this entity and its management. We report the case of a 21-year-old patient hospitalized for progressive dysphonia. Endoscopy showed an ulcerous-budding process of the two vocal cords (which were mobile) extending to the laryngeal vestibule and vestibular bands. The histological examination of the biopsies performed was in favor of a caseo-follicular tuberculous laryngitis. An anti-bacillary treatment has been introduced which has allowed a total resolution of clinical, biological and endoscopic signs. La is healthy 2 years after the end of treatment.

**Keywords:** Dysphonia, laryngeal tuberculosis, carcinoma, histology.

### INTRODUCTION

Laryngeal tuberculosis is infrequent and accounts for less than 1% of this disease localisation, but its incidence has been steadily increasing in the past 20 years. Clinical presentation is non-specific, very similar to laryngeal squamous cell carcinoma, this is often responsible of diagnosis delay, hence the interest of biopsies in any chronic laryngitis. The aim of this work is to emphasize the diagnostic difficulty of this entity and its management.

### OBSERVATIONS

We present the case of a 21-year-old female patient, immunocompetent, vaccinated with BCG and without history of tuberculosis or smoking or alcohol consumption, she was hospitalized for onset of progressive dysphonia, evolving for a month associated with alteration of the general condition, with a fever especially nocturnal and a 6 kilos weight loss during a month. Clinical examination found a 38.5 ° C fever.

Nasofibroscope followed by direct laryngoscopy demonstrated an ulcer-budding process of the two vocal cords (which were mobile) extending to the laryngeal vestibule and vestibular folds (Figure 1). The palpation of the neck did not find lymphadenopathies.

In addition, tuberculin intradermal test was positive (13 mm), the search for Mycobacterium tuberculosis in sputum and urine was negative and the immunological status was negative. The erythrocytes sedimentation rate was 65 mm in the first hour and the HIV serology was negative. The histological examination of the biopsies performed was in favor of tuberculous laryngitis (figure 2).

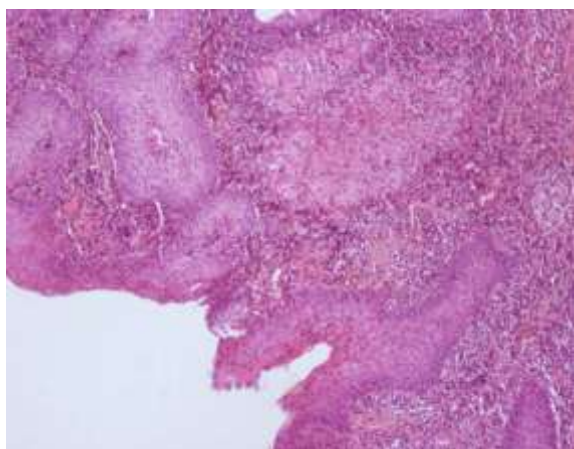
Physical examination and imaging techniques did not find any other tuberculous location, particularly pulmonary. Antitubercular agents was initiated orally based on isoniazid, rifampicin, pyrazinamide and ethambutol during two months, then relayed by the

combination of isoniazid and rifampicin during ten months, allowing a total resolution of clinical, biological and endoscopic signs.

A monthly follow-up in outpatient clinic was carried on until the end of the antitubercular therapy, and then every three months. The patient is healthy 2 years after completion of treatment without any signs of relapse or recurrence.



**Fig-1: endoscopic view showing a glottic ulcerative-budding process (arrow)**



**Fig-2: discreetly hyperplastic laryngeal squamous lining covering a chorion with epithelioid and giganteo-cellular granulomas, coloration, medium magnification**

## DISCUSSION

Isolated laryngeal tuberculosis is rare and presents less than 1% of the manifestations of this disease, it incriminates *Mycobacterium tuberculosis* and represents the most frequent granulomatous disease in the larynx [1,2]. The age of onset is variable with the highest frequency between 40 and 50 years-old and a male predominance [1].

It appears to be more prevalent among people with acquired immunodeficiency, undernutrition, tobacco addiction and lack of BCG vaccination [3,4].

The dissemination of the tuberculous disease to the larynx seems to be by a hematogenous pathway: it is the classical mode of extra-pulmonary dissemination of tuberculosis from a cavern opening into a vessel. Laryngeal mucosa may also be contaminated during coughing effort. A possible lymphatic pathway may explain the frequent ipsilateral laryngeal and pulmonary lesions [5].

Laryngeal tuberculosis is often revealed by chronic dysphonia, sometimes concomitant with

odynophagia and dyspnea, associated or not with other signs of tuberculous infection [1].

At endoscopy, these tuberculous laryngeal lesions, which may be ulcerative, ulcer-budding, papillomatous or pseudopolypous (Portmann fibro-tuberculoma), affect mainly the vocal cords, ventricular folds, epiglottis, subglottic region and the posterior commissure [3, 5].

Laryngoscopy and imaging techniques may misdiagnose a laryngeal cancer or other chronic granulomatous disease such as laryngeal syphilis, sarcoidosis, mycosis (actinomycosis, blastomycosis, and histoplasmosis), leprosy, amyloidosis and Wegener's granuloma [3, 4]. But bacteriology and especially pathology make it possible to confirm the diagnosis of tuberculous laryngitis [5].

Early diagnosis and appropriate antitubercular treatment remain the only guarantee of complete recovery. The place of surgery remains minimal and reserved for acute accidents and some sequelae [5]. The risk of relapse or treatment failure despite a well-conducted therapy is 1%. These failures are due to the appearance of resistant strains of Koch's bacillus [2, 5]. Epidemiological surveillance of these strains is essential to prevent the extension of resistance. The prognosis depends on the affected organs, the patient general condition and comorbidity, and finally the diagnostic delay. High (33%) and early mortality may concern immunocompromised patients with multifocal locations [5].

## CONCLUSION

Laryngeal tuberculosis is a rare notifiable disease. It should be evoked before any dysphonia with long-term fever, even in an immunocompetent patient. An endoscopy with biopsy for pathological examination, allow an early diagnosis. Its treatment is medical, even in case of very large lesions, the surgery being reserved for the cases of acute dyspnea or progressive aggravation.

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