

Tubercular Laryngitis Simulating Laryngeal Carcinoma

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Abstract

With early diagnosis of pulmonary tuberculosis and availability of effective antituberculosis chemotherapy, prevalence of laryngeal tuberculosis had decreased significantly. Because of similar clinical presentation and risk factors, laryngeal tuberculosis is often confused with laryngeal carcinoma and diagnosis was usually made while work-up for malignancy. Here we are presenting one such case of 55 years old male, initially suspected as laryngeal carcinoma was diagnosed to have secondary laryngeal tuberculosis.

Keywords: Tuberculosis; Malignancy; Larynx

Introduction

The prevalence of laryngeal tuberculosis has decreased significantly as a result of improvement in public health care and availability of effective antituberculosis chemotherapy. Clinical findings and risk factors for laryngeal tuberculosis and laryngeal carcinoma are common creating difficulties for even the most experienced clinicians. Here we are reporting a case of laryngeal tuberculosis clinically mimicking malignancy.

Case Report

55 year old male, chronic tobacco chewer, occasional consumer of beetle nut, non-smoker, farmer by occupation, presented with history of progressive foreign body sensation in throat and change in voice for last three months. There was no history of cough, fever, chest pain, noisy breathing or weight loss. He had taken antibiotics and other supportive treatment without any improvement. There was no history of contact to a case of tuberculosis. There was no past history of diabetes mellitus, tuberculosis and any other co-morbid illness. On physical examination, he was of average built with normal vitals. There was no peripheral lymphadenopathy. Laryngoscopic findings showed diffuse edema of epiglottis, bilateral aryepiglottic folds and false cords. Bilateral vocal cords were mobile without abnormalities. Other systemic evaluation was unremarkable. His haematological and biochemical parameters including blood sugar were normal except raised erythrocyte sedimentation rate (ESR-68 mm in 1st hour). Contrast Enhanced Computed Tomography (CECT) Neck showed diffuse enhancing thickening of epiglottis. Biopsy was taken from epiglottis which showed stratified squamous epithelium with epitheloid granuloma and Langhans giant cell surrounded by lymphocytes suggestive of tuberculosis (Figure 1). Sputum for gram stain and acid fast bacilli on three consecutive days were also negative. Subsequently, Chest radiograph was done, which showed infiltrates in bilateral upper and left middle zone (Figure 2). Bronchoscopy revealed purulent discharge coming from the left upper lobe bronchus and bronchoalveolar lavage (BAL fluid) were taken which showed mycobacterium tuberculosis on culture by bactec method.

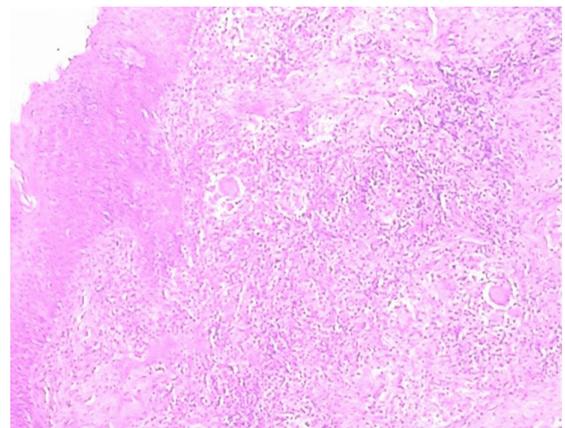


Figure 1: Epiglottis biopsy

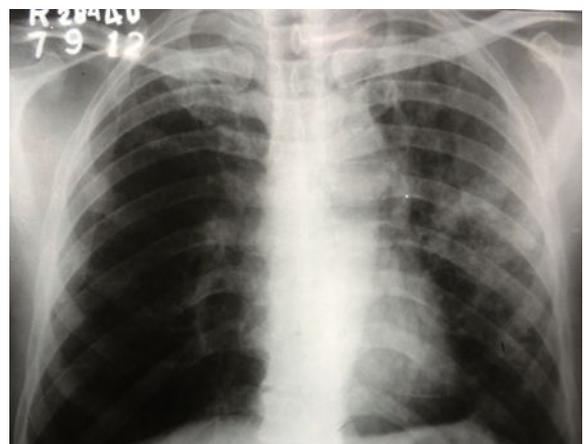


Figure 2: Chest radiograph

Standard six month treatment was given with Rifampicin, Isoniazid, Pyrazinamide, Ethambutol followed by Rifampicin and Isoniazid for four months. On follow up there was resolution of symptoms and supraglottic swelling after two months.

Discussion

Laryngeal tuberculosis (TB) used to be the common manifestation of tuberculosis in the early twentieth century, but now it is a rare clinical entity and recent incidence of laryngeal tuberculosis is less than 1% of all tuberculosis cases [1,2]. In a series of 843 tuberculosis cases, only 11 cases showed laryngeal involvement (1.3%) [3].

The pathogenesis of laryngeal involvement is either primary (absence of pulmonary disease) or secondary to pulmonary tuberculosis. Primary laryngeal tuberculosis is rare [4]; therefore patient diagnosed to have laryngeal tuberculosis should be investigated further to rule out pulmonary tuberculosis. Recent study from USA [5] revealed that 86% of patient diagnosed to have laryngeal tuberculosis was having underlying pulmonary tuberculosis. The prevalence of secondary laryngeal TB is around 1.5% [6]. But in developing countries, laryngeal involvement secondary to pulmonary tuberculosis was quite high as shown by various studies: 26.7% in an African study [7], 37% and 47% from Pakistan studies [8,9]. In a study from India, among 500 patients with pulmonary tuberculosis, only 4% were found to have laryngeal involvement [10]. In our case, laryngeal involvement was probably secondary to pulmonary disease.

The presentation pattern of laryngeal TB has changed in the developed countries as it resembles laryngeal carcinoma. These cases were initially confused with malignancy. Similar observations were recorded in an Indian study [11]. Laryngeal TB is usually seen in adults, between 40 and 60 years of age [12], with presenting complaints including dysphonia usually accompanied with odynophagia or dyspnoea. However in the same age range, the same symptoms raise suspicion of laryngeal carcinoma. The age of present case (55 years) was in this range.

Tuberculosis isolated from head and neck region is common in Human Immunodeficiency Virus (HIV) infection and should be considered in differential diagnosis of all head and neck lesions in patients infected with HIV, even in the absence of pulmonary involvement [13] (our case was HIV negative).

Laryngoscopic Findings of laryngeal TB may be categorised into four groups; (a) Whitish ulcerative lesion (40.9%) (b) Non specific inflammatory lesion (27.3%) (c) Polypoidal lesion (22.7%) (d) Ulcerofungative lesions (9.1%) [14] (our case had non-specific inflammatory lesion). The vocal cords represent the most common site, followed by the ventricular folds, epiglottis, sub-glottic region and posterior commissure [15]. The possibility of tuberculosis should be suspected when a bilateral and diffuse laryngeal lesion is seen without destruction of laryngeal architecture.

Demonstration of acid-fast bacilli or identification of *Mycobacterium tuberculosis* in the biopsy specimen is the main

modality of diagnosis. However the culture growing *M. Tuberculosis* is the gold standard [16]. Awaiting results of the culture to begin therapy may put the patient in jeopardy, as any unwarranted delay in treatment may result in subglottic stenosis or vocal cord paralysis due to invasion of the recurrent laryngeal nerve or vocal apparatus [15]. Therefore the presentation of either of the former investigations is considered sufficient to begin anti-tuberculosis therapy. An anti-tuberculosis treatment offers a good prognosis, generally curing the disease without any sequel. Most lesions disappear over a 2 months period, as in the present case.

Even though tuberculosis of larynx is a rarity, but it should always be considered among the differentials for dysphonia along with dysphagia mimicking laryngeal cancer especially in India where tuberculosis prevalence is still high.

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