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A Chronic Dysphony Caused by a Bifocal and Pulmonary Laryngeal Tuberculosis

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Abstract

Laryngeal tuberculosis is a rare entity. We consider the case of a woman of 62 who presented a one-year evolving chronic dysphonia chart associated with cough, febricula and general health damage. The nasofibroscopy showed a budding ulcerous lesion of the larynx a priori evoking a granulomatous lesion or cancer. The BAAR spits were strongly positive and the radiographic pictures of the thorax, typically evoked a pulmonary tuberculosis. Seeing the excellent therapeutic response to TB treatment in 4 months period, the bifocal tuberculosis diagnostic was confirmed.

Keywords

Tuberculosis, Dysphonia, Larynx, Lungs

1. Introduction

Tuberculosis (TB) is a contagious disease which is almost exclusively transmitted through aerosolized respiratory secretions [1]. It is characterized by necrosing granulomas which mainly affect the lungs as well as any extrapulmonary site [2] [3]. Localizing Otolaryngology (ORL) tuberculosis represents a few percentages of extra-pulmonary cases [4]. Its signs mainly occur in the form of cervical adenopathies, otitis media, laryngitis, pharyngitis and nasal TB [5]. The occurrence of laryngeal tuberculosis has considerably decreased with the discovery of antituberculous drugs, it represents more or less than 1% of TB cases recently found [3] [6]. It is often associated with a pulmonary disorder [7]. We report a particular

observation on bifocal laryngeal TB and pulmonary TB revealed by chronic dysphonia.

2. Observation

Mrs. A. P. is a patient of 62 who did not have any previous particular pathology with no tuberculous contagion. She had been received in our service for a chronic dysphonia with one-year evolution and a significant weight loss, evening and nocturnal fever and wet cough. The medical examination revealed a health deterioration in general according to WHO's ICD-1, a febricula at 38˚C. The cervical lymph node areas were free. It was difficult to take an indirect laryngoscopy. The nasofibroscopy revealed a budding ulcerous lesion, badly limited, sprinkled with a whitish coating which showed a "dirty unclean aspect" of the larynx. The lesion extended to the vocal chords, ventricles and the basis of the epiglottis (**Figure 1**).

The pleuro-pulmonary examination showed rattling sounds in the right pulmonary area. The other organs showed no particular signs. This chart made us think about a bifocal granulomatous lesion or larynx cancer with a pulmonary metastasis. The Complete Blood Count (CBC) was normal with a haemoglobin rate of 12 g/dL. The retro-viral serology was negative and the blood sugar level was 0.95 g/l. The BAAR test in the spits was highly positive. A frontal chest X-ray has been taken. It showed some widespread parenchymal lesions in the right pulmonary area with typical caves of tuberculosis infection (**Figure 2**).

The patient had been referred to the healthcare centre where she received an antituberculous quadritherapy based on isoniazid 5 mg/kg per day, rifampicin 10 mg/kg per day, pyrazinamide 25 mg/kg per day and ethambutol 20 mg/kg per

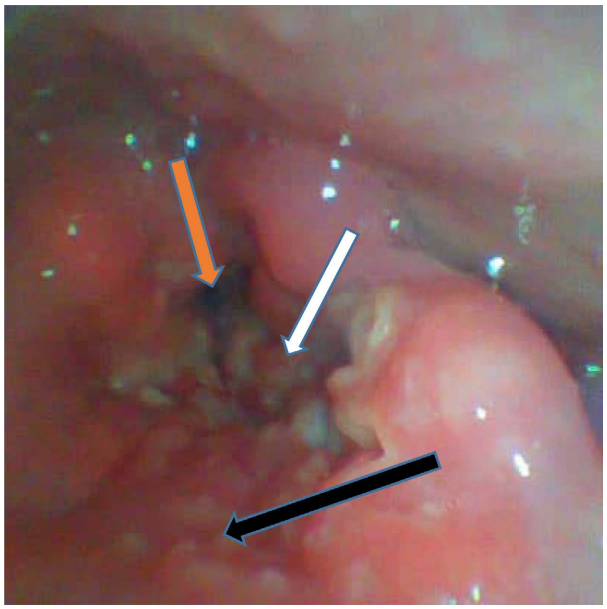

Figure 1. Nasofibroscopic image with a buddingulceration (white arrow), poorlydefined, dottedwithwhitishcoatingsgiving a "dirty, poorlywashed" appearance of the larynx and extended to the vocal cords (redarrow), the ventricles and the epiglottic base (black arrow).

day. After 4 month of treatment, the patient had been examined and it had been noticed that her dysphonia disappeared and the signs of tuberculosis impregnation were recessing. The check-up nasofibroscopy showed a complete disappearance of the lesion with a good bilateral cordal and arytenoid mobility (Figure 3). We

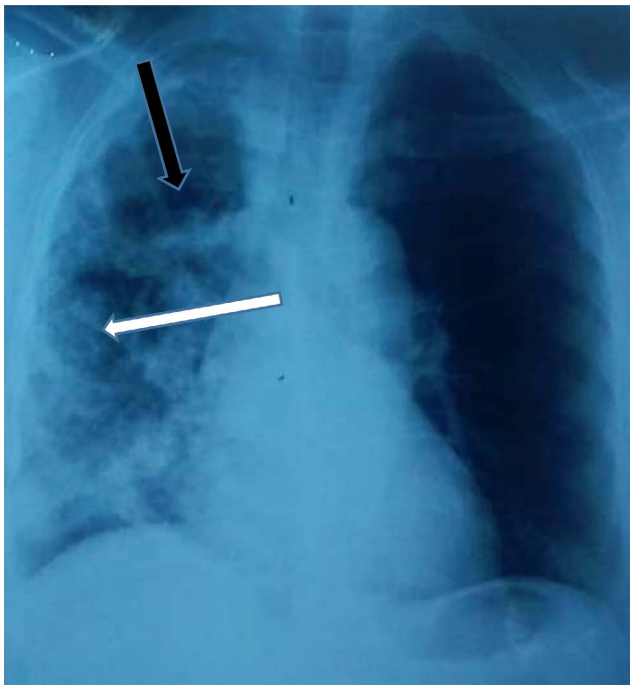

Figure 2. Radiographic image in the form of interstitial and alveolaropacity (white arrow) of the entire right pulmonaryfieldwith an apical recess (black arrow).

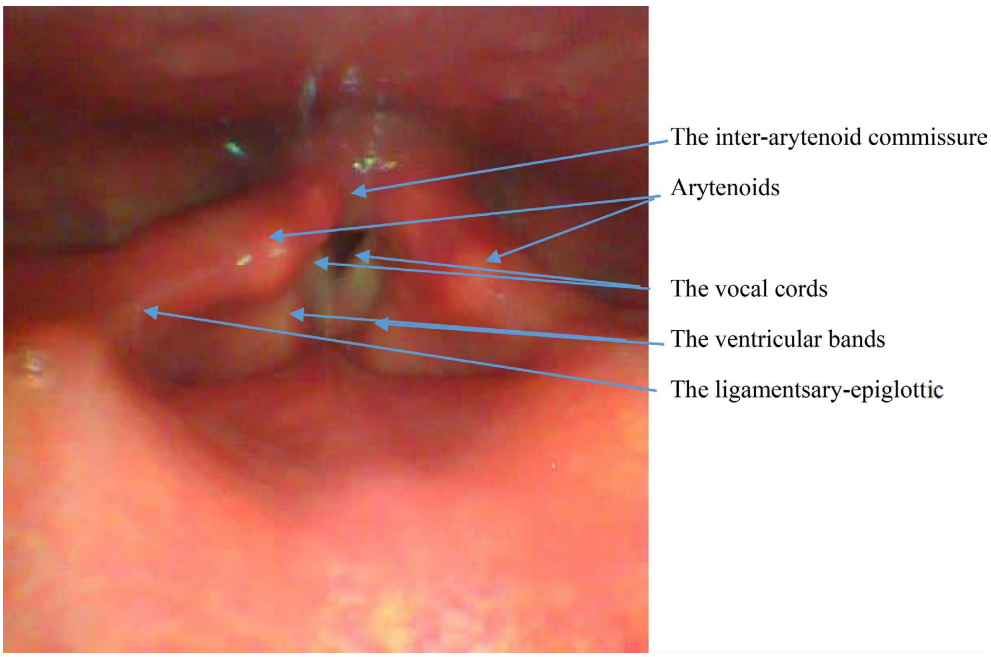

Figure 3. Normal nasofibroscopic control image after 4 months of treatment for laryngealtuberculosis with the arytenoids, the vocal cords, the inter-arytenoid commissure, the ventricularbands and ligamentsary-epiglottic.

found the evolution and prognosis in our patient good but, like any tubercular patient, the risk of relapse was not excluded.

3. Discussion

Laryngeal tuberculosis is rare and represents less than 1% of tuberculous cases [3]. It is mostly associated with lung damage [7]. An active bronco pulmonary tuberculosis is associated with 50% of laryngeal tuberculosis cases whereas only 20% of the patients suffer from laryngeal tuberculosis [8].

We are reporting a case of dysphonia which has revealed an unknown lung involvement. Similar cases had been reported [9] [10]. They all have in common laryngeal cancer as an eliminatory diagnosis. The main risk factor is when the patient is older than 60 years old [11]. The patient in this study is 62 years old and had no medical history of tuberculosis; also there was no notion of tuberculosis contagion.

The transmission mode may have been a direct laryngeal seeding of aerosolized bacilli [12]. But also, an eventual pulmonary tuberculosis during the laryngeal location may be done through a step by step dissemination [13].

The symptomatology of laryngeal tuberculosis is usually a dysphonia, a cough, an odynophagia or painful dysphonia even dyspnoea [11]. Our patient showed dysphonia which was first associated with cough without dysphagia. She did not have any cervical adonopathy. Instead, the latters represent 95.5% of otolaryngological extra-pulmonary tuberculosis locations [4]. As to the change in general health condition, weight loss in particular, it is found in almost the half of the cases [13].

The endoscopic aspects may take many shapes, from the erythematous form or congestive to ulcerous-budding and ulcerous-infiltrating forms that confuse with the granular and malignant pathology [14] [15]. In our patient, the ulcerous-budding form with a dirty aspect, unclean larynx was evocative either of laryngeal tuberculosis, or cancer, or both. This seldom aspect, is classically described in the advanced form of laryngeal tuberculosis [16].

In our rural social context with limited incomes, we prescribed a frontal chest X-ray which shows typical pictures of pulmonary tuberculosis. But cervical thoracic X-ray remains the preferred examination in determining laryngeal tuberculosis [14].

We found it not necessary to make a biopsy of those clear pictures of nasofibroscopy and X-rays. We only made the BAAR test in the patient's spits. According to some authors, a laryngeal biopsy to determine the differential diagnosis of laryngeal cancer must only be considered if the response to tuberculous treatment remains weak during the first weeks [17].

Laryngeal tuberculosis is known as sensible to anti-tuberculous drugs [18]. Therefore, we can see some sequels after the patient has recovered. In case of severe dyspnoea caused by laryngeal obstruction, a tracheotomy may be done. An anti-tuberculous treatment of 6 months can be lengthened to 12 months when it

is associated with pulmonary attack [19]. In fact, in most of the cases, the symptoms start disappearing in few weeks' treatment and the larynx is almost restored to its original state in few months. We obtained a complete regression of the laryngeal lesions in only 4 months treatment.

4. Conclusion

Laryngeal tuberculosis is rare, but it must always be evoked in the case of laryngeal symptomatology associated with tuberculous pulmonary damage. Sometimes, it is difficult to make a differential diagnosis with other damages, notably tumoral and granular damage. A slow evolution and progression are clinically and radiologically characteristic of the disease, which explains why it is difficult to make an early diagnosis. The biological examinations can be negative. But in certain circumstances, the clinical particularities of laryngeal tuberculosis and its quick sensitivity to anti-tuberculous treatment can be enough to make a diagnosis.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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