

Giant Vocal Cord Nodule

S Felek, H Celik, H Pulat, E Tastan

Citation

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Abstract

Tumors, inflammation, allergy, gas inhalation and drugs can cause upper airway obstruction and dyspnea. Vocal cord nodules usually cause hoarseness. They may also cause dyspnea if they grow to larger sizes. Symptoms of vocal cord nodules may be confused with asthma symptoms. In this article, a case of giant vocal cord nodule, which was misdiagnosed as asthma with symptoms mimicking asthma is discussed.

INTRODUCTION

Vocal cord nodules are benign lesions, which are the most common reasons of dysphonia in children and adults. These lesions are also known as singer's nodule or speaker's nodule. These are mostly seen in young female adults and male teenagers. Vocal cord nodule is the most common reason of chronic dysphonia in 38-78 % of all cases₁.

In this paper a rare case of giant vocal cord nodule with respiratory obstruction mimicking asthma was reported with literature review.

CASE REPORT

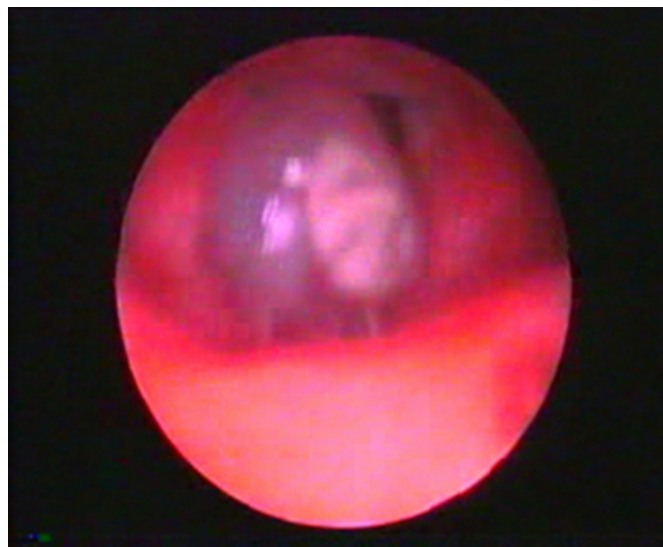
A 36 year-old female patient, complaining of dysphonia and dyspnea, admitted to the hospital. The complaints had been present for one year and had been easily exacerbated with a small effort, resulting in wheezing and cough. She admitted to the emergency room due to same complaints twice. Nine months ago, when she came to the emergency room, asthma was diagnosed and oxygen and steroid treatment (intravenous and inhaler) were given. After this treatment, although the complaints of dyspnea and wheezing recovered partially, there was no change in the severity of dysphonia. The major complaints were dyspnea, dysphonia and wheezing.

In the otorhinolaryngological examination, a mass completely obstructing the laryngeal airway was observed. In videolaryngostroboscopic examination, a mass with vascularized and necrotic fields, that originated from 1/3 of anterior left vocal cord was seen. It was protruding from the subglottic region to the supraglottic region especially during expiration and it was preventing the appearance of

supraglottic region completely (Figure 1).

Figure 1

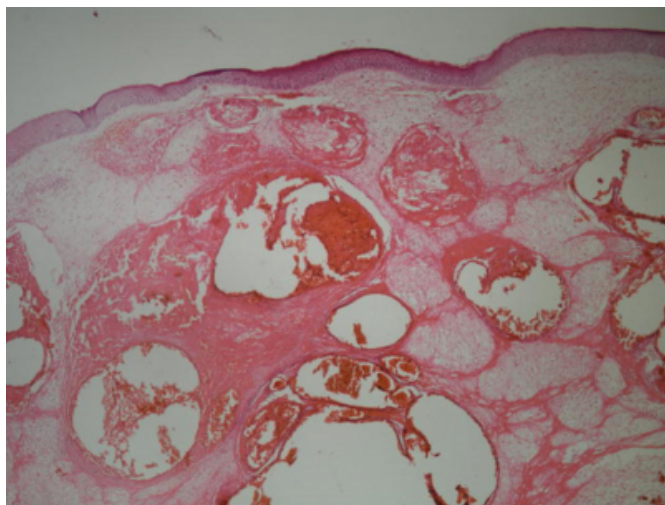
Figure 1: Showing the mass with vascularized and necrotic fields, that originated from 1/3 of anterior left vocal cord



The patient was operated urgently. A right-sided vascularized vocal cord mass, which was not seen during videolaryngostroboscopic examination, because of the larger left-sided mass was also observed. The mass was removed with endolaryngeal approach under general anesthesia and without tracheotomy. All symptoms relieved and respiratory function tests were in normal range in the postoperative period. The result of histopathological examination was reported as a nodule of vocal cord (Figure 2).

Figure 2

Figure 2: Showing congested vessels in the stroma of the lesion surrounded with multilayered squamous epithelium (H&E x40).



DISCUSSION

The etiology of vocal cord nodules is mostly mechanical. Vocal misuse is the major etiological factor in the formation of nodules. This causes mechanical stress and trauma in the junction of anterior and middle thirds of membranous vocal cord. As a result of trauma an injury appears in this field. During healing of this injury, remodeling occurs in lamina propria and epithelium of vocal cord. Remodeling of this tissue results in formation of vocal cord nodules, polyps and cysts⁽²⁾.

Vocal cord nodules have opaque and symmetrical appearance and mostly originate from the junction of anterior and middle thirds of membranous vocal cord. It may be confused with polyps of this region. The final diagnosis depends on the result of pathological specimen.

Vocal cord nodules may cause dysphonia commonly, and also dyspnea rarely. Factors that originate from upper airways, which may cause respiratory problems, such as inflammation, allergy, inhalation of gas, drugs and tumors (laryngeal papillomatosis, vocal cord cysts and granuloma like benign and other malign lesions) should be considered

in the differential diagnosis^(1,3).

Lesions of the upper airways may mimic symptoms of asthma. Inspiratory dyspnea is mostly seen in stenosis of glottis. In some severe cases of expiratory dyspnea, this may also be seen. Laryngeal pathologies may be confused with the symptoms of asthma as in this patient^(3,4,5). Hence, under normal circumstances, vocal cord nodule does not cause dyspnea, this property makes this case unique and special.

According to our patient's thoughts, her complaints of dyspnea and wheezing were insignificant and transient. This caused a delay of admittance to the hospital. This delay in admittance and diagnosis caused overgrowth of the mass. Additionally, when she has admitted to the hospital, the misdiagnosis of asthma was the result of insufficient investigation. Hence, inappropriate treatments were given to the patient. Finally, the nodule has reached to a giant size.

Laryngeal lesions mimicking asthma should be remembered. Detailed etiological investigation should be performed in all similar cases.

CORRESPONDENCE TO

Sevim Aslan FelekM

337. Sokak, 8/19, Karakusunlar, Ankara, TURKEY

Tel: + 90 505 718 66 48

E-mail: saslanfelek@yahoo.com

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Author Information

Sevim Aslan Felek

2nd Clinic of Otolaryngology, SB Training and Research Hospital

Hatice Celik

2nd Clinic of Otolaryngology, SB Training and Research Hospital

Haluk Pulat

Department of Pathology, SB Training and Research Hospital

Eren Tastan

2nd Clinic of Otolaryngology, SB Training and Research Hospital