

CASE REPORT

Vocal cord hemangioma

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Abstract

Hemangiomas of the larynx can be divided in two main forms: infantile and adult. The infantile form is more common in the subglottis and the adult form is usually found at or above the level of the vocal cords. Laryngeal hemangioma of the vocal cord is a very rare condition. We present a case of a 39-year-old female with a large hemangioma of the left vocal cord causing hoarseness and respiratory distress. The lesion was surgically removed successfully at our center.

Keywords: Hemangioma, vocal cord, hoarseness, larynx

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Introduction

Hemangiomas are the most common benign vascular tumors. Two-thirds are found in the head and neck and have a female / male ratio of 3-5:1 [1].

The occurrence in the larynx is very rare and can be divided in two main forms: infantile and adult. The infantile form is more frequent than adult ones, is commonly found in the subglottis and can cause stridor and respiratory distress. They can also coexist with cutaneous hemangiomas. The adult form is infrequent, usually found in the glottis or supraglottis, and the symptoms can vary from being absent or mild forms of hoarseness to severe dyspnea and dysphagia, depending on the size and location of the hemangioma [2,3].

Case report

A 39-year-old female was referred to our emergency room complaining of progressive hoarseness for two years and respiratory distress for the past month. She was an active cigarette smoker but had no history of alcohol use, any preceding infection, past intubation, trauma, voice abuse, reflux symptoms or any other systematic diseases. She had previously done a neck computed tomography (CT) scan revealing a "large polypoid mass, with approximately 10 mm diameter, occupying 50% of the glottic space, originating from the anterior half of the left vocal cord".

The flexible nasopharyngolaryngoscopy showed a movable bulky mass on the left vocal cord extending to the subglottic space (Image 1). The vocal cords were symmetrically mobile. The vocal folds and ary-epiglottic folds were normal as well as other otolaryngologic findings. A provisional diagnosis of a vocal cord polyp was made. The patient was submitted to microlaryngeal surgery under general anesthesia and the examination revealed a pink large pedunculated mass attached to the free edge of the left vocal cord, with its body extending to the subglottis. There was no extension to the anterior commissure or the arytenoids. The stalk of the lesion was isolated and excised completely with a microscissor. The minimal bleed was

controlled with application of cotton balls and local pressure. The postoperative period was uneventful and the patient experienced no further symptoms, with prompt relief from respiratory distress. Voice rest was advised for a fortnight followed by speech therapy.

Histopathological examination of the specimen revealed capillary hemangioma of the vocal cord with vascular structures covered by a layer of non-atypical endothelial cells, with a lumen filled with erythrocytes (Image 2).

At two months after the operation, there was considerable improvement in the voice of the patient and laryngeal examination findings were normal.

Discussion

The occurrence of laryngeal hemangiomas in adults is very rare and generally seen in males. The etiologic factors are thought to be cigarette smoking, vocal abuse, and laryngeal trauma (i.e. intubation). [2,5] The main symptom is hoarseness. Respiratory distress, hemoptysis and dysphagia are usually seen in advanced cases.

The site of origin is variable with most of these lesions appearing at or above the level of the vocal cords. To the best of our knowledge there are only few than 10 cases reported in the literature of hemangiomas originating from the free edge of the vocal cords [2,5-7].

Laryngoscopy is almost always sufficient for the diagnosis of a hemangioma. Other exams, such as CT, magnetic resonance imaging with contrast and angiography are reserved for larger lesions and for patients with respiratory symptoms. Biopsies are usually unnecessary and dangerous, due to the risk of severe bleeding [3,4,9].

Although the patient in this case is a female, she was an active cigarette smoker. She presented with hoarseness and respiratory distress, and the lesion originated from the free edge of the left vocal cord. Since our patient had previously done a neck CT scan, considering the size of the lesion, the exam was important to define its limits and dimensions.

Histopathologically, laryngeal hemangiomas are generally of the cavernous type. According to our search, there are only three cases of capillary hemangiomas described in the literature, similar to the one in our case. These lesions also need to be distinguished pathologically from polypoidal vascular granulation tissue that may arise after laryngeal biopsy, intubation or trauma. [6-10] There is no uniformly accepted treatment of head and neck hemangiomas. The various modalities of therapy are dependent on the age of the patient, the site and size of the lesion, and the hemodynamic pattern of the hemangioma. In adults, smaller hemangiomas can be managed conservatively but larger lesions may require a tracheostomy. Systemic steroids, intralesional steroid injection, laser ablation, interferon, microdebrider, radiation therapy, cryosurgery and surgical excision have all been used [2,6,7].

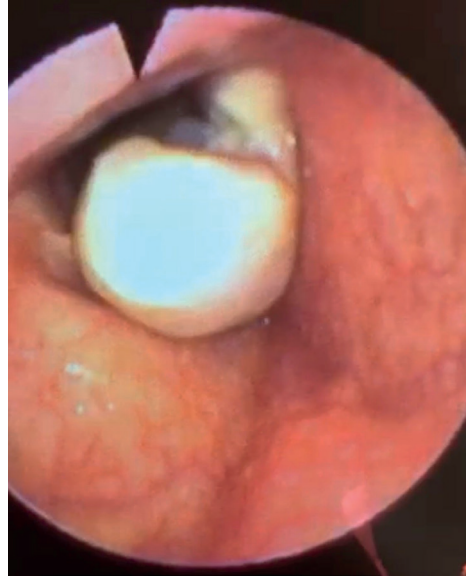


Image 1. Bulky mass on the left vocal cord

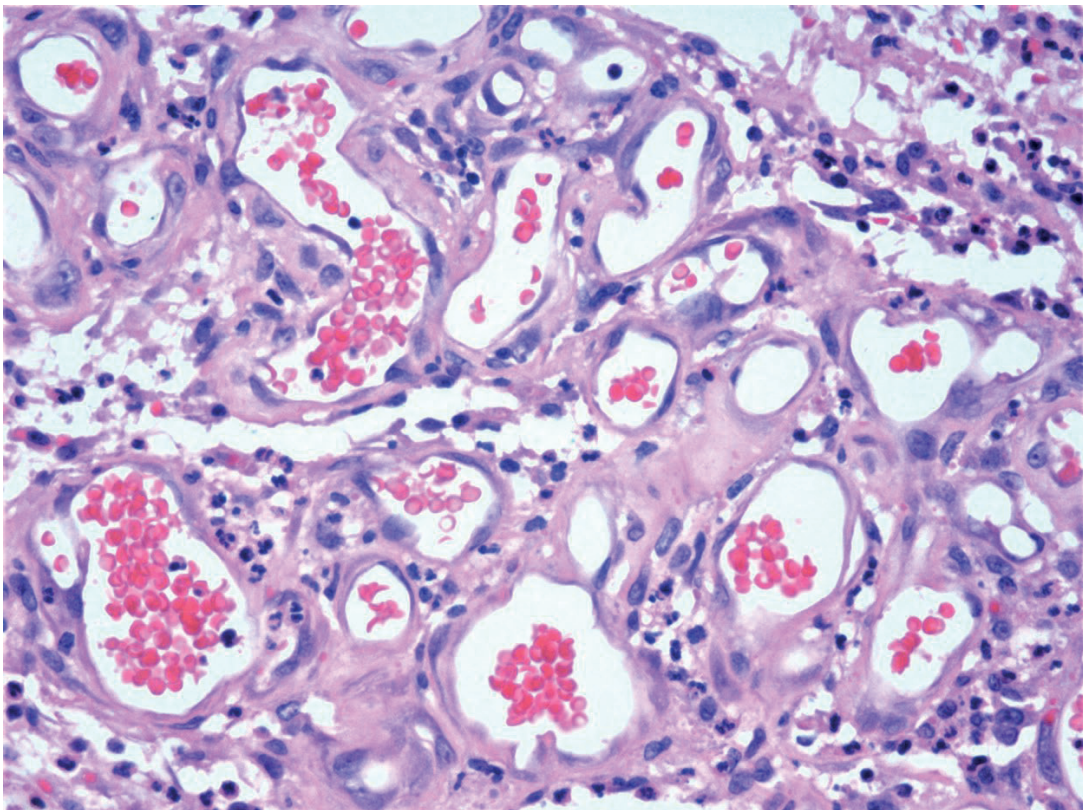


Image 2. Vascular structures covered by a layer of non-atypical endothelial cells, with a lumen filled with erythrocytes

Conclusion

Given the infrequency of vocal cord hemangiomas in adults, these lesions can easily be misdiagnosed as polyps. Also, it is not possible to standardize the diagnostic and therapeutic approach of such rare lesions.

Endoscopy should be meticulous and carefully done considering the possible extension of the lesion to adjacent structures and association with other lesions such as tumors.

Excision of the hemangioma with microlaryngoscopic techniques gives satisfactory results in terms of eradication of the lesion and improvement of voice quality.

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Conflict to interest

We wish to confirm that there are no known conflicts of interest associated with this publication.

Data availability statement

The authors confirm that the data supporting the findings of this study are available within the article and its supplementary material.

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