

Sneezing: a case report of an unusual presentation for vocal cord hemorrhage

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ABSTRACT

Background: Vocal cord hemorrhages are due to the rupture of the blood vessel within the submucosa of the vocal fold. It is common in singers, post upper respiratory tract infections and in patients on anticoagulation. In this case report, we present an unusual presentation of a vocal cord hemorrhage following a sneeze.

Case Report: This paper presents the case of a 34-year-old male who presented with change of the quality of his voice and throat pain following a sneeze. He was found to have right vocal cord hemorrhage on nasoendoscopy and was managed with total voice rest and rehydration. Patient made full recovery following conservative management.

Conclusion: This case report is important as it highlights sneezing as a mechanism of vocal cord hemorrhage. It also shows the importance of having a low index of suspicion for performing nasoendoscopy following voice changes.

Keywords: Case report, vocal fold, hoarseness, odynophagia.

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Background

The patient presented with sneezing and was found to have right vocal cord hemorrhage. This represents an unusual presentation of vocal cord hemorrhage and highlights the importance of investigating the patient's symptoms even when the presentation is atypical.

Case Presentation

A 34-year-old male, non-smoker presented to the emergency department with a 4-day history of throat pain following a sneeze. He had presented 2 days earlier to a different emergency department and was told that he might have to wait for a long time, so he decided to leave at the time. Emergency doctors saw the patient and asked for an otorhinolaryngologist's opinion as this was the patient's second presentation in few days.

Patient was then seen in the otorhinolaryngology department, after a 4-day history of throat pain and a change in the quality of his voice following a sneeze. Further questioning revealed he sneezed with a tightly closed lip thus increasing the pressure in the subglottic region. The patient thought that his voice was deeper and coarser following the incident and he had been having odynophagia when swallowing. He denied having any temperatures or feeling unwell at any stage and reported that this was the first time this has happened to him. The

patient later developed exquisite pain over the midline of his neck. Patient was not on any anticoagulation or antiplatelets and did not suffer from any medical problems.

Examination of the patient's oral cavity and posterior pharyngeal wall did not reveal any abnormality and there were no signs of infection or inflammation. Neck examination did not reveal any lymph nodes but when palpating the trachea at the midline of his neck, the patient was exquisitely tender. Otoscopic examination was normal. A nasoendoscopy was then performed and it showed a vocal fold (VF) hemorrhage along the full length of the right VF (Figure 1). Vocal cords mobility appeared to be normal bilaterally. The patient was advised to have total voice rest and hydration before being discharged. Patient was followed up with a telephone consultation and made a full recovery.

Discussion

Vocal cord hemorrhage mainly presents in professional singers but remains an uncommon presentation overall [1]. Other causes found in the literature are upper respiratory tract infections (URTIs), being on antiplatelets or anticoagulation, blunt trauma to the larynx, chemical irritation secondary to acid reflux or singers with poor oral hygiene due to smoking or alcohol [1]. Some studies have



Figure 1. Patient nasoendoscopy shows unilateral (right sided) vocal cord hemorrhage.

suggested that premenstrual women are at higher risk of developing vocal cord hemorrhage due to hormonal imbalances although reports indicate that both men and women are affected [2,3].

The diagnosis of vocal cord hemorrhage is achieved through a careful history taking looking for sudden voice changes and a triggering event. Triggering events can be singing, screaming, starting anticoagulation or antiplatelets, recent URTI or in our patient's case sneezing [4]. In our case, the patient presented with sudden change in the quality of his voice in addition to odynophagia and tenderness when palpating over the midline of his neck. Examination wise nasoendoscopy is the gold-standard investigation to look for any changes to the vocal cord including vocal cord nodules, paralysis or in our patient's case hemorrhage [1,2,4,5]. If vocal cord hemorrhage was seen, it is important to assess the impact of the hematoma on the mobility of the vocal cord. In our case both vocal cords appeared to have normal mobility.

Vocal cord hematomas are usually treated conservatively. Patients are usually advised to undergo complete voice rest for 7-10 days in addition to increased hydration. If the hemorrhage was caused by new medication (anticoagulant or antiplatelet), it is important to consider stopping the medication and thinking about possible alternatives [2-4]. From a social point of view, it is important to sleep well and reduce alcohol and caffeine intake [4]. For professional singers it is important to use voice warming techniques prior to a performance and cooling techniques following a performance. Surgery can be considered in those with permanent voice changes or recurrent VF hematomas and involves laser ablation of the large vessels in the vocal cord [6]. In the case of our patient, he was

advised voice rest for 2 weeks and increased hydration. Patient made full recovery.

Long-term effects of vocal cord hemorrhage area point of contention. One study [5] comparing a group of patients with VF hemorrhage to a control group with similar occupation and demographics showed that there was no significant difference in the voice quality on the long term. On the other hand, the literature suggests that VF hemorrhage can cause long term changes to the quality of the voice and can be catastrophic if the patient is a professional singer although these studies were not looking specifically at the long-term effect of VF hemorrhage [2-4].

We only know one similar case reported in the literature of a patient that presented following a sneeze and was found to have vocal cord hemorrhage, although the patient was also found to have non-traumatic thyroid cartilage fracture as well [7].

Conclusion

This case report is important as it highlights sneezing as a mechanism of vocal cord hemorrhage. It also shows the importance of having a low index of suspicion for performing nasoendoscopy following voice changes.

What is new?

This case represents an unusual presentation of vocal cord hemorrhage following a sneeze with tight close lips. Patient's main presenting complaint was a noticeable change in the quality of his voice. Nasoendoscopy is the gold standard investigation and revealed a vocal cord hemorrhage in this case. Patient was advised total voice rest and adequate hydration and made complete recovery.

List of Abbreviations

URTI	Upper Respiratory Tract Infection
VF	Vocal Fold

Conflict of interest

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Consent for publication

Written consent for publication was obtained from the patient.

Ethical approval

Ethical approval is not required at our institution to publish an anonymous case report.

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Summary of the case

1	Patient (gender, age)	Male, 34 year old
2	Final diagnosis	VF hemorrhage
3	Symptoms	Changes in his voice, pain in the throat
4	Medications	N/A
5	Clinical procedure	Nasoendoscopy
6	Specialty	Otolaryngology