

# Autopolypectomy of a Vocal Cord Polyp

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## ABSTRACT

### Introduction:

Vocal cord polyps commonly occur in those with a history of vocal abuse. Patients with large lesions generally undergo microlaryngeal surgery under general anaesthesia. This unique case report highlights a strange scenario where the patient coughed out a fleshy mass during his morning walk and which was later confirmed as a vocal cord polyp.

### Case Report

A 62 year old male with a history of hoarseness of voice for 3 months presented to the ENT OPD holding a chunk of tissue which was apparently coughed out by him during his morning walk. After the incident, his symptoms had immediately improved. A videolaryngoscopy showed a congested spot on the right vocal cord being the probable site of origin of the lesion. On Histopathological examination, the tissue was reported as a vocal cord polyp. The patient was managed conservatively but the lesion recurred at the same site after a month for which a microlaryngeal excision was performed.

### Discussion

Vocal cord polyps are fairly common in ENT practice and usually present to the clinic with hoarseness of voice. Polyps that are small are usually managed conservatively by voice therapy alone whereas large polyps require surgical excision. This unique case report highlights a strange clinical scenario where the patient coughed out a large vocal cord polyp (Auto-polypectomy) during a bout of acute cough. This event saved him a surgery at the first instance, but eventually had a recurrence and had to undergo an excision under GA.

### Keywords:

Polyps; Vocal Cords

Vocal fold polyps are characterized by benign soft tissue swelling on medial side of vocal folds and commonly present with hoarseness of voice. They commonly arise at the junction of anterior and middle 1/3rd of the vocal fold and are commonly found in middle aged females and also seen in children due to excessive screaming or shouting.<sup>1</sup> The most common cause is attributed to mucosal injury arising as a result of phonotrauma involving either of mucosal surfaces. These lesions inhibit the vibratory mucosal waves travelling on the vocal fold and hence patients usually present with change in the quality of voice. Depending on the size, patients can also have noisy breathing and intermittent pain. On histopathological examination, a combination of signs of recent bleeding and depositions of fibrin and iron pigment in macrophages is seen almost exclusively

in polyps when compared with other benign lesions.<sup>2</sup>

## Case Report

We report a case of a 62 year old adult male who presented with a chunk of tissue which was apparently coughed out by him during his morning walk and following which the hoarseness immediately improved. He gave a 3 month history of hoarseness of voice for which no prior medical advice was sought. Apart from being a hypertensive on regular medication there was no other significant medical history neither he had history of substance abuse. A Videolaryngoscopy showed a congested spot (raw mucosal area) with no active bleed on the superior surface of anterior 1/3rd of the right vocal cord, being the probable site of the coughed out lesion. (Fig. 1) Both the vocal cords were mobile. General physical examination along with basic laboratory investigations were within normal limits.

The coughed out tissue was sent for histopathological examination. It showed features of hyalinization, fibrinous deposits and congested vessels in the stroma

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of the lesion surrounded with multilayered squamous epithelium and the diagnosis was consistent with vocal cord polyp. (Fig. 2)

As the patient had a raw mucosal surface on the vocal cord with no active bleed, he was managed conservatively with antibiotics, antireflux medications, steam inhalation and voice rest. However, he came back after a month with hoarseness of voice. Videolaryngoscopy was repeated and showed a polypoidal and highly congested lesion on the superior aspect of the right vocal cord (anterior 1/3rd). The lesion was crossing the midline and occupying the anterior commissure. (Fig. 3) Both vocal cords were mobile. Under antibiotic cover, he was posted for microlaryngeal surgical excision (cold steel) under general anaesthesia. The excised lesion was reported as Lobular capillary hemangioma. (Fig. 4) Postoperatively, he was advised antireflux medication, steam inhalation and absolute voice rest for 6 weeks. On follow up after 3 months he is found to be asymptomatic with no recurrence of the lesion.

### Discussion

Vocal cord polyps are fairly common in ENT practice and usually present in individuals with abusive voice behaviors like excessive talking, habitual throat



Fig. 1. Showing area of congestion in anterior 1/3rd of right vocal cord marked in oval (probable site of lesion)

clearing, prolonged and excessive loudness, use of inappropriate pitch and chronic cough. Polyps start after a bout of voice trauma and present to the clinic with hoarseness of voice.<sup>3</sup> Polyps develop at the site of maximum muscular and aerodynamic forces exerted during phonation and are considered a sequelae of phonotrauma.<sup>4</sup> At microscopic level, there is a tear in the lamina propria and epithelium caused by shearing forces during exertion leading to capillary rupture with focal hematoma followed by inflammatory cell infiltration and new matrix formation. Polyp is formed when remodeling in these tissues happen during healing phase. They obstruct flow of mucosal waves causing hoarseness of voice.<sup>5</sup>

Polyps can present unilaterally or bilaterally and can be broad-based or pedunculated. The colour of the lesions vary and can be red, white or translucent. They can also be categorized as hemorrhagic and non-hemorrhagic types. Hemorrhagic are usually found in patient who are on anticoagulant therapy. Non-hemorrhagic polyps are found after voice abuse.<sup>6</sup>

Few investigators have hypothesized hard glottal attacks (HGA) on surfaces of vocal cords to be associated with benign lesions of vocal cords like vocal cord polyps in professional speakers, singers, and nonprofessional speakers.<sup>7</sup>

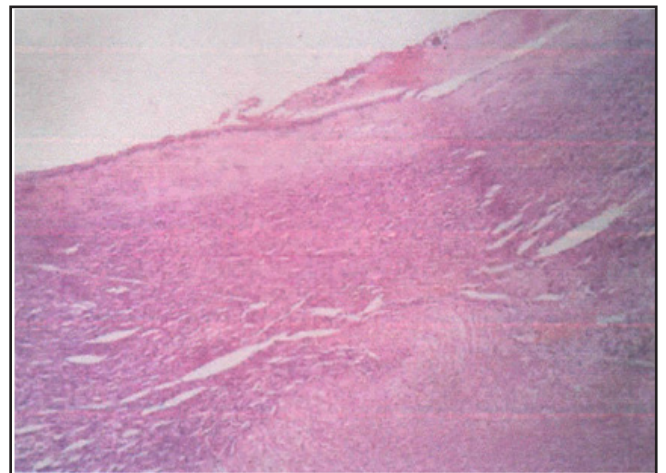
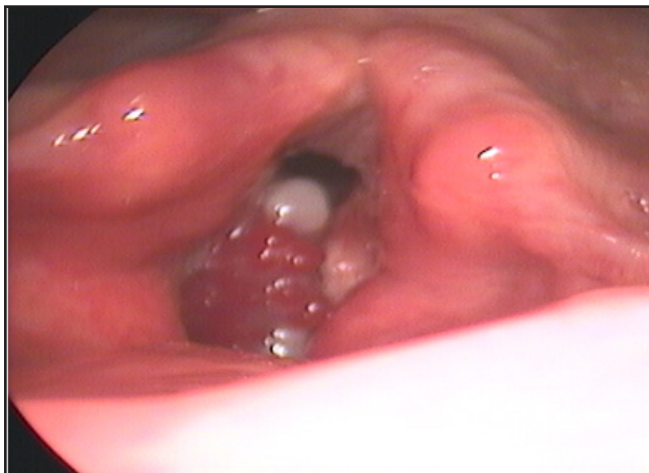
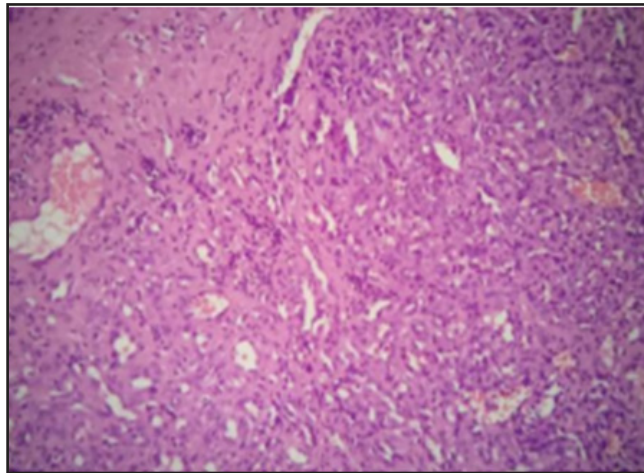


Fig. 2. HPE showing features of hyalinization, fibrinous deposits and congested vessels in the stroma of the lesion surrounded with multilayered squamous epithelium, consistent with vocal cord polyp. (H&E, 40X)



**Fig. 3. Polypoidal, congested mass in anterior 1/3d of vocal cord covering anterior commissure and crossing midline. Vocal cord movements were normal.**



**Fig. 4. HPE showing surface ulceration with fibrinous clots, proliferating capillaries and infiltrating cells suggestive of Lobular Capillary Hemangioma. Negative for malignancy. (H&E, 100X)**

Rarely, patients with large polyps present with inspiratory stridor and dyspnea.

Polyps that are small are usually managed conservatively by voice therapy alone.<sup>8</sup> Large polyps require surgical intervention.<sup>9</sup> Voice rest, management of acid reflux and if possible, to discontinue anticoagulant for hemorrhagic polyps are usually necessary. Pulse diode laser is used to coagulate small hemorrhagic polyps.<sup>10</sup>

Our patient miraculously had an auto-polypectomy during a bout of acute cough. This was confirmed on videolaryngoscopy findings and HPE report of the coughed out lesion. However, the lesion recurred after a month for which he had to undergo a microlaryngeal excision under GA.

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