

A Vallecular Cyst as a Cause of Hemoptysis in an Adult

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ABSTRACT

A vallecular cyst although rare but well-documented clinical entity. This case report presents a case of vallecular cyst in a 26-year-old male patient who presented to us with history of spontaneous onset hemoptysis for 9 days along with voice change and dysphagia for 15 days.

Keywords: A vallecular cyst, Hemoptysis, Dysphagia, Voice change.

CASE REPORT

A 26-year-old male patient came with complaints of history of hemoptysis since 9 days which was spontaneous in onset, minimal in amount 1 to 2 episodes per day in the form of streaks of blood mixed with whitish mucous, stopped spontaneously. There was history of hoarseness of voice since 15 days. There was also history of dysphagia (solids > liquids) since 15 days. There was neither history of dyspnea nor stridor. There was no history of mouth breathing neither that of snoring.

Examination of oral cavity revealed no abnormality. Indirect laryngoscopy revealed 2 × 2 cm sized cystic swelling in the left vallecula extending onto lingual surface of epiglottis. Right-sided vallecula, bilateral pyriform fossae were clear. Bilateral vocal cords were mobile. There was no evidence of any other swelling detected on indirect laryngoscopy. On examination of neck revealed no significant lymphadenopathy, laryngeal crackle was present. Ear and nose examination did not reveal any abnormality.

Patient was investigated subsequently. On CT scan head and neck there was a fairly well-defined cystic attenuation lesion measuring approximately 1.4 × 1.2 × 1.1 cm in maximum dimensions situated in the left vallecula along the lingual surface (Figs 1 and 2). Rest of the laryngeal structures appeared normal. On sputum examination for acid-fast bacilli (AFB) was negative.

Patient was worked up for excision of vallecular cyst. Under general anesthesia, laryngoscopy confirmed the findings mentioned above (Fig. 3). The cyst was attached firmly to the base of tongue and to epiglottis. It was fluctuant and transilluminant. Using a large gauge needle aspiration of thick yellowish fluid and decompression of the cyst was performed to facilitate excision. Cyst was excised completely by using Eve's tonsillar snare. Specimen was subjected for histopathology.

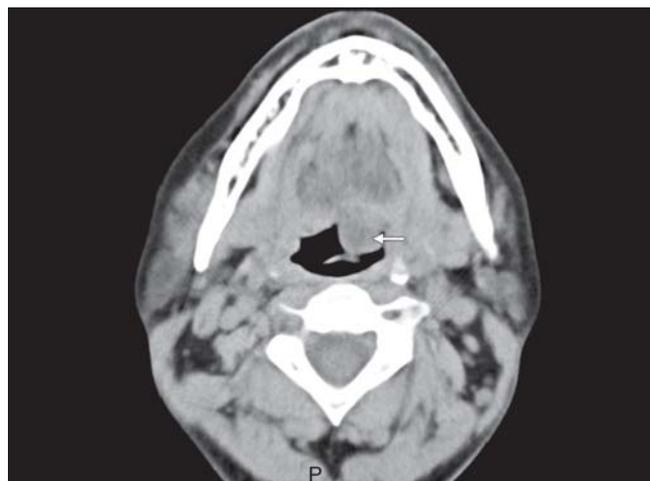


Fig. 1: Radiological appearance of left vallecular cyst as pointed out by an arrow (CT scan with nonionic contrast, lesion is nonenhancing, slice thickness 5 mm)

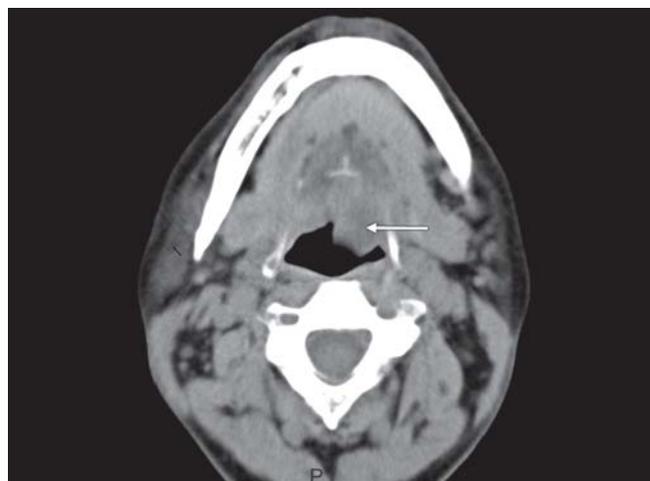


Fig. 2: CT scan of head and neck showing well-defined cystic lesion in left vallecula (CT scan with nonionic contrast, lesion is nonenhancing, slice thickness 5 mm)

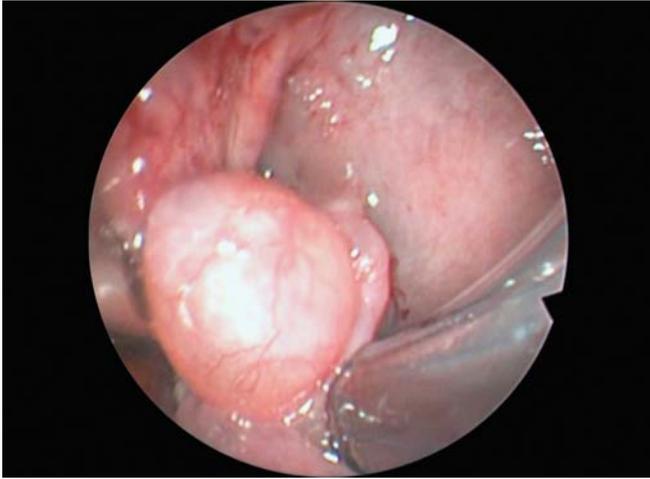


Fig. 3: Clinical picture of left vallecular cyst as seen on direct laryngoscopy

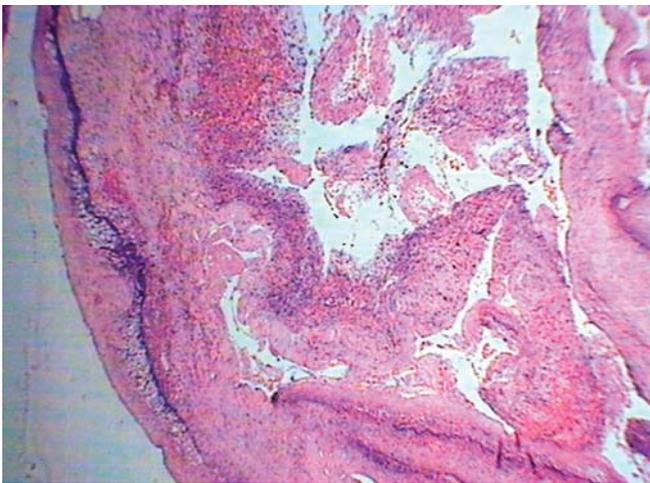


Fig. 4: Histological appearance of vallecular cyst showing stratified squamous epithelial lining and connective tissue showed inflammatory infiltrate mainly lymphocytes, few neutrophils and hemorrhage at some areas (H & E staining magnification 10x)

Histopathological examination revealed that the vallecular lesion had stratified squamous epithelial lining and connective tissue showed inflammatory infiltrate mainly lymphocytes, few neutrophils and hemorrhage at some areas. Findings were consistent with the cyst wall. There was no evidence of malignancy (Fig. 4).

DISCUSSION

Laryngeal cysts are rare lesions representing 5% of all benign laryngeal lesions. Approximately, 10.5% of laryngeal cysts occur in vallecular space.^{1,2} Other synonyms of the vallecular cyst being mucous retention cyst, preepiglottic cyst, epiglottic cyst, base of tongue cyst and ductal cyst.³ Vallecular cysts are more common in adults, in 5th and 6th decade of life.⁴ Several classification systems and theories concerning the etiology of laryngeal cysts were suggested. First classification was by Myerson who separated laryngeal cysts into four types: Retention, congenital, traumatic and

lymph or blood cysts.⁵ However, the most popular classification was by DeSanto as he classified laryngeal cysts into ductal cysts which account for 75% of laryngeal cysts and saccular cysts which account for 25% of laryngeal cysts.⁴ Ductal cysts were the result of submucous gland obstruction and subsequent fluid retention and were mostly found at the vallecula. On the contrary, saccular cysts were due to obstruction of the saccular orifice in the laryngeal ventricle.⁴ Newman et al gave classification based on histological diagnosis, while Arens et al used histomorphology and location to classify laryngeal cysts.^{1,5} Presenting symptoms vary depending upon its size, amount of airway obstruction as well as age of the patient. In infants respiratory stridor and dyspnea are noted, whereas in older children feeding difficulties and failure to thrive are the most common symptoms.³ In adults they tend to be asymptomatic, discovered during ENT examination or by anesthetist during intubation.⁴ Symptomatic adults present with hoarseness, throat pain, foreign body sensation and dysphagia.^{1,2} Rarely, laryngeal cyst can present as sudden death in an adult. Hemoptysis is unusual symptom in laryngeal cyst.^{6,7} So far, only two cases have been reported in literature.^{6,7} Secondary infection of vallecular cyst could lead to such a presentation and may progress to epiglottitis and epiglottic abscess.^{6,7} *Streptococcus pneumoniae*, beta hemolytic streptococci and staphylococci are most prevalent in these cases; however, laryngeal malignancies have to be ruled out in these cases.^{2,6,7}

CT scan or MRI airway localizes the lesion, shows its extent and can differentiate fluid-filled cysts from air-filled laryngoceles.³ Thyroid scan is also advisable to exclude the possibility of an ectopic thyroid. However, definitive diagnosis involves direct visualization of the lesion by laryngoscopy.³

Treatment modalities include endoscopic excision, marsupialization, deroofing with or without a CO₂ laser.⁶⁻⁸ Also removal of cyst by using Eve's tonsillar snare has been described.⁸ Among the various modalities available, removal of cyst by using Eve's tonsillar snare proved to be safe, free of complications with no recurrence after 2 months in present case and the patient had an uneventful recovery.

CONCLUSION

Although laryngeal cysts are rare lesions, they should be considered as a cause in any patient presenting with airway complaints or voice changes. Hemoptysis seen in this case is a very rare presentation of a laryngeal cyst; reported only twice in the literature^{6,7} which may indicate cyst infection or malignancy which should be excluded and dealt appropriately.

ACKNOWLEDGMENTS

We would like to thank Dr AK Vyas, Medical Director, Jagjivan Ram Hospital, for allowing us to publish this case

report and special thanks to Dr Uma Natraj, Sr DMO ENT, Jagjivan Ram Hospital for her support.

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