

A RARE CASE REPORT OF EXTERNAL LARYNGOCELE IN FARMER

Dr. Nina M. Shah	Associate Professor & HOU, Department of General Surgery, B.J. Medical College, Civil Hospital, Ahmedabad.
Dr. Sandip Lukhi*	3 rd Year Resident, Department of General Surgery, B.J. Medical College, Civil Hospital, Ahmedabad. *Corresponding Author
Dr. Siddharth Tanti	1 st Year Resident, Department of General Surgery, B.J. Medical College, Civil Hospital, Ahmedabad.
Dr. Hiral C. Chauhan	Assistant Professor, Department of General Surgery, B.J. Medical College, Civil Hospital, Ahmedabad.

KEYWORDS :

INTRODUCTION

Laryngocele is a cystic dilatation of the saccule of the larynx and it is generally filled with air. If communication between the cyst and the laryngeal lumen is occluded, fluid may accumulate within the sac. A mucous retention cyst may also arise from the mucus gland of the saccule of the larynx, in which case it is filled only with mucus and not air and is called a saccular cyst. The incidence of laryngocele is 1 in 2.5 million population, hence it is rare. Usually, males between 50 and 60 years of age are affected. Since a laryngocele is mainly seen among glass blowers and trumpet players, an increase in intraluminal laryngeal pressure has been postulated as a possible mechanism. However, in the elderly, an underlying laryngeal carcinoma needs to be excluded. This case is unique in that the patient was neither a glass blower nor a trumpet player. Besides, the excised specimen showed no evidence of malignancy.

Case Report

This is a case report of a 80-year-old farmer male who presented with the complaints of painless swelling in the upper left side of the neck for the past 1 year. It used to increase in size during coughing and straining. Patient had past history of pulmonary Koch's for that complete AKT taken. He is chronic bidi smoker.

Examination revealed a compressible swelling measuring 7 × 5 cm in the left anterior triangle of neck with normal overlying skin. It was non-tender, soft, cystic, fluctuant and mobile. The swelling increased in size on coughing and on Valsalva maneuver. Indirect laryngoscopy was normal [Figure 1].



Figure 1: Laryngocele on neck examination

Soft-tissue radiograph of neck (antero-posterior view) revealed an air-filled sac suggestive of external laryngocele [Figure 2].

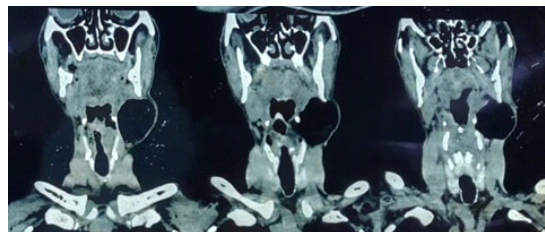
Figure 2: External laryngocele on X-ray
CECT of neck confirmed the diagnosis following which the patient was taken up for excision of laryngocele. [Figure 3].

Figure 3: External laryngocele on CECT neck

PROCEDURE

Under general anesthesia with endotracheal intubation and aseptic precautions, a horizontal skin crease incision was made over the swelling. After raising skin flaps and dissecting soft-tissues, the laryngocele was identified, separated from surrounding tissues and mobilized up to its neck as far as the thyrohyoid membrane. The neck was transected after securing it with a transfixation suture to reduce the risk of recurrence. The skin was closed in layers after placing a drain. The post-operative period was uneventful and sutures were removed after 7 days. Histopathologic examination confirmed laryngocele and excluded malignancy [Figure 4] and [Figure 5].

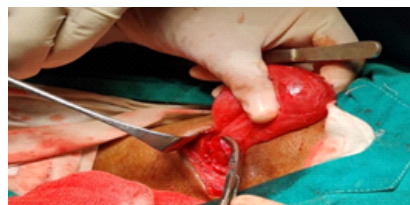
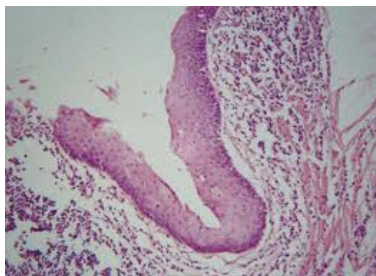


Figure 4: dissected fundus and neck.**Figure 5: transfixed and cut end of neck.****Figure 6: confirmed by histopathology.**

DISCUSSION

A congenital laryngocele, which causes respiratory distress in new borns, may be the result of a large ventricular appendix. An acquired laryngocele may develop as a result of an increase in intra-glottic pressure, such as that caused by excessive coughing, playing a wind instrument, glass blowing and after performing Valsalva maneuver, or using ventricular phonation during speech.

Laryngoceles may extend internally into the airway or externally through the thyrohyoid membrane and they are termed internal if medial to the thyroid cartilage, or external if lateral to it. As the laryngocele expands and escapes laterally across the thyroid cartilage, the air-filled communication may become tenuous, even though pressure changes may still be transmitted through it; this accounts for the presence of a cough impulse and also increase in size with Valsalva maneuver. Depending on the size and duration, the swelling may present as internal, external or combined (mixed) internal and external laryngocele.

The common presenting symptoms of internal or mixed laryngoceles are globus sensation, sore throat, cough, pain, snoring, increasing stridor, hoarseness, airway obstruction if the lesion is large, or in case of external laryngoceles, a visible or palpable mass in the neck. Laryngoscopic examination may reveal a globular swelling in the laryngeal lumen or a submucosal fullness, but may miss the internal component of a mixed laryngocele if it is small and also due to rapid deflation and inflation.

While it is often difficult to establish if a laryngeal cyst is congenital or acquired, a laryngocele must be differentiated from other laryngeal cysts, of which the true cysts may be classified as epithelial, oncocytic and tonsillar. Epithelial cysts are the most common and include saccular cysts, whereas tonsillar cysts are mostly found in the region of the vallecula, epiglottis or pyriform sinus and bear resemblance to lympho-epithelial cysts of the oral cavity. Oncocytic cysts are more common in the ventricle, are seen predominantly in the elderly, may be multiple in number, have higher rates of recurrence and generally behave like benign neoplasms, though the jury is still out on whether the oncocytic cells containing hypertrophied deeply eosinophilic mitochondria are the result of degeneration or neoplastic change.

A laryngocele may coexist with other laryngeal diseases like

recurrent respiratory papillomatosis, amyloidosis, rheumatoid arthritis, etc., and must not only be differentiated from, but may also be co-existent with, oncocytic cysts.

Computed tomography scan is the most accurate imaging method in defining spatial relationships between the laryngocele and laryngeal structures and extra-laryngeal soft-tissues, in differentiating the laryngocele from other cystic formations and in identifying the coexistence of a laryngeal malignancy. Management includes observation, endoscopic resection, or resection through an external approach.

Marsupialization using CO₂ laser, may be done through an endolaryngeal, endoscopic or microscopic approach for internal or mixed laryngoceles.

The external cervical approach, with or without tracheotomy, may be employed for mixed and external laryngoceles. The neck, in case of an external laryngocele sac, should be dissected carefully in order to prevent damage to the neurovascular bundle which penetrates the thyrohyoid membrane at the site of exit of the external laryngocele.

CONCLUSION

Though rare, laryngocele should be considered in any patient presenting with a compressible neck swelling, even in the absence of known risk factors or associations. Repeated and thorough laryngoscopic examination must be carried out to determine whether the laryngocele is internal, external or mixed so that appropriate treatment can be instituted.

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