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External Laryngocele – A Rare Case Report

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Abstract

A Laryngocele is a rare condition characterised by the abnormal dilatations which develop from the laryngeal saccule of the ventricle of Morgagni. They may be congenital or acquired. This is a case report of a 54 year old male patient who presented with a change of voice and swelling on the left side of neck. Through clinical evaluation, imaging studies and surgical intervention, the diagnosis and successful management of Laryngocele were achieved.

Keywords: Laryngocele,Laryngeal saccule, Valsava's maneuver

Introduction

Laryngocele is an uncommon benign condition with an incidence of 151 per 2.5 million patients per year1. It is an abnormal dilatation of the laryngeal saccule which is air filled and communicates with the laryngeal lumen. Laryngeal saccules are small, blind outpouches, lined by pseudostratified columnar epithelium arising from anterior aspect of the laryngeal ventricle, lateral to the vestibular folds2. Usually patients are asymptomatic but, if symptomatic, then presents as a change of voice, cough, swelling in neck and if large, obstruction to airway.

Herein, we present the case of a 55-years-old male patient diagnosed with an External Laryngocele who underwent successful surgical management.

Case Report

A 54-years-old male patient presented to ENT OPD with 8 months history of unilateral swelling in left neck and change of voice. The swelling was insidious in onset and progressive in nature.

On clinical examination, the swelling was soft and seemed small , but after eliciting Valsava's manoeuver, a non tender, reducible swelling measuring 4* 2 cm was observed. Cough impulse was present and a hissing and gurgling sound was produced on compression of the swelling (Bryce sign). The patient was a moderate smoker. There was no history of fever, chronic cough, weight loss, night sweats, trauma, dyspnea or dysphagia. There was no history suggestive of Diabetes mellitus, Hypertension, Tuberculosis or any surgeries undergone in the past. FNAC was done which showed presence of scattered squamous epithelial cells and occasional lymphoid cells along with few macrophages. A provisional diagnosis of benign laryngeal cyst/ Laryngocele was given.

Furthermore, CT scan revealed well defined , thin walled , fluid or air filled cystic lesions passing through the thyrohyoid membrane , extending

superiorly into the paralaryngeal space confirming the diagnosis as Laryngocele.

The patient was scheduled for Excision of Laryngocele under GA . The procedure involved an external transcervical approach . Under General anaesthesia, a horizontal incision was made in the left neck region and the skin flaps were raised. The cystic mass was identified and carefully dissected free from surrounding tissues. An endoscope was used intraoperatively to ensure complete removal of the laryngocele. The communication between the cyst and the laryngeal ventricle was sealed. The wound was closed with sutures . The excised mass was sent for histopathological examination which confirmed the presence of a laryngocele lined by columnar lined epithelium with focal squamous metaplasia [Figure 4 A&B]. Subepithelium showed presence of lymphoid cells, occasional plasma cells and few histiocytes. No atypia or dysplasia was noted in sections examined.

Surgery was uneventful and postoperatively patient was stable with no symptoms. The patient was discharged in good condition and instructed to follow up with regular laryngeal examinations. Follow-up laryngoscopy showed resolution of the laryngocele with no evidence of recurrence. The patient reported complete resolution of neck discomfort.

Discussion

Laryngocele is a relatively rare condition involving the abnormal dilatation of the laryngeal saccule, a small pouch-like structure within the larynx. This condition can lead to various symptoms and complications, and its management can involve medical or surgical interventions.

Laryngoceles can be categorised into Internal, External and Mixed. Internal Laryngocele occurs when the saccule becomes dilated and extends into the laryngeal lumen3. It can obstruct the airway and lead to respiratory issues or voice changes. In External Laryngocele the dilatation of the saccule extends externally into the neck through the thyroid membrane, creating a visible swelling4. External laryngoceles are more likely to present with visible symptoms. Mixed Laryngocele includes both types.

The exact cause of laryngocele development is not always clear, but it's often associated with chronic irritation or increased pressure within the larynx5. Risk factors may include chronic coughing, excessive vocal strain, or certain occupational exposures. It is more commonly seen in trumpet blowers , glass blowers and musicians6 .

The symptoms of Laryngocele can vary depending on the type and size of the Laryngocele. Common symptoms include change in voice, throat discomfort ,coughing and difficulty in breathing, particularly in cases of Internal laryngocele7 . Visible swelling is more commonly seen in the neck in External laryngocele.

Diagnosis typically involves a combination of a medical history review, physical examination, and imaging studies. Laryngoscopy, CT scans, or MRI may be used to confirm the presence of a laryngocele and assess its size and location.

The management of Laryngocele depends on its type and severity . Small, asymptomatic laryngoceles may be monitored without immediate intervention.

Voice therapy may be recommended to reduce strain on the larynx8.

Surgical removal of the laryngocele may be necessary if it causes significant symptoms, airway obstruction, or if it's an external laryngocele causing cosmetic concerns9.

If left untreated, laryngoceles can lead to complications such as recurrent respiratory infections, aspiration of secretions into the laryngocele, or voice problems that affect one's quality of life10.

The prognosis for individuals with laryngocele is generally good, especially when promptly diagnosed and appropriately managed. Surgery, if required, can provide relief from symptoms and prevent complications.

Conclusion

This case report highlights the importance of considering External Laryngocele as a differential diagnosis in patients presenting with neck swelling and hoarseness. Timely diagnosis and surgical management can lead to favourable outcomes and resolution of symptoms in these rare cases.

This report contributes to the limited body of literature on External Laryngoceles, emphasising the importance of a multidisciplinary approach involving Otolaryngologists and Radiologists in the evaluation

Volume 7, Issue 2; March-April 2024; Page No 107-111

and management of these uncommon lesions. Further research and documentation of such cases are essential to enhance our understanding of this rare clinical entity.

Patient Consent

Written Informed Consent was obtained from the patient in study.

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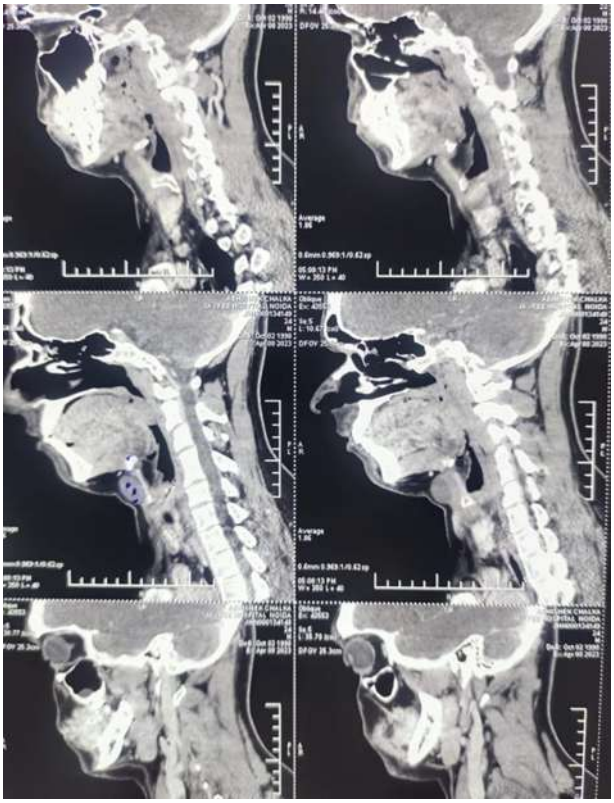
Figures With Legends

OBVIOUS SWELLING LEFT SIDE OF NECK ON VALSALVA

Volume 7, Issue 2; March-April 2024; Page No 107-111

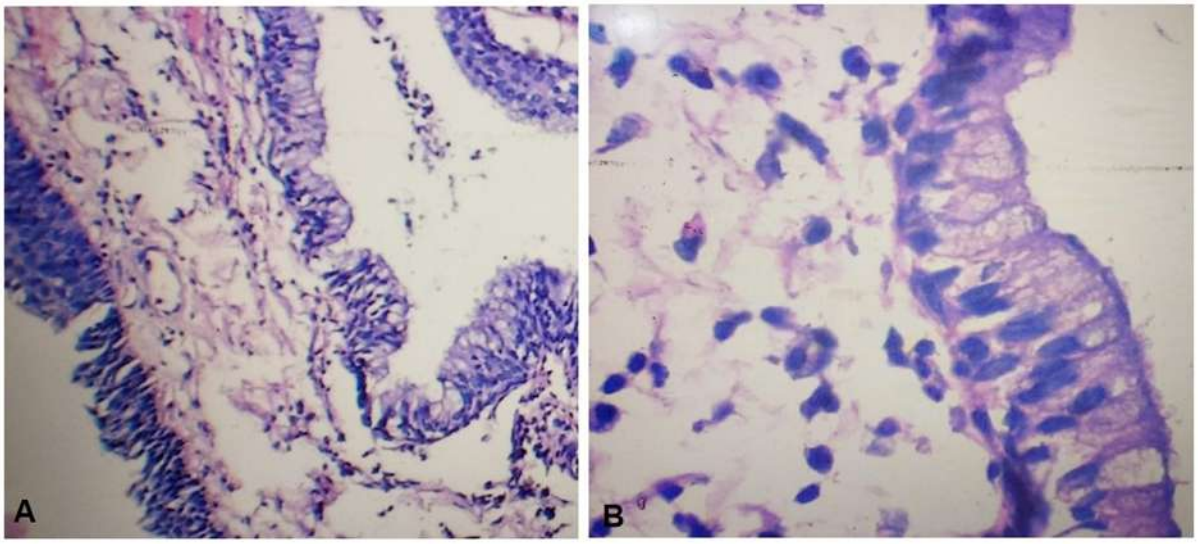
CT SCAN SHOWING EXTERNAL LARYNGOCELE



EXCISED SPECIMEN OF EXTERNAL LARYNGOCELE

Volume 7, Issue 2; March-April 2024; Page No 107-111

SECTIONS SHOW CYSTIC CAVITY LINED BY COLUMNAR LINED EPITHELIUM WITH APICALLY PLACED NUCLEI AND VACUOLATED CYTOPLASM [H&E- A-20X, B-40X].



Volume 7, Issue 2; March-April 2024; Page No 107-111