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Case Report

Coblator-assisted excision of a large vallecular cyst in an adult: a case report

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ABSTRACT

Vallecular cysts are rare, mucus-retention cysts located at the base of the tongue or lingual surface of the epiglottis. While often asymptomatic in adults, large cysts may lead to dysphagia and voice changes. Authors report a case of a 30-year-old male who presented with progressive dysphagia and voice change. Flexible laryngoscopy and contrast-enhanced CT revealed a large vallecular cyst extending from the base of the tongue to the epiglottis. The cyst was excised completely using a co-ablator in an atraumatic manner. The procedure was uneventful, and the patient was discharged the following day. Vallecular cysts in adults may present with vague symptoms. Co-ablator-assisted excision offers a safe, effective, and minimally traumatic method for complete cyst removal with good outcomes.

Keywords: Vallecular cyst, Co-ablator, Base of tongue cyst, Adult dysphagia, Laryngoscopy, epiglottic cyst

INTRODUCTION

Vallecular cysts also referred to as epiglottic mucous retention cysts or base of tongue cysts are ductal cysts that arise from mucus retention due to obstruction of the submucosal glands at the tongue base.[1] They are rare in adults and often asymptomatic or associated with minor symptoms such as voice changes or foreign body sensation.[1,2] In contrast, in neonates and infants, they may cause stridor or respiratory distress due to the relatively small airway.[3] Histologically, vallecular cysts are lined by ductal rather than acinar cells, supporting the theory that they are dilated ducts rather than true glandular enlargements.[4] Asymptomatic cases may be managed conservatively, while symptomatic lesions warrant intervention. Surgical options include aspiration, marsupialization, surgical excision, or laser ablation.[5,6] We report a unique case of a large vallecular cyst in an adult successfully excised using a co-ablator, with minimal trauma and rapid recovery.

CASE REPORT

A 30-year-old male presented to the ENT outpatient department with complaints of intermittent difficulty in swallowing for the past three months, along with a progressive change in voice. Symptoms were insidious in onset and had worsened over recent weeks, especially the hoarseness. Hopkins Laryngoscopy revealed a brownish cystic lesion originating from the base of the tongue, extending over the lingual surface of the epiglottis and into the vallecula. A contrast-enhanced computed tomography (CT) scan of the neck confirmed a well-defined cystic lesion in the vallecular region, consistent with a vallecular cyst. The patient was evaluated preoperatively and scheduled for surgical excision. Endotracheal intubation was performed under direct visualization without difficulty. A rigid laryngoscope was introduced, and the cyst was visualized under the operating microscope. It extended from the base of the tongue to the lingual surface of the epiglottis and laterally into the vallecula (Figure 1). Using atraumatic forceps, the cyst was grasped, and dissection was carried out using a co-ablator (Figure 2). The dissection began at the base of the tongue, proceeded through the vallecula, and finally included the attachment at the epiglottis. During dissection, a small rupture in the cyst wall led to the release of a small quantity of thick, straw-colored fluid, which was suctioned. The cyst was completely excised and removed in toto. The specimen was sent for

histopathological examination. Hemostasis was confirmed (Figure 3), and the procedure was completed without complications. The patient was monitored postoperatively and discharged the following day in stable condition.

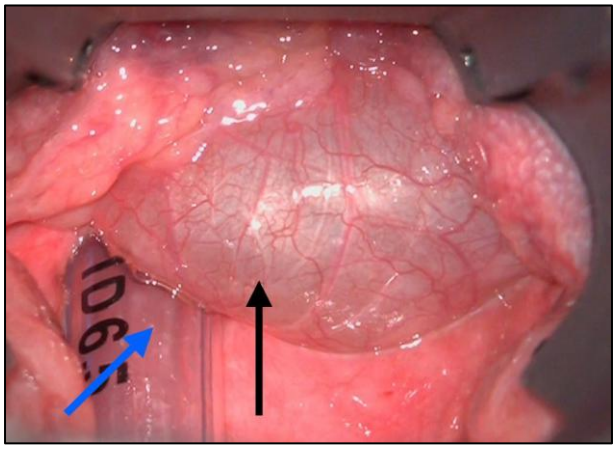

Figure 1: Microscopic view of vallecular cyst, black arrow-vallecular cyst, (Blue Arrow-Endotracheal tube).

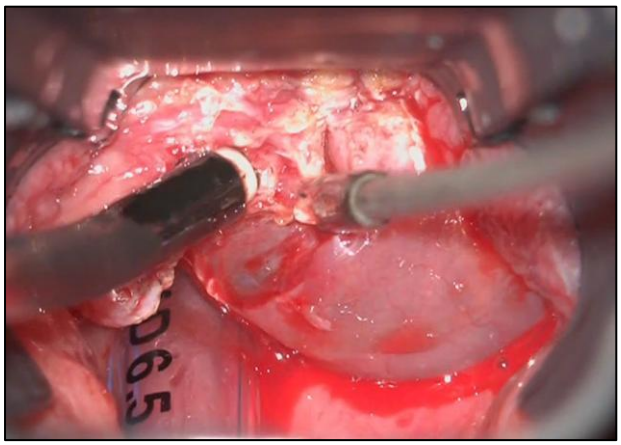

Figure 2: Intraop use of laryngeal wand of coblator and cyst reduction.

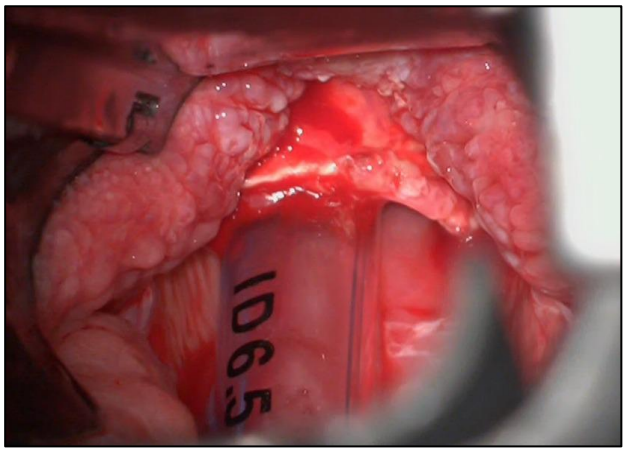

Figure 3: After removal of vallecular cyst.

DISCUSSION

Vallecular cyst although rare is a potentially life-threatening condition causing sudden airway obstruction by its location.[7] The term ductal cyst originates from the classification of DeSanto et al in which they grouped laryngeal cysts according to their location and surface mucosa.[3] Newman classified laryngeal cysts as epithelial, tonsillar, and oncolytic cysts.[8]

Vallecular cysts are uncommon in adults and usually present with nonspecific symptoms such as foreign body sensation, dysphagia, or voice change. Due to their location and potential size, they may obstruct the laryngeal inlet and pose a significant risk during airway management, especially during anesthesia induction. Options for removal of the cysts include wait and watch, cyst aspiration, marsupialization, debulking with a snare, CO_2 Laser, and use of a microdebrider.[5,6]

In this case, although the cyst was large, it did not cause airway compromise, and intubation was achieved smoothly. The use of a co-ablator allowed for precise and minimally traumatic dissection, reducing thermal damage and bleeding, and preserving surrounding tissue. The co-ablator works by combining radiofrequency energy with saline irrigation, providing controlled tissue dissection and coagulation. This technique is particularly useful in the oropharyngeal and laryngeal regions where delicate structures are involved. Complete excision is essential to prevent recurrence, which is more likely with simple aspiration or incomplete marsupialization. Histopathology typically shows a cyst lined by respiratory or squamous epithelium, supporting its origin from mucus retention rather than glandular hyperplasia.

CONCLUSION

Vallecular cysts, though rare in adults, should be considered in patients presenting with dysphagia or voice changes. Co-ablator-assisted excision is an effective and safe method for complete removal with minimal tissue trauma. Early recognition and appropriate surgical management can lead to excellent outcomes.

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