



Case Report

Management of Lymphoepithelial Cyst of Vallecule by Coblator, a Case Report and Literature Review

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Abstract

Introduction: Lymphoepithelial cyst (LEC) of vallecule is an uncommon benign lesion. Cysts in vallecule can present with odynophagia, dysphagia, dysphonia and stridor. Many times, they can be asymptomatic. They can pose difficulty in intubation. On endoscopic evaluation it may mimic the appearance of a lipoma because of its yellowish appearance. Management of this requires adequate visualization and instrumentation. It can be done under endoscopic guidance or laryngoscopy by using cold steel method or laser or coblator. Because of rarity of the lesion, case has been reported. **Case report:** A 54-year-old male presented with odynophagia. An upper gastrointestinal endoscopy done by gastroenterologist revealed a mass in left vallecule and was then referred to otorhinolaryngologist. Excision was done using coblator under endoscopic guidance under general anaesthesia. Coblator enabled precise excision with adequate hemostasis without multiple repeated instrumentations. Histopathology confirmed it as a Lymphoepithelial cyst. Patient was discharged the next day with oral antibiotics and analgesics and at follow up was asymptomatic and endoscopic examination showed a well healed site of the lesion. **Conclusion:** Lymphoepithelial cyst of vallecule is a rare lesion. It can be excised using coblator under endoscopic guidance with advantage of having better precision, reduced bleeding, faster recovery compared to conventional methods. This technique can be used for other vallecular benign lesions as well.

Keywords

Lymphoepithelial Cyst, Vallecule, Coblator, Endoscopy

1. Introduction

Lymphoepithelial cyst (LEC) of vallecule is an uncommon benign lesion [1]. Cysts in vallecule can present with odynophagia, dysphagia, dysphonia and stridor. Many times, they

can be asymptomatic [2]. Cysts in vallecule should be considered in differential diagnosis in those presenting with the above complaints. They can pose difficulty in intubation [3, 4].

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They can be diagnosed by endoscopic examination, laryngoscopy, CT scan [5], MRI Scan [6], barium swallow or USG of neck. These cysts are conventionally treated by excision by direct or suspension laryngoscopy using cold steel instruments or laser [7, 8, 2] or by marsupialization [5]. It is important to have suitable instruments to remove these unusual lesions.

2. Case Report

A 54 years old male presenting to OPD, came with history of odynophagia since 3 months, non-progressive, which he pointed to, more towards left side of his neck. He had past history of type 2 diabetes mellitus for 10 years and was a chronic smoker which he had quit recently. On consultation with a gastroenterologist, he underwent an upper gastrointestinal endoscopy that revealed a mass in left vallecula. Later he was referred to an otorhinolaryngologist.

On clinical examination, he was moderately built and nourished. Oral cavity examination was normal. Endoscopic examination with 70° telescope revealed a yellowish mass with a smooth surface in the left vallecula measuring about 1 × 2 cm. Epiglottis, pyriform fossa, vocal cords and posterior pharyngeal wall were normal [Figure 1]. Examination of neck and other systems were normal. Vital parameters were normal. Routine biochemical and hematological examination were normal. A provisional diagnosis of lipoma of left vallecula was made because of its color and smooth surface, planned for excision under general anesthesia.

Under general anesthesia he was intubated with cuffed endotracheal tube. Position given with neck flexed and head extended using a shoulder bag and Boyle's Davis mouth gag fixed with Draffin bipod stand. Larynx was packed with wet ribbon gauze piece. Using 0-degree 4mm endoscope mass lesion was examined. Endoscope being held by an assistant; the mass was held with long crocodile forceps and traction was given to the mass using left hand of surgeon. It was found to be a pedunculated lesion. Then coblator was used by the right hand and mass was excised in toto [Figure 2]. Haemostasis was achieved using coblator in coagulation mode. The whole procedure was done by coblator under endoscopic visualization on monitor. The procedure was uneventful and patient was extubated and shifted to post operative ward. Histopathological examination showed fibrocollagenous cyst wall lined by squamous epithelium containing lamellated keratin suggestive of lymphoepithelial cyst [Figure 3].

Patient is under regular follow up. 70-degree endoscopic examination on postoperative day 30 showed healed up site of the cyst [Figure 4]. Patient's symptom of odynophagia resolved. Patient was asymptomatic at 6 months of follow up.

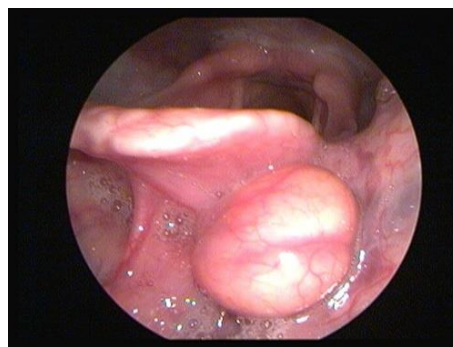


Figure 1. Endoscopic view showing a yellowish mass with a smooth surface in the left vallecula.



Figure 2. Coblator assisted excision of the cyst being done.

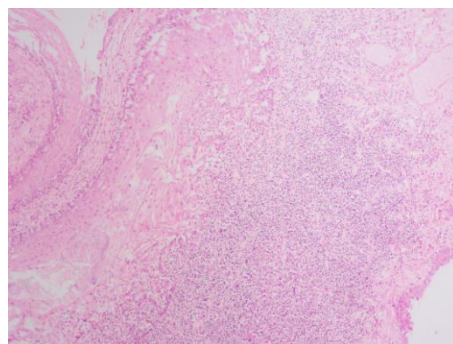


Figure 3. Histopathological appearance, cyst lined by stratified squamous epithelium. Underlying sub epithelium shows dense lymphocytic infiltrate.



Figure 4. Postoperative endoscopic view showing healed base.

3. Discussion

LEC of vallecula is rare. They arise in various organs like Parotid gland, lateral cervical region, oral region [9]. The clinical features are nonspecific. Like any other vallecular cyst, they present with dysphonia, dysphagia, odynophagia and breathing disorder [2]. In this case it presented with odynophagia more on the affected side. Endoscopic appearance of smooth, yellowish surface with well-defined margins suggested a probable benign nature of the lesion probably lipoma and hence treated with complete excision to prevent recurrence. Various methods have been used in literature for management of vallecular cyst. Exposure of the lesion can be obtained using laryngoscope [10, 11] or Boyle Davis mouth gag [12] with rigid endoscope as in our case. In the case reports published by Hoang, T. et al. [13], Tan KS et al. [14], and George C et al. [11]. Vallecular cyst was managed via complete excision using cold steel method. Ting LKN et al. [15] in their case report excised vallecular cyst using monopolar suction diathermy. Nathani N et al. [16], Suzuki J et al. [17], Prowse S et al. [18], Kayhan FT et al. [19], managed via marsupialization using various modes using electrocautery, cupped forceps and laryngeal scissors and robotic system Yuce Y et al. [10], when faced with difficult intubation on incidental finding of vallecular cyst managed it via aspirating with 22G needle and no further excision/marsupialization whereas Torun MT et al. [8], managed it with tracheostomy followed by aspiration followed by complete excision using CO2 laser. In a case series of 20 patients by P J Puneeth et. al. [9], trans-oral laser-assisted surgery with excision or marsupialization combined with cold instruments was done. In cases where the glottis view was blocked by the cyst, aspiration was done to reduce the pressure on the epiglottis and improve the glottis view. No patient required pre-operative tracheostomy and no patient had intubation related complication after surgery. Romak JJ et al [2], has also used CO2 laser for excision of vallecular cyst. Gonik N et al. [20] used radiofrequency ablation for ablating the deeper aspect of the cyst following excision using microsurgical technique. Vijayanand H et al. [12], in their case report evacuated the fluid within cyst by incising the cyst wall followed by deroofting of the cyst and cautery of margins using the Boyle Davis mouth gag, tonsil scissors and bipolar cautery.

In the review of 52 cases done by Suzuki J et al., [17] it was established that aspiration had a high rate of recurrence and was of limited use. Small cysts can be aspirated, but aspiration should only be used as a palliative procedure, or as an initial maneuver if intubation is difficult. It was also seen that recurrence occurred in one of 39 patients who underwent marsupialization by cold steel method suggesting a possibility of recurrence with cold steel method. However, recurrence occurred in none of 14 patients following marsupialization with laser instruments suggesting laser can be a better option than cold steel however it has potential health hazards and requires safety precautions to be taken which is not necessary while using coblator.

In the case report/case series by George C et al. [11], Vijayanand H et al. [12] and Gonik N et al. [20], where cold steel method was used with or without bipolar cautery for hemostasis, it required post operative intubation for up to 24-48hrs and steroids for up to 3 days, which was not required when coblator was used under endoscopic visualization in our case. Hence, we recommend this technique for management of vallecular cyst. It has the advantages of better visualization and bloodless field.

4. Conclusion

Lymphoepithelial cyst of vallecula is a rare lesion. It should be kept in mind in a patient with symptom of odynophagia. LEC can be mistook for lipoma because of its yellowish appearance. It can be excised using coblator under endoscopic guidance with advantage of having better precision, reduced bleeding, faster recovery compared to conventional methods. This technique can be used for other vallecular benign lesions as well. The endoscopic coblator assisted excision is a useful technique in managing vallecular lesions.

Abbreviations

LEC Lymphoepithelial Cyst

Conflicts of Interest

The authors declare no conflicts of interest.

References

- [1] Elakhiri, Mohammed & Sahli, Mohamed & Tayane, Mossab & Aljalil, Abdelfattah & Ammar, Haddou & Darouassi, Youssef. (2021). Lymphoepithelial Cyst of the Valleculae: A Case Report and Literature Review. *Saudi Journal of Medicine*. 6. 60-62. <https://doi.org/10.36348/sjm.2021.v06i03.002>
- [2] Romak, Jonathan & Olsen, Steven & Koch, Cody & Ekblom, Dale. (2010). Bilateral Vallecular Cysts as a Cause of Dysphagia: Case Report and Literature Review. *International journal of otolaryngology*. 2010. 697583. <https://doi.org/10.1155/2010/697583>
- [3] Bae HM, Yoon JR, Yoo JH, Han YJ, Park YJ. A vallecular cyst in a patient with deep neck infection causing difficult airway management. *Korean J Anesthesiol*. 2014 Dec; 67(Suppl): S21-2. <https://doi.org/10.4097/kjae.2014.67.S.S21>
- [4] Nanda C. A Rare Case of Unanticipated Difficult Intubation Due to a Vallecular Cyst. *J Card Crit Care TSS*. 2024; 8: 252-3. https://doi.org/10.25259/JCCC_14_2024
- [5] Gaxa, Luvo & Hlatshwayo, Bafana & Magaroleng, Hendry & Modishi, (2015). Vallecular cyst. *Case Reports International*. 4. 6-10. <https://doi.org/10.5348/crint-2015-7-CR-2>

- [6] Lahiri AK, Somashekar KK, Wittkop B, Ayshford C. Large Vallecular Masses; Differential Diagnosis and Imaging Features. *J Clin Imaging Sci*. 2018 Jun 28; 8: 26. https://doi.org/10.4103/jcis.JCIS_15_18
- [7] Puneeth PJ, Balushi F, Gandhi S. Vallecular Cyst: 10 Years Experience and Review of the Literature. *Indian J Otolaryngol Head Neck Surg*. 2023 Jun; 75(2): 492-495. <https://doi.org/10.1007/s12070-022-03319-3> Epub 2022 Dec 11.
- [8] Torun MT, Seçkin E, Tuncel Ü, Kılıç C, Özkan Ö. A Rare Entity: Adult Asymptomatic Giant Vallecular Cyst. *Case Rep Otolaryngol*. 2015; 2015: 723420. <https://doi.org/10.1155/2015/723420> Epub 2015 Nov 24.
- [9] Sykara M, Ntovas P, Kalogirou EM, Tosios KI, Sklavounou A. Oral lymphoepithelial cyst: A clinicopathological study of 26 cases and review of the literature. *J Clin Exp Dent*. 2017 Aug 1; 9(8): e1035-e1043. <https://doi.org/10.4317/jced.54072>
- [10] Yuce Y, Uzun S, Aypar U. Asymptomatic vallecular cyst: case report. *Braz J Anesthesiol*. 2013 Sep-Oct; 63(5): 419-21. <https://doi.org/10.1016/j.bjan.2013.03.018>
- [11] George C, Martin A, Osahan NM, Liddle D. Anesthetic and Surgical Management of Muroid Retention Cyst in the Vallecular Region: An Airway Challenge. *J Indian Assoc Pediatr Surg*. 2018 Oct-Dec; 23(4): 234-235. https://doi.org/10.4103/jiaps.JIAPS_170_17
- [12] Vijayanand H, Mudhol RS, Patil PH, Maheswaran M. Innovative surgical management of large vallecular cysts. *Indian J Otolaryngol Head Neck Surg*. 2009 Jun; 61(2): 147-9. <https://doi.org/10.1007/s12070-009-0055-z> Epub 2009 Jun 14.
- [13] Hoang, T. M., & Kim, B. B. (2015). A Case Report of a Vallecular Cyst and Literature Review. *Journal of Oral and Maxillofacial Surgery*, 73(9), 1766.e1–1766.e4. <https://doi.org/10.1016/j.joms.2015.05.002>
- [14] Tan KS, Jalaluddin WMS. Lipoma of vallecula-a case report. *BJR Case Rep*. 2016 Jul 28; 2(3): 20150460. <https://doi.org/10.1259/bjrcr.20150460>
- [15] Ting LKN, Idris A, Mat Baki M. Rare cause of voice muffling: pyogenic vallecular cyst. *BMJ Case Rep*. 2022 Sep 15; 15(9): e250615. <https://doi.org/10.1136/bcr-2022-250615>
- [16] Nathani N, Verma PC, Sharma MP. Cyst vallecula unusual presentation. *Indian J Otolaryngol Head Neck Surg*. 2006 Oct; 58(4): 410-1. <https://doi.org/10.1007/BF03049617>
- [17] Suzuki J, Hashimoto S, Watanabe K, Takahashi K. Congenital vallecular cyst in an infant: case report and review of 52 recent cases. *J Laryngol Otol*. 2011 Nov; 125(11): 1199-203. <https://doi.org/10.1017/S0022215111001368> Epub 2011 Jun 14.
- [18] Prowse S, Knight L. Congenital cysts of the infant larynx. *Int J Pediatr Otorhinolaryngol*. 2012 May; 76(5): 708-11. <https://doi.org/10.1016/j.ijporl.2012.02.025> Epub 2012 Feb 28.
- [19] Kayhan FT, Kaya KH, Koc AK, Altintas A, Erdur O. Transoral surgery for an infant thyroglossal duct cyst. *Int J Pediatr Otorhinolaryngol*. 2013 Sep; 77(9): 1620-3. <https://doi.org/10.1016/j.ijporl.2013.07.007> Epub 2013 Aug 2.
- [20] Gonik N, Smith LP. Radiofrequency ablation of pediatric vallecular cysts. *Int J Pediatr Otorhinolaryngol*. 2012 Dec; 76(12): 1819-22. <https://doi.org/10.1016/j.ijporl.2012.09.008> Epub 2012 Sep 26.