

Endoscopic Technique for Management of Large Epiglottic Cyst - A Novel Approach

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ABSTRACT

Epiglottic cyst is a common disorder seen in larynx. Most of the times they are asymptomatic but large epiglottic cysts sometimes can cause airway obstruction. The routine treatment options are surgical excision or laryngoscopic marsupialization. But sometimes, this becomes difficult owing to the limited mobility of laryngoscopes and restricted space available in the oral and pharyngeal cavity, especially when we are dealing with wide-based epiglottic cysts. We report use of endoscopic mucosal resection technique for complete excision of an epiglottic cyst in one patient. Compared to traditional techniques, this method is fast and easy and offers an effective alternative to manage epiglottic cysts.

Key words: Carbon dioxide laser, endoscopic mucosal resection, epiglottic cyst, laryngoscope, marsupialization

INTRODUCTION

Epiglottic cyst is a benign disorder of larynx. Finding an asymptomatic epiglottic cyst during a routine upper GI endoscopy is a common occurrence. Many epiglottic cysts arise from the epiglottic lingual surface.^[1] A congenital epiglottic cyst can cause neonatal respiratory failure or even death, although this rarely occurs in adults.^[2] However, epiglottic cysts are generally incidental findings in adults and small cysts are often asymptomatic. When the cysts are perceptively large, it may cause mild dysphasia with hoarseness, a muffled voice, foreign body sensation in the throat, obstructive sleep apnea, or stridor.^[3] Usually surgical excision using laryngoscope and microsurgery is preferred method for the treatment of symptomatic cysts. Endoscopic

mucosal resection (EMR) provides a novel way of managing these cysts.

CASE REPORT

A 45-year-old female was referred by an ENT surgeon for upper G I endoscopy for symptoms of recurrent throat irritation and foreign body sensation. A large epiglottic cyst was observed during the endoscopic examination [Figure 1a]. As the patient had symptoms of occasional strider and breathlessness, resection of the cyst was planned. As the cyst was large, decision was taken to remove it endoscopically using EMR technique.

Procedure was done under general anesthesia with endotracheal intubation. Olympus TJF 170 upper GI endoscope was used for the procedure. Omniview variceal band was used to encircle the entire extent of the cyst and the cyst was excised using an EMR snare. Spray coagulation was done on the raw surface after resection to achieve hemostasis [Figure 1b-d].

Oral feeds were started after 6 h and on the next day the patient was discharged. Follow-up scopy was done after 1 month which showed complete healing of the operated site with no scarring.

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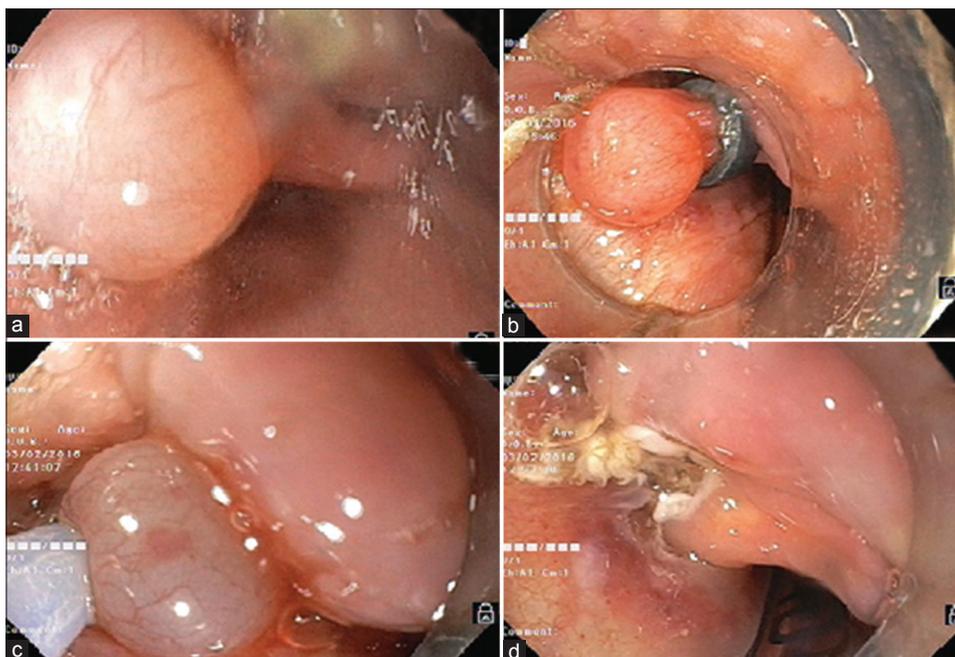


Figure 1: (a) Endoscopic view of epiglottic cyst; (b) band application at the base of the cyst, (c) snare encircling the cyst; (d) post-resection showing post-operative picture

DISCUSSION

Epiglottic cyst is a benign lesion, with incidence of about 4–6% of all the laryngeal lesions.^[4] It commonly arises on the lingual or laryngeal surface of epiglottis. They are generally mucus retention cysts.^[5] Most of these cysts are asymptomatic, but because of their position and size, they can cause airway obstruction and that's why they need excision.^[6,7] Common age of occurrence is in sixth decade but they can be seen infrequently in all the age groups.^[8] One potential complication of these cysts is secondary infection. In which case, the condition can progress to epiglottitis or epiglottic abscess. The differential diagnosis includes thyroglossal cysts, lymphangiomas, hemangiomas, lingual thyroid, and papillomas.^[4,9] A good history taking and physical examination many a times gives the diagnosis of epiglottic cyst and they can be examined using indirect laryngoscopy or upper GI endoscopy.

Surgical excision remains the treatment of choice for epiglottic cysts.^[10] Surgery is performed using traditional laryngomicrosurgery or using carbon dioxide laser.^[11] Incomplete excision can lead to recurrence hence complete excision of the cyst is of utmost importance. However, this needs longer surgical and anesthesia time.^[10,11] Another potential problem is, when we are using a microscope during surgery, there limited surgical field and this restricts

the mobility of the laryngoscope. This becomes more problematic if one has to resect a wide-based epiglottic cyst. In addition, the surgical field can get blurred if there is hemorrhage during excision of wide-based cyst by traditional instrumentation. This problem may not occur if one is using laser for resection but in that case also it is not easy to excise wide-based epiglottic cyst because of poor mobility and the surgeon has to adjust laryngoscope and microscope repeatedly.

EMR is an endoscopic technique used to resect superficial lesions in the organs of GI tract.^[12,13] This technique was used to remove epiglottic cyst in our patient. There are two ways to do EMR technique – (a) lift and cut (non-suction) and (b) suck and cut (suction) techniques. However, in some cases, both techniques need to be used together.

In the non-suction technique, the lesion is on the mucosal surface and a submucosal injection is used to lift the lesion off the muscularis propria. After elevating the lesion, it is caught using a special EMR snare and then resected using an electrocautery.

The second technique is, suction technique where a multiband ligation device is used to create a pseudopolyp by applying a band along the base of the lesion. This pseudopolyp is then resected using a snare. This way there is no need to use submucosal injection in this method.^[14]

In our case, we used to the second method of EMR. The entire cyst was sucked inside the EMR cap,

which was fitted on the tip of the gastroscope and an Omniview band was applied encircling the base of the cyst creating a pseudopolyp. This was then excised with the use of an EMR snare. The raw surface at the base of the cyst was coagulated using spray coagulation. With this technique, we could resect the cyst completely and the time taken for the procedure was much shorter than that is needed for conventional surgery. The patient was called for a follow-up scopy after 1 month. It showed complete healing with no residual cyst.

This technique is safe and easy to perform and it can be a very good alternative for managing epiglottic cysts.

CONCLUSION

Epiglottic cyst is a fairly common condition. EMR is an effective method for excising these cysts. This technique is comparatively easy and less expensive. Hence, in addition to laryngomicrosurgery with microinstruments and carbon dioxide laser, the EMR is an effective and a good alternative for managing epiglottic cysts.

REFERENCES

- Lam HC, Abdullah VJ, Soo G. Epiglottic cyst. *Otolaryngol Head Neck Surg* 2000;122:311.
- Henderson LT, Denny JC 3rd, Teichgraeber J. Airway-obstructing epiglottic cyst. *Ann Otol Rhinol Laryngol* 1985;94:473-6.
- Lee WS, Tsai CS, Lin CH, Lee CC, Hsu HT. Airway obstruction caused by a congenital epiglottic cyst. *Int J Pediatr* 2000;53:229-33.
- Prasad KC, Gopinath IV. Micro flap technique: A novel approach for the management of a large epiglottic cyst. *Int J Otorhinolaryngol Head Neck Surg* 2018;4:1508-10.
- Vourexakis Z. Epiglottic cysts in clinical practice. *Cleve Clin J Med* 2016;83:338-9.
- Sonny A, Nagaraj G, Ramachandran R. Asymptomatic epiglottic cyst: A rare cause of unanticipated difficult intubation. *Middle East J Anaesthesiol* 2011;21:119-20.
- Norris W. Epiglottic cysts complicating general anaesthesia. *Anaesthesia* 1957;12:311-6.
- Dahm MC, Panning B, Lenarz T. Acute apnea caused by an epiglottic cyst. *Int J Pediatr Otorhinolaryngol* 1998;42:271-6.
- Reichard KG, Weingarten-Arams J. Radiological case of the month: Epiglottic cyst. *Arch Pediatr Adolesc Med* 1998;152:1237-8.
- Kawaida M, Kohno N, Kawasaki Y, Fukuda H. Surgical treatment of large epiglottic cysts with a side-opened direct laryngoscope and snare. *Auris Nasus Larynx* 1992;19:45-50.
- Su CY, Hsu JL. Transoral laser marsupialization of epiglottic cysts. *Laryngoscope* 2007;117:1153-4.
- Soetikno RM, Gotoda T, Nakanishi Y, Soehendra N. Endoscopic mucosal resection. *Gastrointest Endosc* 2003;57:567-79.
- De Palma GD, Caiazzo C, Di Matteo E, Capalbo G, Catanzano C. Endoscopic treatment of sessile rectal adenomas: Comparison of Nd:YAG laser therapy and injection-assisted piecemeal polypectomy. *Gastrointest Endosc* 1995;41:553-6.
- Peters FP, Kara MA, Curvers WL, Rosmolen WD, Fockens P, Krishnadath KK, *et al.* Multiband mucosectomy for endoscopic resection of Barrett's esophagus: Feasibility study with matched historical controls. *Eur J Gastroenterol Hepatol* 2007;19:311-5.

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