Endolaryngeal Laser Excision of a Giant Hypopharyngeal Lipoma Causing Severe Respiratory Distress: Case Report

Ciddi Hava Yolu Tıkanıklığına Sebep Olan ve Endolarengeal Lazer Eksizyonu ile Tedavi Edilen Dev Hipofarengeal Lipom

Mustafa GEREK,[a]
Umut EROL,[b]
Yusuf HIDIR,[a]
Hakan BİRKENT[a]

[a]Department of Ear, Nose and Throat, Gülhane Military Medical Academy, Ankara
[b]Department of Ear, Nose and Throat, Erzurum Mareşal Fevzi Çakmak Military Hospital, Erzurum

Geliş Tarihi/*Received:* 08.02.2012
Kabul Tarihi/*Accepted:* 23.03.2012

This case report was presented as a poster at Laryngology 2011 Conference, 20-22 June 2011, London.

Yazışma Adresi/*Correspondence:*
Hakan BİRKENT
Gülhane Military Medical Academy, Department of Ear, Nose and Throat, Ankara,
TÜRKİYE/TURKEY
hbirkent@gata.edu.tr

ABSTRACT Lipomas are the most common benign tumors of mesenchymal origin. Although they are rarely seen in the head and neck region, their most common location in the head-neck are the posterior neck. Lipomas of larynx and hypopharynx are very rare. The aim of this paper is to report a case of a giant hypopharyngeal lipoma causing severe respiratory distress. A 76-year-old man with respiratory distress, stridor and voice changes present for 5 months was referred to our department. Videolaryngoscopic examination revealed a pedicled left piriform sinus mass with smooth and yellowish surface which was obstructing the laryngeal inlet during respiration. It was removed via endolaryngeal laser excision without any complications. The histopathologic investigation was reported as lipoma. Lipoma should be kept in mind in case of a hypopharyngeal large mass with a smooth and yellowish surface. Computerized tomography is useful in the differential diagnosis, and endolaryngeal laser excision is a good surgical treatment option for removal.

Key Words: Lipoma; larynx; hypopharynx; lasers

ÖZET Lipomlar en sık karşılaşılan mezenkimal orijinli benign tümörlerdir. Baş boyun bölgesinde sıklıkla arka boyunda lokalize olmakla birlikte nadir görülürler. Larenks ve hipofarenks lipomları oldukça nadirdir. Bu çalışmada ciddi hava yolu tıkanıklığına yol açan bir dev hipofarenks lipomu sunulmaktadır. Yaklaşık 5 aydır solunum sıkıntısı, stridor ve seste değişiklik şikayetleri olan 76 yaşında bir erkek hasta kliniğimize başvurdu. Videolarengoskopik muayenede respirasyon esnasında larengeal girişi tıkayan düzgün yüzeyli, sarımsı renkte, pediküllü, sol piriform sinüse lokalize kitle lezyonu tespit edildi. Kitle lazer ile komplikasyonsuz olarak eksize edildi. Histopatolojik inceleme lipoma olarak rapor edildi. Lipoma tanısı hipofarenkste lokalize düzgün yüzeyli, sarımsı renkteki lezyonlar için akılda tutulmalıdır. Bilgisayarlı tomografi ayırıcı tanıda yararlıdır ve endolarengeal lazer cerrahisi kitlenin eksizyonu için iyi bir yöntemdir.

Anahtar Kelimeler: Lipoma; larinks; hipofarinks; lazerler

Turkiye Klinikleri J Med Sci 2013;33(2):596-9

Lipomas are the most common benign tumors of mesenchymal origin.[1] Approximately 13% of these tumors occur in the head and neck region, commonly in the posterior neck.[2] Rarely, they may be seen in the anterior neck, infratemporal fossa, oral cavity, pharynx, larynx and parotid gland. Lipomas of larynx and hypopharynx are very rare.[3,4] To our knowledge, only 94 cases have been reported in the literature up to date. Herein, we present a case of hypopharyngeal lipoma causing severe respiratory distress.

doi: 10.5336/medsci.2012-28796

CASE REPORT

A 76-year-old man with respiratory distress, stridor and voice changes for 5 months was referred to our department. There was no history of trauma, chronic infection, smoking or alcohol. Flexible videolaryngoscopy showed a hypopharyngeal mobile lesion that almost completely obstructed the rima glottis during inspiration. Vocal fold mobility was normal. Computed tomography (CT) revealed a 3x4 cm hypopharyngeal mass with low attenuation and negative dansitometry values of adipose tissue (Figure 1).

Endolaryngeal excision was planned via direct laryngoscopy under general anesthesia. Since the lesion was obstructing the laryngeal inlet, a fiberoptic system was used for intubation. The lesion was a 3x4 cm pedinculated mass originating from the left piriform sinus, had a smooth surface with normal appearing yellowish mucosa (Figure 2). When the mass was grasped with the forceps, it has been noticed that it originated from the left pyriform sinus and was pedicled. The mass was removed en-bloc using CO_2 laser (4 W power, 0.1sec exposure time, 0.1 sec interrupted mode) with minimal bleeding (Figure 3).

The postoperative period was uneventful. Respiratory distress and stridor disappeared after surgery. The patient was discharged on the third day and the histopathologic examination was reported as lipoma (Figure 4). One month later, mucosal healing was complete and there was no sign of a mass in the hypopharynx (Figure 5).

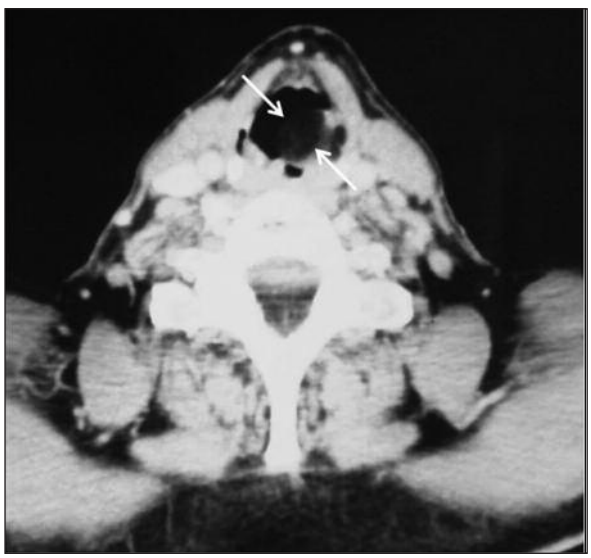

FIGURE 1: Axial computerized tomography of the neck demonstrates low attenuation and negative density of left hypopharyngeal mass (white arrows).

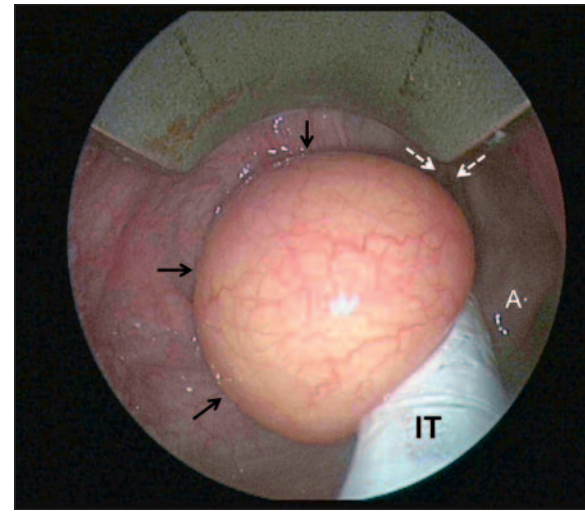

FIGURE 2: Videolaryngoscopy showing a mass arising from the left pyriform sinus obstructing the rima glottis (Black arrows: Mass, White dashed arrows: Vocal cords, IT: Intubation tube, A: Right arytenoid).
(See for colored form http://tipbilimleri.turkiyeklinikleri.com/)

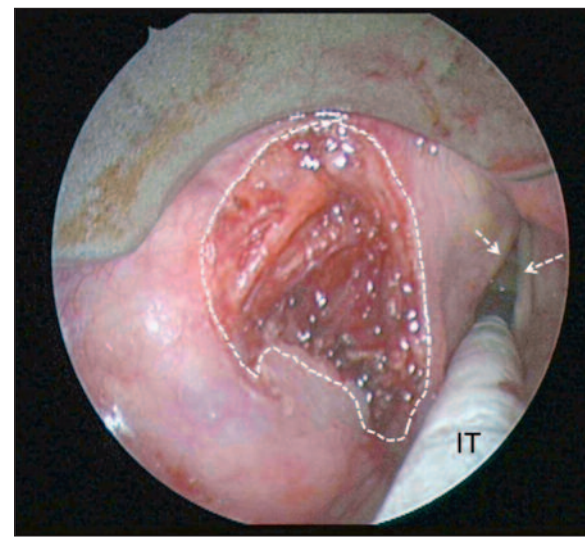

FIGURE 3: Appearance right after the laser excision of the mass (Dashed line area: Excision area, IT: Intubation tube, Dashed white arrows: Vocal cords).
(See for colored form http://tipbilimleri.turkiyeklinikleri.com/)

DISCUSSION

Hypopharyngeal lipomas are extremely rare lesions and they usually arise from the aryepiglottic fold.

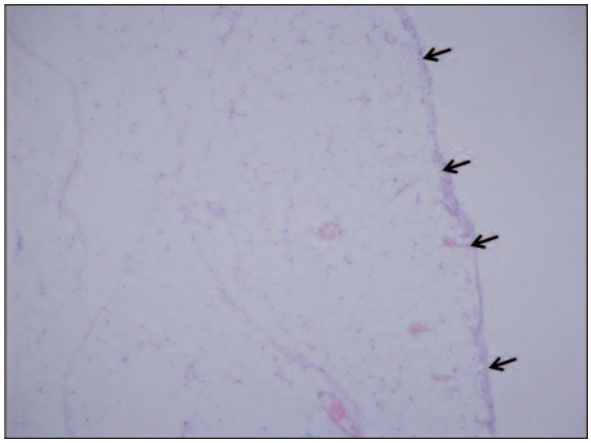

FIGURE 4: Histopathological examination showing that the mass had thin fibrous capsule (black arrows), and mature adipocytes without atypia and mitosis and with minimal vascularity (HEx100).
(See for colored form http://tipbilimleri.turkiyeklinikleri.com/)

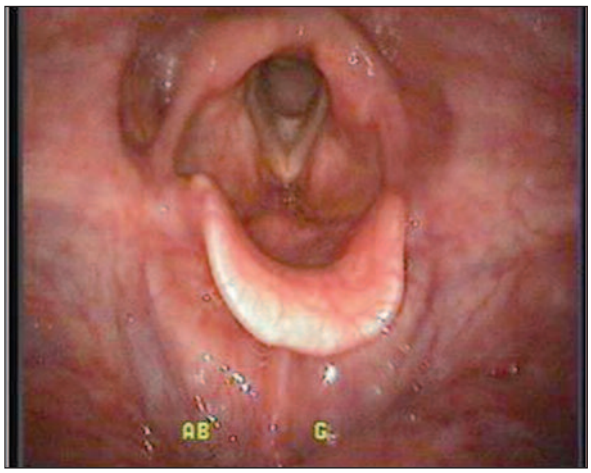

FIGURE 5: Laryngeal appearance one month after the surgery, showing no recurrence with a good mucosal healing.
(See for colored form http://tipbilimleri.turkiyeklinikleri.com/)

Symptoms vary and are non-pathognomonic, this causes difficulty in preoperative diagnosis. Typical symtoms are difficulty in swallowing, hoarseness, cough, stridor, and rarely respiratory distress.[5] These tumors are usually pedicled, encapsulated and have a smooth surface.[6] Hypopharyngeal lipomas which are pedicled may cause sudden laryngeal obstruction, asphyxia and death.[7-9]

In diagnosis, endoscopic evaluation and radiologic techniques are frequently used. In endoscopy, lipogenic tumors of the larynx and hypopharynx are usually seen as yellowish, submucosal or polypoid masses. On CT scans, tissues of lipogenic tumors have a typical homogeneous appearance with low attenuation value and have a lower density compared to water.[10]

Lipomas can be confused with other benign lesions such as retention cysts or laryngoceles.[11,12] Recurrent lipogenic tumors should also be evaluated in terms of a possibility of a well-differentiated liposarcoma. Although malign transformation in has not been reported in solitary lipomas, it has been reported in multiple lipomas of larynx and pharynx.[13] In case of incomplete excision, recurrence may occur.

Endoscopic approach is the most common technique in the treatment of laryngeal and hypopharyngeal lipomas. If the tumor is not pedicled or is submucosal, an external approach is generally required using thyrotomy, transhyoid or lateral pharyngotomy in order to prevent possible recurrences.[14,15] CO_2 laser has some advantages for endolaryngeal tumor removal. It is technically easy to excise the pedicled lipomas with minimal bleeding.

In conclusion, lipoma should be kept in mind in case of a hypopharyngeal large mass with a smooth and yellowish surface. CT scan is useful in the differential diagnosis, and endolaryngeal laser excision is a good surgical treatment option for removal.

REFERENCES

1. Barnes L, Ferlito A. Soft tissue neoplasms. In: Ferlito A, ed. Neoplasms of the Larynx. London: Churchill-Livingstone; 1993. p.265-304.
2. Enziger FM, Weiss SW. Benign lipomatous tumors. Soft Tissue Tumors. 3rd ed. St Louis: CV Mosby; 1995. p.81-430.
3. Jones SR, Myers EN, Barnes L. Benign neoplasms of the larynx. Otolaryngol Clin North Am 1984;17(1):151-78.
4. Wenig BM. Lipomas of the larynx and hypopharynx: a review of literature with addition of three new cases. J Laryngol Otol 1995;109(4): 353-7.
5. Som ML, Wolff L. Lipoma of the hypopharynx producing menacing symptoms. Arch Otolaryngol 1952;56(5):524-31.
6. Laurent C, Lindholm CE, Nordlinder H. Benign pedunculated tumours of the hypopharynx. 3 case reports, 1 with late malignant transformation. ORL J Otorhinolaryngol Relat Spec 1985;47(1):17-21
7. Allen MS, Talbot WH. Sudden death due to regurgitation of a pedunculated esophageal lipoma. J Thorac Cardiovasc Surg 1967;54(5):756-8.

8. Cochet B, Hohl P, Sans M, Cox JN. Asphyxia caused by laryngeal impaction of an esophageal polyp. Arch Otolaryngol 1980;106(3): 176-8.
9. Fyfe B, Mittleman RE. Hypopharyngeal lipoma as a cause for sudden asphyxial death. Am J Forensic Med Pathol 1991;12(1):82-4.
10. Schrader M. [Improved diagnosis of laryngeal lipoma by computerized tomography]. HNO 1988;36(4):161-3.
11. Jungehülsing M, Fischbach R, Pototschnig C, Eckel HE, Damm M. Rare benign tumors: laryngeal and hypopharyngeal lipomata. Ann Otol Rhinol Laryngol 2000;109(3):301-5.
12. Akgül Özmen C, Nazaroğlu H, Yıldırım M, Öztürkmen Akay H, Bayrak AH. A rare cause of dysphonia: laryngeal lipoma: differential diagnosis. Turkiye Klinikleri J Med Sci 2009; 29(6):1789-91.
13. Kapur TR. Recurrent lipomata of the larynx and the pharynx with late malignant change. J Laryngol Otol 1968;82(8):761-8.
14. Ogura J, Thawley S. Cysts and tumors of the larynx. In: Paparella MM, Shumrick DA, Gluckman JL, eds. Otolaryngology. 2nd ed. Philadelphia: Saunders; 1980. p.2504-27.
15. Dionne GP, Seemayer TA. Infiltrating lipomas and angiolipomas revisited. Cancer 1974; 33(3):732-8.