

Laryngeal Lipoma a rare entity in daily medical practice

Ian Caldeira Ruppen^{1*}, Leandro Hideki Otani², Vitor Augusto Olivari do Carmo¹, Isabela Matias Cian¹, Jamile Diogo de Araújo², Gabriel Botequia Zanatta¹, Yasmin Cavatorta Jannani¹, Felicia Satie Ibuki Otani², Gabriel Petermann³, Lara Beatriz Dallaqua Bitiati¹ Alana Reigota da Costa Rosa¹, Geórgia Verona Cruz², Jhamille Amanda Cardoso do Val⁴, Valentina Verona Cruz⁵, Larissa da Rosa Piccoli¹, Antonio Fabiano Morelli Filho¹, Maria Clara Malheiros Vizzotto⁵, Júlia Alvares Dal' lago⁶, Marcela Castrequini Guimarães do Vale¹, Rafaela Castrequini Guimarães do Vale¹

1. Centro Universitário Ingá – Uningá, Maringá, PR, Brazil.
2. Instituto Maringá de Imagem, Maringá, PR, Brazil.
3. Universidade Anhanguera Uniderp, Brazil.
4. Hospital Universitário Getúlio Vargas, Brazil.
5. Faculdade Cesumar - Unicesumar Maringá, Paraná, Brazil.
6. Ulbra- Universidade Luterana do Brasil Canoas- Rio Grande do Sul, Brazil.

***Correspondence:** Ian Caldeira Ruppen, Centro Universitário Ingá-UNINGÁ, Email:ian2ruppen@gmail.com; ORCID: <https://orcid.org/0000-0003-1706-1662>

Received: 14 Oct 2024; **Accepted:** 20 Oct 2024; **Published:** 30 Oct 2024

Citation: Ian Caldeira Ruppen. Laryngeal Lipoma a rare entity in daily medical practice. AJMCRR 2024; 3(10): 1-4.

Abstract

Laryngeal tumors are predominantly malignant, with squamous cell carcinoma being the most common type. Among benign tumors, laryngeal lipoma is extremely rare, representing less than 1% of benign cases in this region. Lipomas are composed of mature adipose tissue and tend to be asymptomatic and slow-growing. However, when located in the larynx, they may cause symptoms such as hoarseness, respiratory difficulty, and dysphagia due to compression of adjacent structures. Its diagnosis is challenging and is often mistaken for other benign masses, such as polyps and laryngeal cysts. Laryngeal lipomas are most commonly found in the supraglottic region, where there is a higher concentration of adipose tissue. Imaging methods, such as computed tomography (CT) and magnetic resonance imaging (MRI), are essential for its characterization. Histologically, it is composed of mature adipocytes, well-defined, and without atypia. Complete surgical excision is the definitive treatment, with good success rates and a low probability of recurrence, as long as the removal is complete. Although the prognosis after excision is excellent, with rapid recovery of vocal and respiratory function, long-term follow-up is important to monitor for possible recurrences. The rarity of this lesion and the absence of well-defined management protocols make this topic of great interest to otolaryngologists and head and neck surgeons, highlighting the importance of reporting cases to better understand the disease and improve surgical techniques.

Keywords: Immunohistochemical. Lipoma. Larynx. Rare. Surgical.

INTRODUCTION:

Laryngeal tumors are mostly malignant, with squamous cell carcinoma being the most common type. However, benign tumors can also occur, although they are significantly rarer. Within this spectrum of benign tumors, laryngeal lipoma stands out as a rare entity, with few cases reported in the literature. Lipoma is a mesenchymal tumor composed of mature adipose tissue and is one of the most common benign tumors in the human body. When located in the larynx, its occurrence is extremely uncommon, representing less than 1% of all benign tumors in this region. The etiology of laryngeal lipoma remains uncertain, and clinical manifestations depend on the exact location and size of the tumor. Generally, lipomas are asymptomatic and slow-growing lesions, but in the larynx, their presence can lead to significant clinical symptoms due to airway obstruction or compression of adjacent anatomical structures. The most common symptoms include hoarseness, respiratory difficulty, and dysphagia, which are often mistaken for other more prevalent conditions, such as polyps or laryngeal cysts. Due to its rarity, the early and accurate diagnosis of laryngeal lipoma can be challenging, as it is often confused with other benign or malignant masses of the larynx.

OBJECTIVES:

This study aims to describe lipomas, their sporadic appearance, and their characteristics, contributing to better differential diagnosis of laryngeal obstruction.

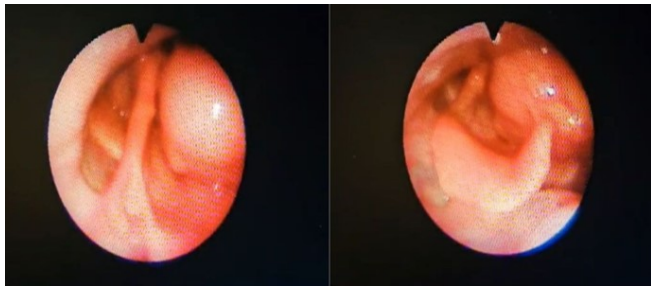
MATERIALS AND METHODS:

A literature review was conducted using articles published in the PUBMED, ScienceDirect, and Scielo databases to support the study.

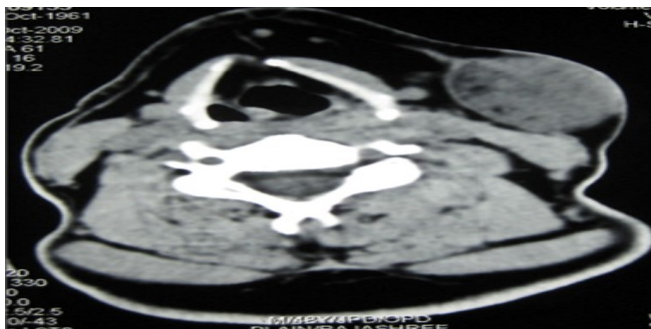
DISCUSSION:

Laryngeal lipomas are more frequently found in the supraglottic region, due to the greater amount of adipose tissue present in this area, but they can also occur in other parts of the larynx. Most cases described in the literature indicate that laryngeal lipomas develop slowly and, therefore, often remain asymptomatic for a long period. However, in larger tumors, symptoms such as dysphonia, respiratory difficulty, and dysphagia may appear, requiring surgical intervention. The diagnosis of laryngeal lipoma is often challenging due to its rarity and its clinical similarity to other benign pathologies of the laryngeal region. Imaging methods, such as computed tomography (CT) and magnetic resonance imaging (MRI), are essential for characterizing the tumor, providing details about its location, extent, and composition. Magnetic resonance imaging, in particular, plays an important role in differentiating lipomas, as it demonstrates high signal intensity on T1-weighted images, characteristic of adipose tissue. Histologically, lipomas are composed of mature adipocytes, are well-circumscribed, and show no atypia. The definitive treatment for laryngeal lipoma is generally surgical, with complete excision of the lesion. The approach can be performed through direct laryngoscopy with laser microsurgery, endoscopy, or open surgery, depending on the size and location of the tumor. Recurrence is uncommon, provided that resection is complete, generally yielding good outcomes with a low risk of recurrence. However, in some cases, due to proximity to vital structures, complete removal may be challenging, requiring advanced surgical techniques and an experienced team. The prognosis for patients with laryngeal lipoma is generally excellent after excision, with rapid recovery of vocal and respiratory function. Nevertheless, long-term follow-

up is important, as, although rare, there are reports of recurrence and malignant transformation. Furthermore, it is important to note that, although recurrence is uncommon after complete removal, some studies report the need for long-term follow-up to monitor for possible recurrences or late complications. The rarity of the disease makes it challenging to establish well-defined management protocols, which reinforces the importance of reporting cases and contributing to the understanding and improvement of surgical techniques.



(Figure 1 and 2): Endoscopic appearance of laryngeal lipoma.



(Figure 3): CT (axial) - CT showing soft tissue mass with discrete fat attenuation densities, with the lesion displacing the platysma.



(Figure 4 and 5): Computed tomography of the neck, showing a hypodense formation in the fat of the left paraglottic space measuring 2.7 x 2.7 cm, causing local bulging with reduction of the airway column in the glottic and supraglottic larynx.



(Figure 6): Tumor in the cervical region.

CONCLUSION:

Laryngeal lipoma is a rare condition that should be considered in the differential diagnosis of benign laryngeal tumors, especially in patients with persistent obstructive or vocal symptoms. Although lipoma is a common neoplasm in various regions of the body, its occurrence in the larynx is uncommon, representing a small percentage of benign tumors in this region. This type of lesion can cause symptoms related to airway obstruction, voice changes, or swallowing difficulties, depending on its location and size. The rarity of laryngeal lipoma, along with its variable clinical presentation, makes this a topic of great interest to otolaryngologists and head and neck surgeons. Proper characterization through imaging, combined with histopathological evaluation, is fundamental for diagnosis and treatment. Surgery remains the treatment of choice, with an excellent prognosis in most cases. Given the rarity of the lesion, many reported cases in the literature are case reports or case series, which limits understanding of the exact etiology, clinical evolution, and predisposing factors for the development of laryngeal lipomas. However, factors such as trauma, chronic inflammation, and genetic predisposition are believed to be associated with its development.

References:

1. KAPILA, M. et al. Lipoma of the larynx: a rare presentation. **Journal of Laryngology and Otology**, v. 128, n. 5, p. 474-476, 2014.
2. PAI, P. et al. Laryngeal lipoma: A rare tumor. **Otolaryngology-Head and Neck Surgery**, v. 151, n. 6, p. 1006-1007, 2014.
3. DAS, S. K. et al. Laryngeal lipoma: Case report and review of the literature. **European Archives of Otorhinolaryngology**, v. 262, n. 11, p. 892-895, 2005.
4. PONS, Y. et al. Lipoma of the larynx: case report and review of the literature. **European Annals of Otorhinolaryngology, Head and Neck Diseases**, v. 128, n. 1, p. 21-23, 2011.
5. KAMBLE, M. T. et al. Laryngeal lipoma: a rare cause of airway obstruction. **Case Reports in Otolaryngology**, v. 2014, p. 753807, 2014.
6. MARTÍNEZ-BALLESTEROS, C. et al. Laryngeal lipoma: Unusual etiology of dysphonia. **Journal of Voice**, v. 31, n. 5, p. 676.e1-676.e3, 2017.
7. ROSEN, P. S. et al. Lipoma of the Larynx: A Rare Benign Tumor. **The American Journal of Otolaryngology**, v. 31, n. 3, p. 182-185, 2010.
8. KUSABA, M. et al. A case of a large laryngeal lipoma treated by endoscopic surgery. **The Journal of Laryngology & Otology**, v. 130, n. 12, p. 1107-1109, 2016.
9. SOM, P. M. et al. Benign and malignant tumors of the larynx. **Radiologic Clinics of North America**, v. 36, n. 5, p. 1059-1072, 1998.
10. KOSHY, J. C. et al. Endoscopic removal of a laryngeal lipoma. **Annals of Otology, Rhinology & Laryngology**, v. 119, n. 3, p. 176-179, 2010.