MEGA JOURNAL OF CASE REPORTS

OPEN ACCESS

Case Presentation

Compiled Date: September 18, 2024

Spindle Cell Lipoma in the Supraglottic Region of the Larynx: A Case Report

Ian Caldeira Ruppen[1*], Rafael Ferreira Pacheco Cabral[2], Manuel Gustavo Giraldelli Nóbrega[3], Joaquim Branco Fernandes[3], Jamile Diogo de Araujo[4], Leandro Hideki Otani[4], Marcela Castrequini Guimarães do Vale[1], Rafaela Castrequini Guimarães do Vale[1], Lara Beatriz Dallaqua Bitiati[1], Geórgia Verona Cruz[4], Vitor Augusto Olivari do Carmo[1], Evili Rathier Sandri[1], Gabriely Garcia Galvão[1], Isabela Matias Cian[1], Gabriel Botequia Zanatta[1], Eduarda de Paula Morcella[1] and Yasmin Cavatorta Jannani[1]

[1]Department of Medicine, Centro Universitário Ingá – Uningá, Maringá, PR, Brazil

[2]Department of Otolaryngology, Instituto do Ronco e Apneia de Maringá, PR, Brazil

[3]Department of Head and Neck Surgery, University of São Paulo – USP, Ribeirão Preto, SP, Brazil

[4]Department of Radiology, Instituto Maringá de Imagem, Brazil

[*]**Corresponding author:** Ian Caldeira Ruppen**,** Departmentof Medicine, Centro Universitário Ingá (UNINGÁ), Maringá, Paraná, Brazil, E-mail: ian2ruppen@gmail.com

Abstract

A lipoma is a common benign tumor of soft tissues, characterized by the proliferation of mature adipose cells. However, its occurrence in the larynx is extremely rare, representing less than 1% of benign tumors in this region. Among the less common variants, the spindle cell lipoma stands out for its peculiar characteristic: it is predominantly composed of spindle-shaped (or elongated) cells, rather than the typical adipocytes. This rare variant may present diagnostic challenges due to its different appearance and the possibility of being confused with other mesenchymal neoplasms, such as fibromas or leiomyomas. The clinical presentation of spindle cell lipoma can vary. Patients with small tumors may be asymptomatic, while those with larger tumors may experience symptoms such as hoarseness, dysphagia, dyspnea, and a foreign body sensation. Accurate identification is achieved through immunohistochemical examination and

histological analysis, which confirm the presence of spindle cells and exclude other similar conditions. The standard treatment involves complete surgical excision, which generally results in a good prognosis with a low recurrence rate, although follow-up is important to detect possible recurrences or atypical features. The low-grade myxoid mesenchymal neoplasm, a rare condition, can also be confused with spindle cell lipoma. It is characterized by a predominantly myxoid stroma and low mitotic activity, presenting a gelatinous and mucous-like component. Understanding the clinical and pathological features of spindle cell lipoma is crucial for accurate diagnosis and appropriate management. Early recognition of this variant and proper treatment helps prevent complications and improve the prognosis for patients.

Keywords: Spindle Cell; Supraglottic; Larynx; Lipoma

Introduction

Lipoma is one of the most common benign tumors found in soft tissues, characterized by the proliferation of mature adipocytes. While lipomas are common in various parts of the body, their occurrence in the larynx are extremely rare, representing less than 1% of all benign tumors in this region. However, there are less common variants, such as spindle cell lipoma. This rare type of lipoma is defined by a predominance of spindle-shaped cells (or elongated cells) instead of typical adipocytes. The clinical and pathological presentation of these tumors can vary, sometimes complicating their diagnosis. Understanding spindle cell lipoma is essential to differentiate this variant from other mesenchymal lesions and ensure proper management. Due to the rarity of the condition and the importance of laryngeal functions, early recognition and appropriate management of laryngeal lipoma are crucial to avoid complications such as airway obstruction and changes in vocal quality.

Objective

This work aims to describe a clinical case of a 78-year-old patient diagnosed with Low-Grade Myxoid Mesenchymal Neoplasm, specifically Spindle Cell Lipoma. The goal is to describe its low prevalence, its characteristics, thus contributing to a better understanding of the tumor and the importance of treatment.

Case Presentation

A 78-year-old male patient sought the Otolaryngology clinic with complaints of choking, throat clearing, and hoarseness for years, reporting progressive dysphonia over the past few months. The patient had undergone thyroid surgery 5 years prior, is on Puran, and is well-controlled. A videolaryngoscopic examination revealed a submucosal cystic-appearing lesion occupying the vallecula and left laryngeal wall, extending over the glottis. Consequently, this led to compression of the larynx, affecting phonation and swallowing, with progressive worsening. A computed tomography scan of the neck was requested. The patient was referred to the Head and Neck Surgery service, where the CT scan report showed a heterogeneous hypodense formation without significant enhancement by iodinated contrast, located in the left paraglottic fat, adjacent to the left aryepiglottic fold and ventricular band on this side, causing marked reduction in the glottic and supraglottic laryngeal airway column, measuring approximately 2.7 x 2.7 cm in the largest

dimensions. This change caused local bulging with reduction of the glottic and supraglottic laryngeal airway. As a course of action, the patient underwent complete resection of the lesion via lateral cervicotomy. The anatomical specimen was sent for histopathological examination. The examination results led to a diagnosis of Low-Grade Myxoid Mesenchymal Neoplasm. The histological examination revealed a paucicellular neoplasm composed of elongated and small cells with scant cytoplasm and discretely hyperchromatic nuclei, dispersed in abundant myxoid matrix with delicate and sparse vessels and adipocytes. No necrosis, mitotic figures, or cytological atypia were observed. The immunohistochemical study revealed positive CD34 expression (a hematopoietic cell and pericyte antigen), suggesting Spindle Cell Lipoma. The patient showed good postoperative progress with no complications, was discharged on the same day with prophylactic antibiotic therapy, and was advised to return for an outpatient follow-up in 3 months and repeat the CT scan. On follow-up, the patient was doing well, with no complaints of choking or hoarseness, with a good prognosis and no evidence of tumor recurrence **(Figure 1-8)**.

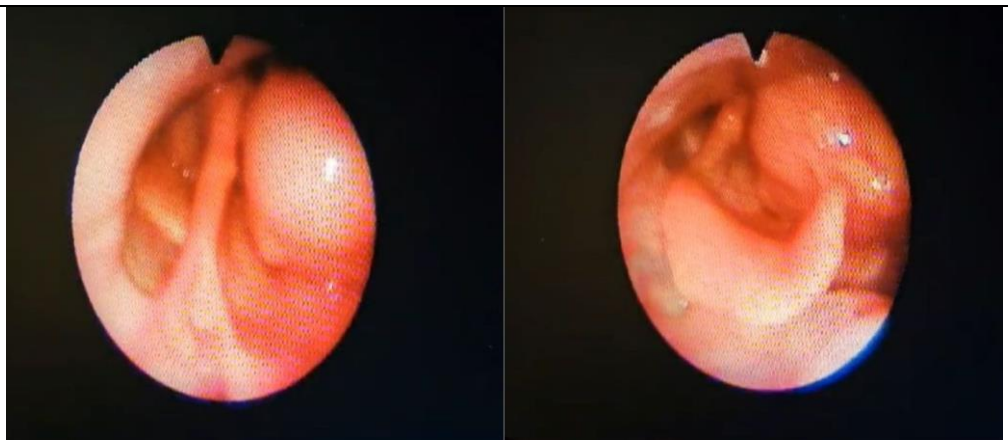

Figure 1 and 2: Endoscopic appearance of laryngeal lipoma.

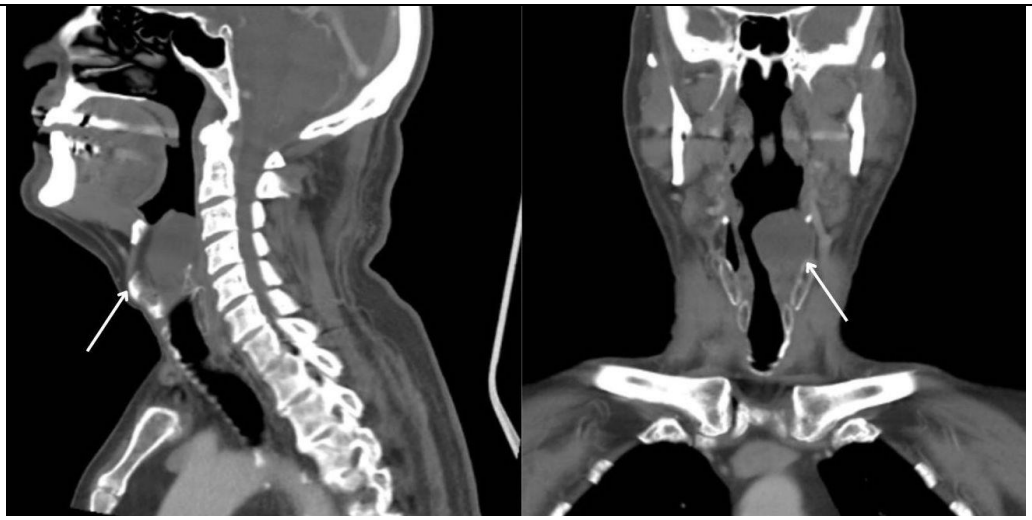

Figure 3 and 4: Computed tomography of the neck, showing a hypodense formation in the fat of the left paraglottic space measuring 2.7 x 2.7 cm, causing local bulging with reduction of the airway column in the glottic and supraglottic larynx.

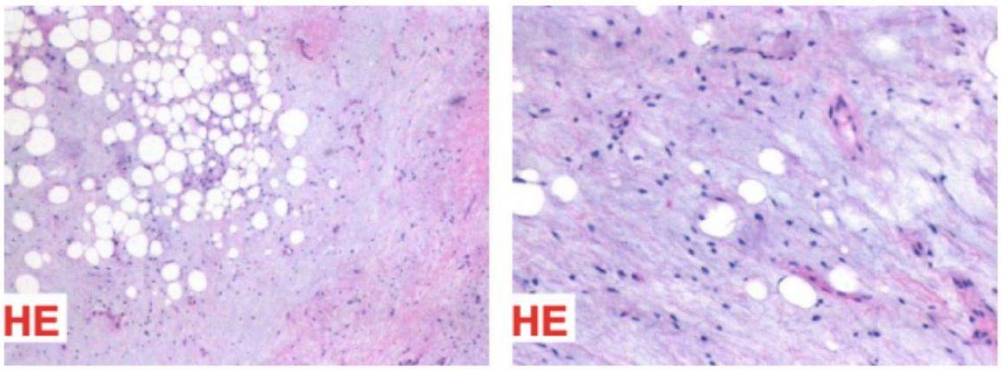

Figure 5 and 6: Histological examination shows a paucicellular neoplasm composed of elongated and small cells with scant cytoplasm and discreetly hyperchromatic nuclei, dispersed in abundant myxoid matrix with delicate and sparse vessels, and adipocytes.

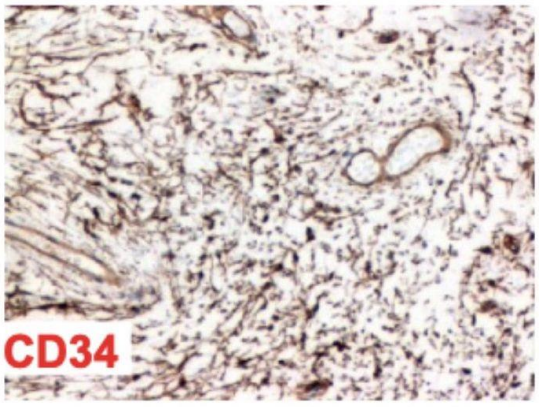

Figure 7: Immunohistochemical study reveals positive expression of CD34. These findings suggest a Spindle Cell Lipoma.

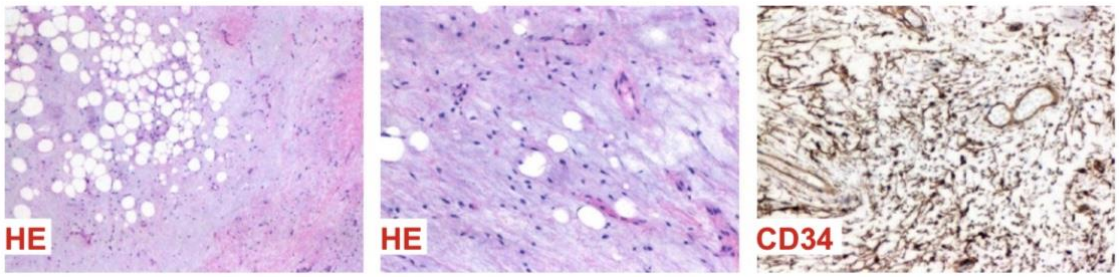

Figure 8: Histological images of the immunohistochemical examination. Low-grade myxoid mesenchymal neoplasm.

Discussion

Spindle cell lipoma, also known as fusocellular lipoma, is a rare and peculiar entity that differs from conventional lipomas by the type of predominant cells. Instead of the typical round adipocytes, spindle cell lipoma is predominantly composed of spindle-shaped cells arranged in a fascicular pattern. These spindle-shaped cells can be confused with other mesenchymal neoplasms, such as fibromas or leiomyomas, if not carefully examined [1-10]. Clinically, patients may be asymptomatic in cases of small tumors or may present symptoms such as hoarseness, dysphagia, dyspnea, and a foreign body sensation when the lipoma reaches larger sizes. Spindle cell lipoma can present as a painless, well-circumscribed subcutaneous mass, typically located in areas such as the upper extremities or trunk. Microscopic diagnosis is confirmed by immunohistochemistry, identifying spindle-shaped cells with characteristics of well-differentiated lipoblasts and excluding other similar conditions. Histological analysis is crucial to differentiate spindle cell lipoma from other mesenchymal neoplasms and to ensure the mass is benign. Treatment for spindle cell lipoma generally involves complete surgical excision. The surgical approach is effective in most cases, with a low risk of recurrence when the tumor is properly removed. However, vigilance is important, as some rare cases may have recurrence or present atypical features. Low-grade myxoid mesenchymal neoplasm is a rare and usually benign form of mesenchymal tumor, characterized by a predominance of myxoid stroma and low mitotic activity. These tumors are composed of immature mesenchymal cells and feature a predominant myxoid component, which is a gelatinous, mucous-like tissue.

Conclusion

Spindle cell lipoma is a rare and challenging variant of lipoma that requires meticulous clinical and pathological evaluation for accurate diagnosis. The predominant presence of spindle cells can make it difficult to distinguish this type of lipoma from other mesenchymal neoplasms. Low-grade myxoid mesenchymal neoplasm is a rare condition with distinct histological characteristics and a generally favorable prognosis when appropriately diagnosed and treated. Careful clinical and pathological evaluation is essential to ensure proper management and prevent complications. Treatment involves complete surgical excision, which, when performed adequately, leads to a good prognosis with a low recurrence rate. A detailed understanding of the clinical and

pathological features of spindle cell lipoma is crucial to ensure accurate diagnosis and effective management, preventing complications and ensuring the best prognosis for patients while avoiding recurrence.

References

1. Fletcher CDM, Bates M. Spindle cell lipoma: a clinicopathological study with some original observations. Histopathology. 1987;11(8):803-17.
2. Enzinger FM, Harvey DA. Spindle cell lipoma. Cancer. 1975;36(5):1852-9.
3. Laura WB, Krans MJ, Peters JJ. Imaging characteristics of spindle cell lipoma. AJR Am J Roentgenol. 2003;181(5):1251-4.
4. Singhal SK, Virk RS, Mohan H, et al. Myxolipoma of the epiglottis in an adult: a case report. Ear Nose Throat J. 2005;84(11):728, 730, 734.
5. Taff ML, Schwartz IS, Boglioli LR. Sudden asphyxial death due to a prolapsed esophageal fibrolipoma. Am J Forensic Med Pathol. 1991;12(1):85-8.
6. Barnes L, Ferlito A. Soft tissue neoplasms. In: FERLITO, A. (ed.). Neoplasms of the Larynx. London: Churchill-Livingstone, 1993;265-304.
7. Rozas Aristy F, Durán ME, Zapateiro J. Lipoma mixoide de la laringe. Revista Medicina de Panamá. 1991;16:33-38.
8. Chen KTK, Weinberg RA. Intramuscular lipoma of the larynx. Am J Otolaryngol. 1984;5:71-72.
9. Friedmann I. Rare benign neoplasms of the larynx: Rhabdomyoma and lipoma. ORL J Otorhinolaryngol Relat Spec. 1996;58(3):182.
10. Murty KD, Murty PSN, George S, Balakrishnan R, Mathew KJ, Varghese G. Lipoma of the larynx. Am J Otolaryngol. 1994;15:149-151.

Citation of this Article

Ruppen IC, Pacheco Cabral RF, Giraldelli Nóbrega MG, Fernandes JB, Diogo de Araujo J, Otani LH, Guimarães do Vale MC, Guimarães do Vale RC, Dallaqua Bitiati LB, Cruz GV, Olivari do Carmo VA, Sandri ER, Galvão GG, Cian IM, Zanatta GB, Morcella EP and Jannani YC. Spindle Cell Lipoma in the Supraglottic Region of the Larynx: A Case Report. Mega J Case Rep. 2024;7(9):2001-2006.

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