



Partial Transoral Resection of Retropharyngeal Lymphatic Malformation with Radiofrequency Ablation: Case Report

Débora Bressan Pazinato*, Flávia Lima Peixoto Costa, Leticia Raysa Schiavon Kinasz, Luciahelena Morello Pacheco Prata and Rebecca Maunsell

Department of Otolaryngology, State University of Campinas, Brazil

Introduction

Lymphatic Malformations (LM) are benign tumors of lymphatic vessels frequently occurring in the head and neck. LM has an incidence of approximately 1-in-2,000 to 4,000 live births and arises from genetic abnormalities in specific cells within the malformation [1,2].

Retropharyngeal location is rare, can cause dysphagia and respiratory symptoms as dyspnea and acute respiratory distress in case of rapid growth. Its management is particularly challenging.

The present study describes a case of a 2-month-old child with respiratory distress due to retropharyngeal LM and upper airway obstruction. She underwent surgical treatment with transoral resection using radiofrequency ablation and tracheostomy was avoided.

Case Presentation

A one-month-old previously asymptomatic full-term baby girl presented perennial snoring and progressive tachypnea. There was no history of perinatal complications.

At 40 days of life respiratory distress worsened and the child was admitted to the pediatric intensive care unit. In the following days she progressed with apneic spells and desaturation.

She presented noisy biphasic breathing characterized as a low-pitched grunt and sternal retractions that worsened when crying, sleeping or breastfeeding. Oral feeding was suspended, and a nasal tube was introduced. High flow nasal cannula was installed for respiratory support to avoid intubation. An awake flexible fiberoptic laryngoscopy was performed and considered normal.

Drug Induced Sleep Endoscopy (DISE) revealed bulging of the posterior pharyngeal wall touching the tongue base and epiglottis. A Microlaryngoscopy and Bronchoscopy (MLB) was also performed but there were no other lesions or obstructions in the glottis, subglottis or trachea levels. Needle aspiration of the lesion revealed hyaline content and a small biopsy of the capsule was sent for pathology.

Magnetic Resonance Imaging (MRI) showed a cystic mass in the retropharyngeal space, extending from the rinopharynx level and causing narrowing of the airway up to the level of the hypopharynx. The mass was hypointense on T1-weighted images and hyperintense on T2-weighted images and had an estimated volume of 11 ml laterally adjacent to the external carotid artery (Figure 1).

Pathological examination confirmed diagnosis of retropharyngeal lymphatic malformation.

Surgical treatment was carried out through a transoral submucosal approach using 0° and 30° rigid endoscopes. With the Coblator® wand at a power setting of 5W, we performed radiofrequency ablation of the lymphangioma, sparing the surrounding structures and the mucosa. Fibrin glue was used to seal the surgical field and pharyngeal mucosa was closed with absorbable sutures, as shown in the Figure 2. The child was extubated in the operating room and there was no need for further airway support.

The respiratory symptoms improved in the early days after surgery.

During follow-up care, reintroduction of oral feeding proved challenging due to persistent drooling and coughing after feedings. An MRI was repeated 30 days after surgery. The exam confirmed significant reduction of the mass: Estimated volume before surgery was 11 ml and after surgery 1 ml. The dysphagic symptoms progressively improved only with adjustment of volumes and the patient was discharged after 2 weeks.

OPEN ACCESS

*Correspondence:

Débora Bressan Pazinato, Department of Otolaryngology, State University of Campinas, Brazil, E-mail: deh.pazinato@gmail.com

Received Date: 01 Apr 2022

Accepted Date: 15 Apr 2022

Published Date: 20 Apr 2022

Citation:

Pazinato DB, Costa FLP, Kinasz LRS, Prata LMP, Maunsell R. Partial Transoral Resection of Retropharyngeal Lymphatic Malformation with Radiofrequency Ablation: Case Report. *Am J Otolaryngol Head Neck Surg.* 2022; 5(6): 1194.

Copyright © 2022 Débora Bressan Pazinato. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Currently, ten months after this procedure, no recurrence has been observed and the patient remains asymptomatic.

Discussion

Retropharyngeal LM are rare and the topographic diagnosis may be challenging, thus requiring an association of high suspicion when assessing airway symptoms. In an infant, symptoms of noisy breathing, retractions and apnea can be due to obstruction at different levels and DISE can help identify the exact location of obstruction. MRI can define size and extent of submucosal pathology.

Treatment of LM particularly in the airway must be individualized for each patient, depending on the size of the lesion, its location and the presence of complications and obstructive symptoms. Early and effective treatment can avoid tracheostomy in a young child.

LM can involve vital structures and make surgical resection potentially challenging. Incomplete resection is not uncommon and damage to important neurovascular structures can occur. A combination of technical skills and instruments may be considered as an alternative to conventional technique. Transoral accesses combined with the use of telescopes are quite appealing to the airway surgery. Although sclerotherapy is a treatment option, it is important to understand respiratory physiology and the potential of further airway obstruction in case of secondary inflammation. In the current case this consideration led to the choice of not using this as a first option.

The transoral approach combined with endoscopic view, proved to be efficient and safe allowing good control of the anatomical boundaries and precise resection of most of the lesion while preserving mucosa.

The surgery described is not a novel technique; Quentil et al. first reported it in 2015 in a retrospective study in which three children with symptomatic retropharyngeal LM were operated on [3]. However, this is the youngest child reported to have been treated for retropharyngeal LM with radiofrequency ablation without a tracheostomy.

Conclusion

Noisy breathing in neonates can be challenging. When the awake endoscopic assessment of the upper airway is inconclusive, sleep endoscopy may contribute to better diagnose and guide the need for further exams. Treatment of retropharyngeal pathology causing airway obstruction should be tailored to the individual case to avoid unnecessary tracheostomy and/or further complications.

References

1. Perkins JA, Manning SC, Tempero RM, Cunningham MJ, Edmonds Jr JL, Hoffer FA, et al. Lymphatic malformations: Current cellular and clinical investigations. *Otolaryngol Head Neck Surg.* 2010;142(6):789-94.
2. Perkins JA. New frontiers in our understanding of lymphatic malformations of the head and neck: Natural history and basic research. *Otolaryngol Clin North Am.* 2018;51(1):147-58.
3. Lisan Q, Villepelet A, Parodi M, Garabedian EN, Blouin MJ, Couloigner V, et al. Value of radiofrequency ablation in the management of retropharyngeal lymphatic malformation. *Int J Pediatr Otorhinolaryngol.* 2016;83:37-40.