Laryngeal Neurofibroma: A Case Report and Review of the Literature

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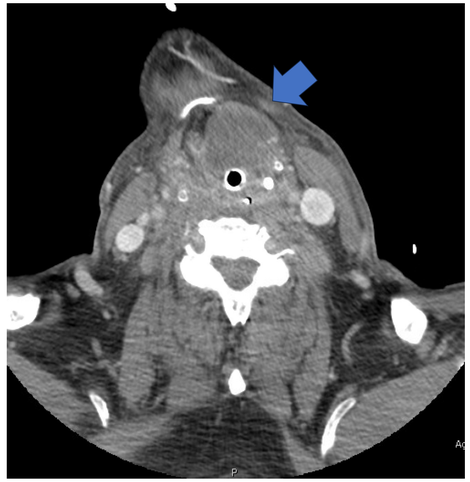
Introduction

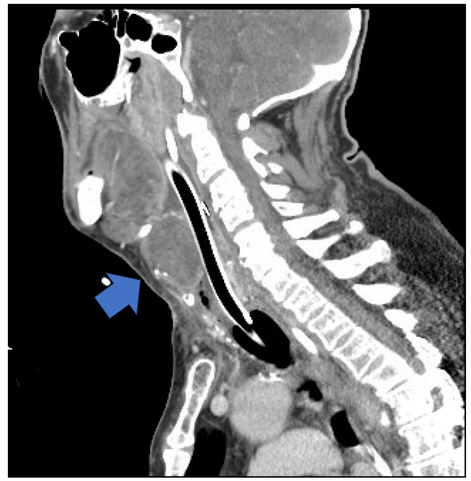
- Laryngeal neurofibromas account for less than 1% of all benign laryngeal tumors and are caused by proliferations of Schwann cells, fibroblasts, and perineural cells.
- Most cases of laryngeal neurofibroma occur in patients diagnosed with neurofibromatosis type 1 (NF-1) or neurofibromatosis type 2 (NF-2).
- Neurofibromas most commonly present as sessile or pedunculated mucosal or sub-mucosal masses of the aryepiglottic fold, arytenoid, or false vocal cords, typically arising from the terminal plexus of the superior laryngeal nerve or branches of the recurrent laryngeal nerve.
- We report on a case of a solitary laryngeal neurofibroma in a 75-year-old male with Schizoaffective disorder with a previously known laryngeal mass lost to follow up without known NF-1 or NF-2.

Clinical Course

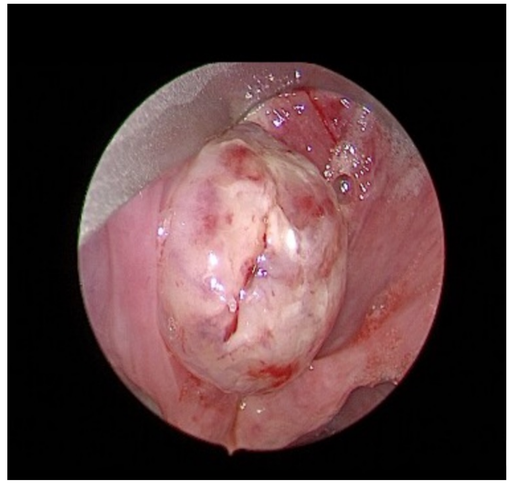
- **12/7/2024**: Presented to OSH with sepsis in the setting of MRSA pneumonia requiring intubation for acute hypoxemic respiratory failure. During intubation, large laryngeal mass noted and was transferred to Yale New Haven Hospital for further management
- **12/11/2024:** CT imaging was notable for a hypoattenuating cystic mass centered between the hyoid and cricoid cartilage superior to the true vocal cords measuring 3.3 x 4.5 cm in size, ddx laryngocele or saccular cyst
- **12/13/2024**: Underwent direct laryngoscopy, biopsy which revealed a large sub-mucosal laryngeal mass involving the endolarynx, extending to the left false vocal fold, ventricle, arytenoid, and aryepiglottic fold, which necessitated tracheostomy for airway protection
- **12/18/2024:** Surgical pathology revealed low grade myxoid spindle cell neoplasm consistent with neurofibroma
- **1/17/2025:** Underwent surgical debulking utilizing carbon dioxide laser and microdebrider which restored airway patency
- **1/16/2025**: Prolonged hospital course due to persistent dysphagia and multiple failed FEES with SLP, leading to PEG placement
- **1/18/2025:** Tracheostomy successfully decannulated
- **2/26/2025**: At most recent follow up, reported strong voice without limitation, improved swallow function working with SLP. Flexible fiberoptic laryngoscopy with slight fullness along right pharyngeal wall without evidence of recurrence

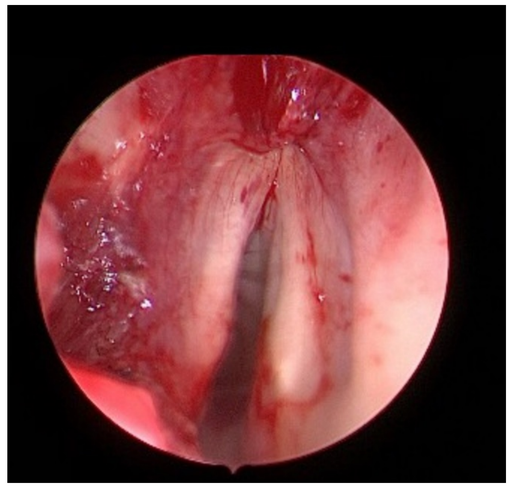
CT Images





Pre and Post-Operative Images





Conclusion

- Benign laryngeal masses can lead to severe symptoms including dysphagia and respiratory distress if left untreated
- Given the broad differential of benign sub-mucosal laryngeal lesions, including neurofibromas, paragangliomas, chondromas, lipomas, rhabdomyomas, and leiomyomas, biopsy and subsequent surgical resection to restore function are paramount.
- Tracheostomy and PEG placement may be needed even for benign laryngeal masses in patients with a complicated clinical course
- Given rare occurrence of laryngeal neurofibromas, recurrence rates are not well established, loing-term follow up is important

References

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