

Case report

Large Vallecula Lipoma: An unusual clinical entity

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Abstract

Lipoma of the oropharynx is an extremely rare entity with less than ten cases reported in so far. We present the case of a 55-year-old gentleman who was referred to our team for an incidental finding of an oropharyngeal mass. Although he did not have stridor despite the mass occupying almost 80% of his oropharynx, he did complain of progressive voice change, feeling of something in the throat and dysphagia over a period of 2 years. The mass was successfully excised endoscopically without the need for a tracheostomy. Airway issues, management options of an oropharyngeal mass, as well as the applied embryology of these lesions are discussed.

Keywords: Lipoma; Vallecula; Cyst; Oropharynx

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Introduction

The diagnoses of vallecula and epiglottic cyst as well as the management challenges that they pose have long been identified and treated appropriately. Their rare counterpart, lipoma of the oropharynx and larynx on the other hand, present in a similar way but may create slight difficulties in terms of securing the airway, as these firm lesions cannot be aspirated, unlike a cyst. We present this case that was initially clinically thought to be a vallecula cyst, but turned out to be a lipoma instead.

Case report

A 55-year-old Asian gentleman, a chronic smoker with underlying chronic obstructive airway disease was being treated for bronchopneumonia. He was referred to our team due to an incidental finding of an oropharyngeal mass during routine oral examination. Upon further questioning, he provided a history of change in voice, followed by feeling of something in the throat and dysphagia, progressively worsening over a period of two years. At presentation he was able to tolerate soft diet as consumption of solids occasionally yielded a choking sensation. He never experienced any noisy breathing apart from the

occasional wheeze that he would have due to his underlying airway disease.

Intraoral examination revealed a large, well-defined, mobile, globular cystic-appearing mass that was almost completely obstructing the entire oropharynx (Fig 1). A bedside awake flexible nasopharyngolaryngoscopy demonstrated a huge compressible mass measuring about 3.0 x 5.0 cm arising from the vallecula and locally confined to the lingual surface of the epiglottis. 80% of the oropharyngeal airway was occluded. The laryngeal structures below the epiglottis were normal. Neck examination was **unremarkable**.



Fig 1: Globular mass obstructing the oropharynx (arrow)

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Computed tomography (CT) of the neck displayed a well-defined, homogenous, hypodense lesion with Hounsfield Unit (HU) of -120 to -80, measuring 2.8 x 4.2 x 5.9 cm arising from the right vallecule (Fig 2a, 2b and 2c). Blood parameters were normal. Attempt at aspiration to reduce the size of the mass did not yield any aspirate. He was intubated via fiberoptic laryngoscopy while being fully awake. The mass was removed in-toto (Fig 3a and 3b) using curved-blade harmonic scalpel (Ultracision Ethicon-Endo Surgery, Generator 300). The procedure was uneventful. He was discharged 3 days after surgery and made a full recovery within 2 weeks, returning to his daily activities. A review at 1 year was **unremarkable**.



Fig 2a, 2b, 2c: Axial, coronal and sagittal CT images demonstrating the mass



Fig 3a and 3b: The excised mass removed in-toto

Discussion

Lipoma is a benign mesenchymal tumor originating from adipose cells. Lipoma of the head and neck region accounts for 13% of cases and of the larynx, oropharynx and hypopharynx make up only 1% of benign laryngeal lesions^{1,2}. The occurrence of a head and neck lipoma may be sporadic, or as a manifestation of systemic lipomatosis³. The aetiology of lipoma occurring in this region is still a debatable topic, however, Murty et al had suggested that fibroblasts being a multipotential cell, may differentiate into fat cells and form a lipoma within this region³.

A benign mass in the oropharynx or hypopharynx may be small to remain asymptomatic, or extremely huge to cause an abrupt airway obstruction. Although they may be slow in development and benign in nature,

they should not be taken lightly because the tumour may grow large enough to cause life-threatening airway obstruction⁴. Occasionally, the mass may also be found incidentally during an inspection of the oropharynx, as in this patient.

The differential diagnoses of a midline oropharyngeal mass include lingual thyroid, lingual tonsil, thyroglossal duct cyst, dermoid cyst, salivary gland neoplasm, mucosal polyp, retention cyst, laryngocele, myoma, chondroma, papilloma, lymphangioma, hemangioma, benign lipoma and liposarcoma. Regardless of the nature of the mass, the usual clinical features are related to oropharyngeal or hypopharyngeal obstruction. Nasal obstruction, snoring, and episodes of sleep apnea are the main reasons for consultation as well as change in voice, dysphagia, foreign body sensation and stridor⁴.

Occasionally a benign oropharyngeal or hypopharyngeal lesion may pose a diagnostic dilemma. However, with the advent of modern imaging techniques such as CT scans, an accurate provisional diagnosis can be made and this later be confirmed via subsequent histopathological examination post excision³⁻⁶. An accurate provisional diagnosis is important to guide one on the further management of the mass, as well as to see if the cyst is amenable to aspiration and decompression.

The vallecule is one of the important landmarks during intubation. Anticipating difficult intubation and early referral to the anesthetic team is vital to avoid fatal complications. Awake flexible fiberoptic intubation is an option to secure the airway in a patient undergoing excision in an elective setting⁷. The presence of an experienced anaesthetist and an otolaryngologist is mandatory during masked ventilation. If the patient cannot be intubated, an emergency tracheostomy may be necessary to secure the airway⁷.

The therapeutic treatment for an oropharyngeal cystic lesion is complete surgical excision, as incomplete removal would result in higher chances of recurrence^{1,3,8}. The options for excision are via the transoral or transcervical route with the external approach being slightly more complex due to the presence of neurovascular structures in the neck¹. We utilized the endoscopic guided intraoral approach using harmonic scalpel and manage to achieve bloodless wide excision of the tumor. Literature shows that postoperative complications are usually rare and prognosis is excellent, as in our case^{1,3}.

Conclusion

Lipoma must be considered in the differential diagnosis of an oropharyngeal mass although it is rare. Multidisciplinary airway management is mandatory to prevent fatal complications. Complete surgical excision is the treatment of choice to prevent recurrence.

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