www.nclinmed.com
Novelty in Clinical Medicine. 2022; 1(2): 116-118
https://doi.org/10.22034/NCM.2022.326710.1007

Case Report Open Access

Anaesthetic management of a huge oropharyngeal mass- case report

Vasudha Govil [1*], **Suresh Singhal** [1], **Anju Rani** [1], **Sudha Puhal** [1], **Sahil Arora** [2]

[1] Department of Anaesthesiology and Critical Care, Pt. B D Sharma PGIMS, Rohtak, Haryana, India
[2] Department of Orthopedics, Pt. B D Sharma PGIMS, Rohtak, Haryana, India

[*] **Corresponding author:** Vasudha Govil. Department of Anaesthesiology and Critical Care, Pt. B D Sharma PGIMS, Rohtak, Haryana, India.
Email: vasudha_govil@yahoo.com

Received: 14 January 2022 **Revised:** 27 January 2022 **Accepted:** 10 February 2022 **e-Published:** 1 March 2022

Abstract

Background: Patients with oropharyngeal masses present a challenge for anesthesiologists regarding ventilation and tracheal intubation. Therefore, preoperative evaluation and preparation play a crucial role in managing difficult airway cases.

Case report: A 45-year-old female suffered from a mass in her oropharynx, leading to dysphagia and a hoarse voice. Clinical examination and diagnostic tests indicated a challenging airway. The patient underwent fiberoptic nasotracheal intubation with successful perioperative outcomes. In addition, a tracheostomy was reserved as an alternative plan in case of unexpected difficulty during the CIV (cricothyroid vein injection) procedure.

Discussion: Thorough preoperative examination and assessment are essential to adequately prepare for potentially difficult airways. Fiberoptic bronchoscope-guided nasotracheal intubation is a secure and effective method for managing the airway in challenging situations when dealing with a spontaneously breathing patient.

Keywords: Oropharyngeal mass, Difficult airway, Preoperative preparation, Fibreoptic nasotracheal intubation.

Introduction

Huge oropharyngeal masses can pose a significant challenge for an anesthesiologist in terms of airway management and the securement of a definitive airway. These masses are frequently presented to the anesthesiologist for airway management and anesthesia during diagnostic or therapeutic procedures. The most common type of oropharyngeal tumor is squamous cell carcinoma, which originates from squamous epithelial cells lining the upper aerodigestive tract.[1] We describe a case of a 45-year-old woman who underwent excision and biopsy of a massive oropharyngeal mass with ease and success throughout the anesthesia process due to a thorough preoperative evaluation and careful planning for potential difficult airways.

Case report

A previously healthy 45-year-old woman presented with a growth in the oropharynx that had been present for 3 months. At the time of her presentation, she experienced changes in her voice, globus sensation, and dysphagia. Over the past 3 months, she has also noticed a significant weight loss and decrease in appetite. The patient did not report any accompanying symptoms such as pain, fever, chills, rash, or night sweats. She chewed tobacco but did not smoke or drink alcohol. During clinical examination, a massive 5x3 cm growth was seen on both sides of the tonsillar fossa, uvula, and tongue, spreading inferolally into the pharynx [Figure 1]. Because of the restriction induced by the soft tissue mass in the oral cavity, the posterior pharyngeal wall could not be assessed. An airway examination revealed a mouth opening of 4 cm. Due to the obstructions caused by the tumor, the Mallampati classification could not be determined. Head and neck mobility were found to be satisfactory during the examination. The computed tomography (CT) scan revealed a 4.6 x 2.6 cm soft tissue attenuating lesion in both tonsillar fossae, uvula, valleculae, and the base of the

tongue reaching up to the supraglottic area (Figure 2). Additionally, bilateral cervical lymph nodes were noted. The general physical examination and laboratory results were all within normal limits.

After a comprehensive evaluation, it was decided to proceed with the excision of the mass under general anesthesia with fiber-optic nasotracheal intubation. Informed written consent was obtained, including consent for an emergency tracheostomy. The patient received ranitidine 150mg orally in the night and morning and was maintained as a fasting patient overnight. An intramuscular injection of glycopyrrolate (0.2mg) was given in the morning. Oxymetazoline nasal drops were instilled into both nostrils. The patient was nebulized with 5 ml of 4% lidocaine and transferred to the operating room. Baseline monitors were attached, and a peripheral cannula was securely positioned with an 18G cannula. Oxymetazoline nasal drops were applied once more to the nostrils. Following this, superior and recurrent laryngeal nerve blocks were performed. Intravenous administration of glycopyrrolate (0.2mg) and fentanyl (80 mg) ensued. A split nasopharyngeal airway, stretched along its full length, was carefully inserted through the right nostril to facilitate the insertion of the fiber-optic bronchoscope without causing damage or bleeding from the mass. The mass was subsequently pushed forward by it. Oxygenation via a nasal cannula remained in place throughout the procedure.

A fiberoptic bronchoscope was inserted through the slit nasopharyngeal airway. When the bronchoscope reached the oropharynx, the patient was asked to open their mouth and protrude their tongue, which moved the mass slightly forward and helped us navigate the bronchoscope through it. After reaching the carina, the slit airway was removed, and a 6.5-ID endotracheal tube was inserted. Bilateral air entry was checked, and the tube was secured. Following intubation, inj. Propofol 100mg and a muscle relaxant (vecuronium) 4mg were administered. Anesthesia was maintained with a mixture of oxygen, nitrogen oxide, and isoflurane. All monitored parameters remained stable throughout the surgery. The mass was observed to arise from the tonsillar fossa and was sent for biopsy. The patient was reversed with inj. Neostigmine 0.05 mg/kg and inj. Glycopyrrolate 0.01 mg/kg, followed by extubation once they regained consciousness. They were then transferred to the post-operative ward after one hour of observation.

Discussion

Oropharyngeal masses pose a significant challenge to the anesthetist regarding airway management. Airway assessment of patients with expectedly difficult airways involves a thorough evaluation comprising history, physical examination, and imaging studies. Keeping the patient spontaneously breathing when concerns arise about airway compromise upon induction of anesthesia is crucial.[2,3] Soft tissue swelling of the neck and oral cavity can cause deviation or compression of the airway, leading to difficulties in ventilation and/or intubation. A large swelling in the oral cavity can render laryngoscopy difficult or even impossible. Compression of the swelling during direct laryngoscopy and blind nasotracheal intubation may lead to bleeding, further complicating the situation. Induction of anesthesia can result in the flopping back of soft tissues and swelling, obstructing the airway. Using a nasopharyngeal airway and opening the mouth with tongue displacement can help the fiberoptic bronchoscope pass smoothly and without trauma. Awake intubation under topical anesthesia and nerve blocks has an inherent advantage in maintaining the airway.[4,5]

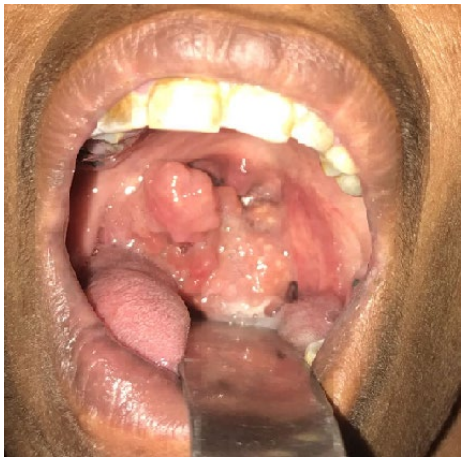

Figure-1. Oropharyngeal mass involving bilateral tonsillar fossa, uvula, base of tongue

Conclusions

Patients with oral cavity swelling often encounter difficulty during ventilation and tracheal intubation. A

thorough preoperative evaluation and preparation are crucial. The patient had a sizable growth in their oropharynx that almost blocked their hypopharynx. As a result, we decided to perform an awake fiberoptic bronchoscope-guided nasotracheal intubation with necessary precautions. We also prepared for a tracheostomy as a backup plan in case of CVCI. Awake fiberoptic bronchoscopy proves to be a secure and effective method for managing difficult airways.

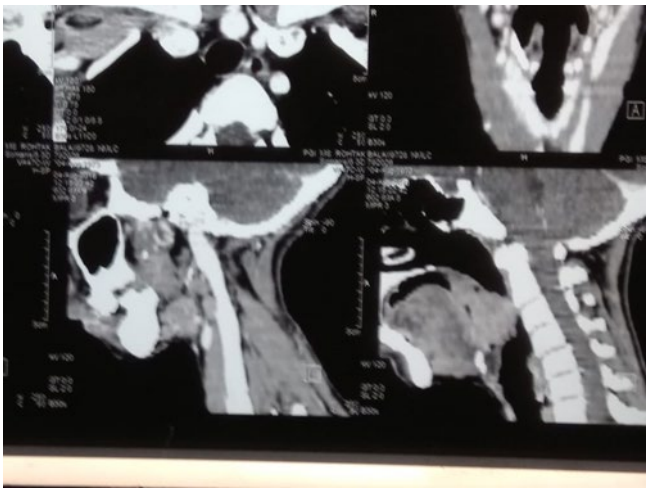

Figure-2. CT scan showing mass obscuring the airway and extending in the hypopharynx

Acknowledgment

None.

Competing interests

There are no conflicts of interest.

Abbreviations

Cannot ventilate, cannot intubate: CVCI.

Authors' contributions

All authors pass the four criteria for authorship contribution based on the International Committee of Medical Journal Editors (ICMJE) recommendations. All authors read and approved the final manuscript. All authors take responsibility for the integrity of the data and the accuracy of the data analysis.

Funding

None.

Availability of data and materials

The data used in this study are available from the corresponding author on request.

Ethics approval and consent to participate

The study was conducted in accordance with the Declaration of Helsinki. Institutional Review Board approval was obtained. The present study did not interfere with the process of diagnosis and treatment of patients.

Consent for publication

By submitting this document, the authors declare their consent for the final accepted version of the manuscript to be considered for publication.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

References

1. Stambuk HE, Karimi S, Lee N, Patel SG. Oral cavity and oropharynx tumors. Radiol Clin N Am. 2007;45:1-20 doi:10.1016/j.rcl.2006.10.010 PMid:17157621
2. Law JA, Broemling N, Cooper RM, Drolet P, Duggan LV, Griesdale DE, et al. The difficult airway with recommendations for management--part 1--difficult tracheal intubation encountered in an unconscious/induced patient. Can J Anesth. 2013;60(11):1089-118. doi:10.1007/s12630-013-0019-3 PMCid:PMC3825645
3. Apfelbaum J, Hagberg C, Caplan R, Blitt C, Connis R, Nickinovich D. Practice guidelines for management of the difficult airway. An updated report by the American Society of Anesthesiologists Task Force on management of the difficult airway. Anesthesiology. 2013; 118:251-70. doi:10.1097/ALN.0b013e31827773b2 PMid:23364566
4. Kaur H, Kataria AP, Muthuramalingapandian M, Kaur H. Airway considerations in case of a large multinodular goiter. Anesth Essays Res. 2017; 11(4): 1097-100. doi:10.4103/aer.AER_86_16 PMid:29284884 PMCid:PMC5735459
5. Gilligan C, Volschenk W, Russo M, Green M, Gilmore C, Mehta V, et al. Long-Term Outcomes of Restorative Neurostimulation in Patients With Refractory Chronic Low Back Pain Secondary to Multifidus Dysfunction: Two-Year Results of the ReActiv8-B Pivotal Trial. Neuromodulation. 2022. doi:10.1016/j.neurom.2021.10.011 PMid:35088722

Cite this article as:
Govil V, Singhal S, Rani A, Puhal S, Arora S. Anaesthetic management of a huge oropharyngeal mass- case report. Novel Clin Med. 2022; 1(2):116-118. doi: 10.22034/NCM.2022.326710.1007