



A FLEXIBLE FIBRE OPTIC NASOPHARYNGOSCOPE : A RESCUE SOLUTION FOR AWAKE ORAL INTUBATION

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ABSTRACT

Patients with oral and nasopharyngeal masses are at risk of difficult mask ventilation and tracheal intubation. The difficult airway can be anticipated with proper airway examination in the preoperative period. Flexible fibre optic endoscopes have become a standard tool for managing difficult airways.– We report a case where difficult tracheal intubation was accomplished using a 300 mm flexible nasal endoscope using topical anaesthesia and sedation while maintaining spontaneous respiration and airway reflexes.

KEYWORDS : nasopharyngeal tumour, difficult intubation, awake fibre optic

INTRODUCTION

Patients with oral tumours or pathology of the nasopharynx, oropharynx, epiglottis and glottic aperture are at risk of difficult mask ventilation and tracheal intubation. Proper preoperative airway examination helps us to identify the risk factors. Awake intubation using a fibre optic bronchoscope is a standard tool for securing the airway in such patients. A conventional bronchoscope is 600 mm in length. It requires skills and training to use this scope. Many times there is a failure to railroad the tube due to its long length while using the scope⁽¹⁾. A nasopharyngoscope is easy to handle and routinely used in ENT practice. It has a short working length of 300 mm and a 3 mm diameter. Here we report a case of difficult intubation achieved using a 300 mm nasopharyngoscope modified to use for awake oral intubation.

CASE REPORT

A 70 year old male patient came with complaints of difficulty in swallowing, increased salivation and voice change over 2 months. The patient was diagnosed to have a nasopharyngeal tumour and was planned for excisional biopsy of the tumour. A thorough airway examination was done preoperatively. Difficult intubation was anticipated. Patient was counselled about awake oral intubation. Patient was asked to perform 2% lignocaine viscous gargles 15 mins before shifting in the operation theatre. Patient was shifted to OT and all standard monitors were attached and baseline vitals were noted. Inj glycopyrrolate 0.2 mg was given along with inj ondansetron 4mg. Patient was then given and inj midazolam 1 mg inj fentanyl 20 mcg iv. Patient was asked to open his mouth and 10% lignocaine was sprayed at the oropharynx base of the tongue and tonsillar pillars. A 300mm nasopharyngoscope(2) was attached with a 12 Fr feeding tube using a micropore at regular intervals. An 8 mm tube was mounted on the scope. Adequate positioning was given and the patient was asked to open his mouth. The scope along with the mounted tube was introduced into the mouth. Spray as you go technique was used .2 % lignocaine 1 ml was sprayed using the feeding tube above the vocal cords, 1 ml at the level of vocal cords and 1 ml below the vocal cord.(4) The endotracheal tube was then railroaded into the trachea and the scope was removed. Air entry was checked and the tube was fixed. Patient was vitally stable during this procedure. Patient was then induced with inj propofol 2mg/kg and inj vecuronium 0.1 mg/kg. Maintenance was done using N2O and sevoflurane. The surgery was uneventful and the patient was extubated after adequate reversal. The micropore count on the feeding tube was checked and found to be the same. Patient was then shifted to the recovery room.



Figure 1: Nasopharyngoscope With Feeding Tube

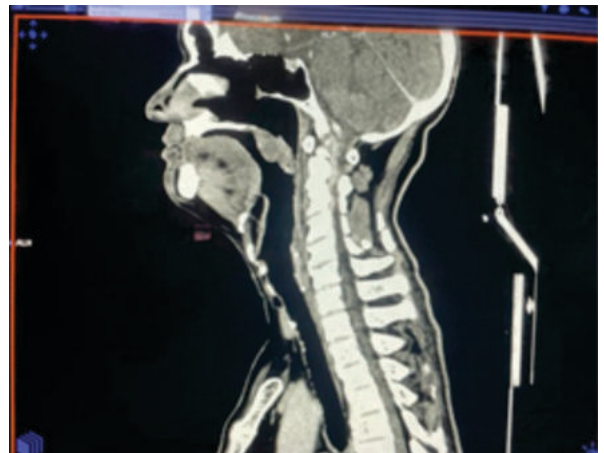


Figure 2: CT Image Of Nasopharyngeal Tumour

DISCUSSION

Nasopharyngeal tumours are detected late and present with late complications with regard to airway management. The factors responsible for difficult airways in these patients are

- Presence of the cancer growth itself which leads to distortion of normal anatomy.
- Anatomical changes and fibrosis due to previous radiotherapy.
- These tumours are usually friable and thus can undergo fracture and get dislodged during laryngoscopy.
- These tumours are usually prone to bleeding which can further hinder glottic view and also lead to aspiration.

Detailed knowledge of the type, extent and vascularity of the tumour is essential. Evaluation of a patient's airway should be performed thoroughly and carefully as it helps in anticipating difficult airways and planning our strategy accordingly. As the nasopharyngoscope is thin around 3 mm in diameter, and easy to handle due to its short length, the procedure is well tolerated by patients with less risk of hemorrhage and trauma^(2,5). A shorter fiberscope is easy to manipulate with one hand, leaving the other hand available for positioning the patient's head to align the glottis and the armed fiberscope. Asking the patient to protrude the tongue and to take deep breaths during the glottis passage also is helpful. The tip of the fibre optic scope is just ahead of the tube it helps smooth the passage of the tube and easy and fast intubation.

Proper airway topicalization helps in smooth intubation.(4) The secretions and blood can obscure the view but using a feeding tube along with the scope helps in suctioning and drug delivery.

CONCLUSION

A difficult airway can be anticipated with proper history and airway examination. Awake oral intubation with a short length 300mm nasopharyngoscope can be done smoothly by modifying the instrument for our use and proper topicalization of the airway.

REFERENCES

1. Ahmad, I., El-Boghdady, K., Bhagrath, R., Hodzovic, I., McNarry, A. F., Mir, F., O'Sullivan, E. P., Patel, A., Stacey, M., & Vaughan, D. (2020). Difficult Airway Society guidelines for awake tracheal intubation (ATI) in adults. *Anaesthesia*, 75(4), 509–528. <https://doi.org/10.1111/anac.14904>
2. Marchis, I. F., Zdrehus, C., Pop, S., Radeanu, D., Cosgarea, M., & Mitre, C. I. (2021). Awake nasotracheal intubation with a 300-mm working length fiberscope: a prospective observational feasibility trial. *Brazilian journal of anesthesiology* (Elsevier), S0104-0014(21)00402-4. Advance online publication. <https://doi.org/10.1016/j.bjane.2021.10.015>
3. Asai, T., & Shingu, K. (2004). Difficulty in advancing a tracheal tube over a fibreoptic bronchoscope: incidence, causes and solutions. *British journal of anaesthesia*, 92(6), 870–881. <https://doi.org/10.1093/bja/ae1136>
4. Kostyk, P., Francois, K., & Salik, I. (2021). Airway Anesthesia for Awake Tracheal Intubation: A Review of the Literature. *Cureus*, 13(7), e16315. <https://doi.org/10.7759/cureus.16315>
5. Guzman J. L. (1997). Use of a short flexible fiberoptic endoscope for difficult intubations. *Anesthesiology*, 87(6), 1563–1564. <https://doi.org/10.1097/0000542-199712000-00034>