

# Routine use of Nasopharyngeal Airway Enhances the Quality of a Fiberoptic / Videobronchoscopic Intubation

Dr. T. Chandana Krishna<sup>1</sup>, Dr. B. Jeevitha<sup>2</sup>, Dr. C. G. Raghuram<sup>3</sup>

<sup>1,2</sup>Post Graduate, Department of Anesthesiology and Critical Care, Kurnool Medical College and GGH

<sup>3</sup>Professor and Head of the Department (in-charge), Department of Anesthesiology and Critical Care, Kurnool Medical College and GGH

**Abstract:** *Nasopharyngeal airway is the most ideal and acceptable device for insertion into the nasal pathway and is mainly used for maintaining the upper airway in an anaesthetized and unconscious patient. Fiberoptic or videobronchoscope is the most recognized and accepted instrument to secure and facilitate Endotracheal intubation whenever there is a difficulty in securing the airway. It is usually introduced through the nose in most of the situations and occasionally through mouth by few people who favour it. We highlight the use of a nasopharyngeal airway device and the measures that go along with it in improving the quality of a fiberoptic/videobronchoscopic intubation.*

**Keywords:** nasopharyngeal airway, videobronchoscopic intubation, nasal decongestion

## 1. Procedure

The following measures are a must to enhance the quality of a fiberoptic bronchoscopic intubation. A successful and smooth fiberoptic/videobronchoscopic intubation requires zero or negligible bleeding in the nasal pathway or airway, absence of viscid secretions in the throat and around the epiglottis and larynx and a well lubricated instrumentation covering both the Nasopharyngeal airway and the bronchoscope.

The measures are:

- 1) Adequate nasal decongestion with xylometazoline /oxymetazoline/ phenylephrine nasal drops along with sorbitol. This should be started at least 72hrs before the proposed bronchoscopy. If this is not done any instrumentation of the nasal cavity can lead to epistaxis and bleeding into the throat and this will obscure the view of bronchoscope.
- 2) The nasal pathway should be thoroughly lubricated with a lubricant jelly to facilitate a smooth insertion of either the nasopharyngeal airway or bronchoscope. If the nasal track is not lubricated, insertion of any intranasal device will encounter excessive resistance and again lead to epistaxis and clouding of the bronchoscopic view.
- 3) An intramuscular premedication with an anticholinergic agent viz., Atropine or Glycopyrrolate should be resorted to in all cases at least one hour before the commencement of bronchoscopy. This will facilitate a clear view of the larynx and vocal cords due to absence of secretions.
- 4) Last but not the least, use of lignocaine in anaesthetizing track for bronchoscopy also ensures a comfortable bronchoscopy procedure for both the doctors as well as the patient.

The following measures are needed and are resorted to by most of the bronchoscopists to facilitate a smooth endotracheal intubation / clear view of the respiratory tract.

The measures are Packing of the nose with gauze soaked in 2% lignocaine with 1 in 80,000 or 1 in 2,00,000 adrenaline, injection of 2% lignocaine jelly into the nasal pathway with a suitable syringe, 2% lignocaine viscous for mouth gargling and minimizing the gag reflex, a 10% lignocaine spray with a long nozzle to anesthetize the throat and suppress gag reflex, bilateral superior laryngeal nerve block and transtracheal recurrent laryngeal sensory block.

- 5) An intravenous injectable antiemetic should be given before performing bronchoscopy to minimize nausea and vomiting.

## 2. The Technique Proper

A suitable appropriate nasopharyngeal airway is inserted through the patent nostril and positioned in such a way that maximum breath sounds are heard. Now, the fiberoptic bronchoscope is inserted after lubricating the instrument through the nasopharyngeal airway. The bronchoscope reaches the larynx with in no time as the airway is situated very nearer to vocal cords. The fiberoptic intubation is facilitated in a smooth way as the bleeding, friction and secretions are already minimized by prior preparation of the patient.

In this technique, the need to do a thorough suction through the bronchoscope is very minimal because of a clear view of the throat and the larynx.

Insertion of the bronchoscope into the nose is also avoided in this technique as the tip of the bronchoscope injuring a turbinate, nasal septum or a spur can happen if the bronchoscope is directly introduced into the nose.

In this technique, the bronchoscope is going through the smooth lumen of the nasopharyngeal airway and the outer surface of the nasopharyngeal airway will facilitate hemostasis by pressing against turbinate and nasal cavity.

### 3. Conclusion

Nasopharyngeal airway is a must for every fiberoptic/ videobronchoscopic intubation for the following reasons:

- 1) It minimizes the damage to the tip of the bronchoscopy instrument by avoiding a direct contact with the nasal cavity.
- 2) It facilitates smooth atraumatic intranasal insertion of an indwelling device (both airway and bronchoscope).
- 3) It reduces the actual procedure time to reach the tracheobronchial tree as its tip is placed very nearer to vocalcords.
- 4) It also helps in arresting any bleeding from the nasal cavity as its outer surface applies a hemostatic pressure on the lateral wall and septum of the nose.
- 5) Prior preparation of the nose before inserting the nasal airway helps in ensuring a clear view of the larynx and vocal cords due to the absence or minimal presence of secretions and blood.

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### Author Profile

**Dr. C. G. Raghuram**, M.D., Professor and Head of the Department (in-charge), Department of Anesthesiology and Critical Care, Kurnool Medical College and Government General Hospital, Kurnool, Andhra Pradesh.

**Dr. T. Chandana Krishna**, Post Graduate, Department of Anesthesiology and Critical Care, Kurnool Medical College and Government General Hospital, Kurnool, Andhra Pradesh.

**Dr. B. Jeevitha**, Post Graduate, Department of Anesthesiology and Critical Care, Kurnool Medical College and Government General Hospital, Kurnool, Andhra Pradesh.