Modified Nasal Trumpet for Airway Management

Uzung Yoon, M.D., M.P.H., Ian Yuan, M.D.

A double modified nasopharyngeal airway connected to a breathing circuit to assist ventilation could be a great rescue airway technique. This setup provides unobstructed spontaneous ventilation, end-tidal carbon dioxide monitoring, continuous positive airway pressure, and assisted ventilation as needed.1

A modified nasopharyngeal airway setup can be easily assembled from supplies found in most operating rooms. A nasopharyngeal airway is connected to an endotracheal tube (ETT) connector (single or double). The soft rubber nasopharyngeal airway (size, 30 to 34 Fr) is compatible with most adult ETT connectors due to its elasticity (fig.). It can be connected to any breathing circuit just like an ETT. With this setting, manual and other modes of mechanical ventilation can be used to support ventilation. The double nasopharyngeal airway offers less resistance and less air leak than a single nasopharyngeal airway.

A double modified nasopharyngeal airway technique is beneficial in specific cases, especially in awake craniotomies, airway access is often limited due to patient positions (prone, lateral, and sitting).2,3 Rescue maneuvers such as intubation or laryngeal mask airway insertion may be challenging in patients with skull clamps.

This airway technique is also useful in situations where general anesthesia is indicated but endotracheal intubation is undesirable and the use of a mask is difficult. Especially in face, mouth, or eye surgery or in laryngeal/pharyngeal procedures such as biopsy, this technique is beneficial. The setup and insertion of a double modified nasopharyngeal airway is easier, faster, and less traumatic compared with that of tracheal intubation while providing a better seal than an oral airway with mask ventilation. In contrast to mask ventilation, the double modified airway technique prevents airway obstruction by the tongue, and therefore, obstructive sleep apnea or edentulous patients will benefit from this technique as well.

Competing Interests
The authors declare no competing interests.

Correspondence
Address correspondence to Dr. Yoon: uzyoon@gmail.com

References