Partially Withdrawn Nasotracheal Tube: An Alternative to the Nasal Trumpet

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After 2-jaw surgery, difficulty in breathing through the mouth and the nose is common due to nasal airway obstruction, intraoral bleeding, and sometimes maxillomandibular fixation. A partially withdrawn nasotracheal tube can be used economically with equal efficacy to the nasopharyngeal airway to provide supplemental oxygen after 2-jaw surgery.

Key Words: Orthognathic surgery; Nasal trumpet; Nasopharyngeal airway; Endotracheal tube; Airway management.

After 2-jaw surgery, difficulty in breathing through the mouth and the nose is frequently observed due to nasal airway obstruction, edema of lips, cheeks, and tongue, intraoral bleeding, and sometimes maxillo-mandibular fixation. The nasopharyngeal airway (NPA) is usually inserted to facilitate breathing, tamponade nasal bleeding if present, and provide supplemental oxygen after extubation. The NPA is preferable in patients with limited mouth opening or those lightly anesthetized.¹ It is known to be useful for oxygen administration after extubation and is well tolerated with less agitation than the facemask.² However, the risk of epistaxis is higher in the postoperative period of 2-jaw surgery as a consequence of damage to the nasal mucosa, polyps, turbinates, or other tissues by the insertion of the nasal endotracheal tube (ETT) or NPA as well as the LeFort surgery itself.

After 2-jaw surgery, we encountered a patient who was sufficiently awake and able to secure her airway and to breathe spontaneously with some difficulty as nasal bleeding was active and there may have been intraoral edema and clots filling nasal cavity. Inspired by previous success in keeping the nasal airway patent with the NPA in the immediate postoperative period of bimaxillary orthog-

nathic surgery, we partially withdrew the ETT (Mallinckrodt Nasal RAE) to allow the tube to remain in the nasopharynx after deflating the cuff (Figure 1). The ETT was cut and the standard adaptor supplied with the ETT was reinserted into the proximal end (Figure 2). The partially withdrawn and shortened ETT performed like a NPA allowing supplemental oxygen to be provided but also allowed pharyngeal suction to be done with minimal discomfort by passing a suction catheter through the shortened ETT.

The NPA has a long tradition of use for over 100 years² and has been successfully used for oxygen administration during early postoperative period after extubation in double jaw surgery patients. We have been using a partially withdrawn and shortened ETT instead of the NPA in similar way. The length of the nasotracheal tube that would be withdrawn can be determined by measuring the distance from the tip of the nose to the external auditory meatus.³ Before intubation, we marked the measured distance from the distal end of the ETT with marking pen. This procedure can identify the proper distance for the cut ETT and help us avoid insertion of new NPA after 2-jaw surgery, which can be associated with some morbidity. Middle turbinectomy was reported as a complication of NPA placement.⁴ In addition, supplemental oxygen and pharyngeal suction can be done with minimal discomfort by passing a suction catheter through the shortened ETT.

In conclusion, a partially withdrawn and shortened nasotracheal tube can be used economically with equal

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Figure 1. Nasotracheal tube (Mallinckrodt RAE) was partially withdrawn after deflating the cuff.

efficacy to the NPA to provide supplemental oxygen after 2-jaw surgery and improved ability to perform pharyngeal suction.

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Figure 2. The standard adaptor supplied with the nasotracheal tube was reinserted into the proximal end.

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