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References

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- 2 Viby-Mogensen J, Engbaek J, Eriksson LI, et al. Good clinical research practice (GCRP) in pharmacodynamic studies of neuromuscular agents. *Acta Anaesthesiol Scand* 1996; 40: 59–74.

REPLY:

We thank Dr. Donati for his interest in our study.¹ The assessment of the intubating conditions in our study was based, in part, on the guidelines recommended at the 1994 consensus conference.² In the interest of improving the interpretation of our results and permitting future comparisons, we have re-examined the data, which are reported as "excellent", "good", and "poor" based on the consensus conference definitions (Table). Data on intubating conditions were incomplete in six patients (three in each group) and were excluded from the analysis. We did not find a statistically significant difference in the intubating conditions between the two groups ($\chi^2 = 1.273$; $P = 0.53$). The type of surgery did not affect these findings. In addition, we performed sensitivity analyses in which we allocated the missing patients in the sevoflurane group to the "poor" category and the missing patients in the propofol group to the "excellent" category and vice versa. There were no statistically significant differences in intubating conditions between the two groups in both sensitivity analyses.

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TABLE Re-analysis of intubating conditions (defined according to GCRP recommendations) by method of anesthetic induction

Intubating condition	Sevoflurane-remifentanyl	Propofol-fentanyl-rocuronium
Excellent	33	40
Good	24	19
Poor	19	18

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Prime the ProSeal™ drain tube with lube from a tube!

To the Editor:

Lubrication of the ProSeal™ laryngeal mask airway drain tube is rarely performed pre-induction unless a guided insertion technique is planned.^{1,2} However, passage of a guide may be needed for airway rescue, and passage of a gastric tube may be needed for the prevention of aspiration. Any delays in placement of either accessory is potentially hazardous for the patient. One of the authors recently experienced a considerable delay before attempting gum elastic bougie-guided insertion after failed digital insertion, as the tube of lubricant had gone missing (later found in the assistant's pocket), and the sachet of lubricant could not easily be injected into the drain tube. A simple expedient to prevent these delays is to prime the drain tube with a column of lubricant before induction of anesthesia. We recommend the use of a tube rather than a sachet, as it can be firmly applied to the rim of the drain tube making the injection of a lubricant column easier, quicker and much less messy (Figure). Priming the drain tube also allows the tests of malposition, such as the suprasternal notch tap test and the bubble test, to be performed more rapidly.³

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- 1 Drolet P, Girard M. An aid to correct positioning of the ProSeal laryngeal mask (Letter). *Can J Anesth* 2001; 48: 718–9.
- 2 Brimacombe J, Keller C, Judd DV. Gum elastic bougie-guided insertion of the ProSeal laryngeal mask airway is superior to the digital and introducer tool techniques. *Anesthesiology* 2004; 100: 25–9.



FIGURE Injection of a column of lubricant into the drain tube by pressing the tube flush against the opening of the drain tube.

- 3 Brimacombe J. ProSeal LMA for Ventilation and Airway Protection. Laryngeal Mask Anesthesia. Principles and Practice. London: W.B. Saunders; 2003: 505–38.

Use of the laryngeal mask airway in a patient with a difficult airway during supra-stoma granuloma removal

To the Editor:

Supra-stoma granuloma can be treated effectively via rigid bronchoscopy.¹ General anesthesia is required and ventilation can be controlled through the bronchoscope's side port or a cuffed tracheostomy tube. However, rigid bronchoscopy may be impossible in patients with a difficult airway. We describe a modified surgical approach of supra-stoma granuloma removal and our anesthetic management in a patient with a difficult airway.

A 60-yr-old patient had speech limitation due to a tracheostomy tube and supra-stoma granuloma. She had a difficult airway, which made two attempts at rigid bronchoscopy abort. To improve her speech, the surgeons planed to remove the granuloma directly through the tracheostomy stoma, followed by insertion of a Montgomery T-tube. However, the tracheostomy tube would be removed and no secure airway existed during the procedure.

Under total *in* anesthesia, a cuffed tracheostomy tube was first used for ventilation. We inserted a laryngeal mask airway (LMA) as a conduit to introduce the flexible fibroscope, and found the trachea was partially occluded. We then tried to ventilate through the LMA after temporary removal of the tracheostomy tube and occlusion of the stoma, and found that ventilation was possible. The peak inspiratory pressure was 35 cm H₂O for a tidal volume of 400 mL with minimal air leakage. We then decided to hyperventilate the lungs via the LMA (HV-LMA) between surgical manipulations, during periods when the airway could not be accessed.

After a period of hyperventilation, the surgeons removed the tracheostomy tube and proceeded with removal of the granuloma through the stoma. When the oxygen saturation (SpO₂) declined below 95%, HV-LMA was performed. Surgery continued after the SpO₂ reached 99%. The procedure lasted about ten minutes and the SpO₂ was kept above 92%.

In this patient, the success of HV-LMA depended both on partial obstruction by the granuloma, and an excellent seal with the LMA. In a previous report, leak pressure was found to be 29 cm H₂O (SD 6) for the ProSeal LMA and 19 cm H₂O (SD 4) for the classic LMA.² The patient's narrow oropharyngeal/hypopharyngeal space might explain the excellent seal observed. To prevent stomach inflation and aspiration, we used a stethoscope over the epigastrium to monitor stomach inflation. Fortunately, granuloma removal was brief and only two periods of HV-LMA were required, attenuating the risk of gastric inflation. Nevertheless, we were well prepared and would have reinserted a cuffed tracheostomy tube for conditions like uncontrolled airway bleeding, inability to ventilate, or unstable vital signs.

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Support was provided solely from Institutional and/or Departmental sources.