SpO₂ was greater than 97%; 3) a tube exchanger catheter was inserted through the ET; 4) the LMA® and ET were withdrawn together; 5) an ET size ID 8 mm was threaded over the tube exchanger.

With an unhurried approach we achieved safe control of the airway, with adequate oxygenation and mechanical ventilation in a few minutes.

Use of the LMA plus a modified sequential technique proved to be an appropriate strategy to achieve airway control in this patient with an unanticipated difficult airway in an environment where all ancillary equipment and personnel for managing this unexpected complication may not be available.

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Sevoflurane induction of anesthesia in elderly patients

To the Editor:

We read with interest the paper by Yamaguchi *et al.*¹ concerning the establishment of an appropriate technique for high concentration induction of anesthesia with sevoflurane in the elderly. We have four comments.

The first one concerns the absence of preoxygenation. Although the benefit of preoxygenation remains to be demonstrated if a mixture of 100% O₂ and sevoflurane is used for vital capacity induction like in the present study, we would suggest that the importance of preoxygenation at least before *iv* induction is widely accepted.²

The second comment concerns waste anesthetic gases during vital capacity induction. It is desirable to minimize exposure to trace anesthetic gases. The use

of the SiBI™ connector (Ventitech Medical Devices, Sherbrooke, Quebec, Canada) designed for vital capacity induction could be useful for both preoxygenation and reduction of waste anesthetic gases.³

Thirdly, opioids are useful to avoid cardiovascular responses to endotracheal intubation. Figures 1 and 2 do indicate a hemodynamic response to intubation in the three groups. Small doses of opioids could be useful to prevent such changes, but should be limited because of the possibility of bradycardia with higher doses of opioids and sevoflurane at vital capacity induction.⁴

Finally, we feel that time to loss of consciousness and time to disappearance of eyelash reflex are longer than generally observed in Groups II and III. We suggest that monitoring of those two times should be a continuous process, not an intermittent process at ten-second intervals.

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REPLY

We thank Colas *et al.*¹ for their comments on our induction technique,² whereby high concentrations of sevoflurane are inhaled initially and concentration is reduced gradually thereafter. We would like to respond and discuss their suggestions. First, they suggest that preoxygenation should be used before anesthesia induction. In our technique, preoxygenation was not used in order to simplify the technique for inhalation induction in the elder-

ly. Although we did not use preoxygenation, serious desaturation was not observed in our patients. Benumof *et al.*³ reported an alternative technique for preoxygenation to increase arterial oxygen tension. However, because the circuit has to be primed with sevoflurane, an additional source of oxygen and anesthesia circuit will be necessary. Recently, Colas *et al.*⁴ reported the SiBI™ connector can be useful for inhalation induction. It may not only facilitate preoxygenation, but also reduce waste anesthetic gases during inhalation induction. When the SiBI™ connector becomes more widely available for inhalation induction, it will certainly improve inhalation induction in the elderly. Second, they suggest the use of small doses of opioids to prevent cardiovascular instability. The use of opioids has its merits and disadvantages in inhalation induction. The merit is to inhibit the stress response to intubation. The disadvantage is to depress cardiac function, especially in the elderly. At this time, the issue remains controversial. However, it should be noted that our inhalation induction technique, using a gradual reduction of concentration, resulted in cardiovascular stability during the induction of anesthesia in our elderly patient population.

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The laryngeal tube and pharyngeal mucosal pressure

To the Editor:

We read with interest Brimacombe *et al.*'s recent article¹ addressing laryngeal tube (LT) intracuff pressure, pharyngeal mucosal pressure, and oropharyngeal leak pressure.

The authors confirm in cadavers and volunteers that at recommended intracuff volume (80 mL) and pressure (60–70 cm H₂O) the LT #4 generates an appropriate pharyngeal mucosal pressure² and oropharyngeal leak pressure. Overinflation of the cuffs may be harmful. The symptoms developed by the three volunteers may be indeed produced by the overinflation of the cuffs (140 mL), as required by the study protocol. The manufacturer (VBM Medizintechnik GmbH, Sulz, Germany) recommends a manometer to inflate the LT cuffs to a target pressure³ (Figure). Inflation of the cuffs to a predetermined volume is recommended only in situations when a manometer is not available. Reducing the intracuff pressure to a minimum required for a functional pharyngeal and esophageal seal is easier to gauge with a manometer. Also, the LT appears to have less contact of non-cuff portion with the pharyngeal mucosa, thus avoiding high pressure points.

The intracuff pressure recommended for the laryngeal mask airway (LMA) in the instruction manual (and clearly marked on the LMA tube!), is ignored in clinical practice. Direct measurement of the LMA intracuff pressure – which correlates with pharyngeal mucosal pressure, oropharyngeal leak,⁴ and incidence of postoperative pharyngolaryngeal morbidity⁵ – is missing from the anesthesiologist's routine. Cuff overinflation is

FIGURE Inflation of the laryngeal tube (LT) cuffs using a manometer.