

CORRESPONDENCE

Let us not forget the joint statement of the American Society of Anesthesiologists and the American College of Obstetricians and Gynecologists:

There is no other circumstance where it is considered acceptable for a person to experience severe pain, amenable to safe intervention, while under a physician's care. Maternal request is a sufficient justification for pain relief during labor.

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Desflurane Can Be Used to Achieve Smooth and Rapid Induction of Anesthesia

To the Editor:—Inhalation induction of anesthesia commonly is employed in the younger child and, with practice, the technique is quick, smooth, and minimally traumatic psychologically. In the adult population, it may be used as an alternative when there is danger of losing airway control with intravenous induction. In the adult, however, induction time may be prolonged and associated with coughing, straining, or laryngospasm, particularly in the patient with "irritable airways" due to smoking, chronic respiratory infection, or other causes.

For inhalation induction, halothane is considered the agent of choice, because it is less of an airway irritant than the other available agents.¹ Desflurane, because its blood-gas partition coefficient is less than one-fifth that of halothane, has the theoretical advantage of a very short induction time. Unfortunately, because it is also a potent airway irritant, it leads to an unpleasant induction associated with breath-holding, coughing, increased secretions, and laryngospasm.^{2,3}

We recently were requested to provide anesthesia to a 62-yr-old man with a class IV airway compounded by stridor caused by granulation tissue growth in the sub- and supraglottic regions. He had undergone radiation treatment to his neck for a laryngeal tumor with consequent fibrotic limitation of neck extension and a recent resection of 3.5 cm of his trachea just distal to the cricoid cartilage. He also had a history of sleep apnea.

Because of the uncertainty of visualizing the glottis, we planned to have the surgeon perform direct laryngoscopy with the patient

awake and on successful identification of the larynx and suspension of the scope to induce general anesthesia intravenously. The surgeon then planned carbon dioxide laser resection of the lesions during jet ventilation without an endotracheal tube.

We elected to sedate the patient and topically anesthetize his upper airway in preparation for laryngoscopy. We accomplished this by giving 0.2 mg glycopyrrolate as an antisialagogue and had the patient breathe nebulized 4% lidocaine followed by a dense 4% lidocaine mist delivered by flowing oxygen at 6 l/min through an atomizer, which was activated on inspiration by occluding a hole precut in the oxygen delivery tube. However, because of increased sensitivity to sedative medications, often associated with sleep apnea, the patient became somnolent and combative after 100 µg fentanyl and 2 mg midazolam administered intravenously over 10 min. We, therefore, had to change anesthetic technique. Because with the aid of forward jaw thrust, unobstructed spontaneous respirations were obtained, we switched to inhalation induction with desflurane, reasoning that it would be quick and safe, because his airway should be protected from irritation by the lidocaine anesthesia. Induction was smooth, and adequate anesthesia for surgical laryngoscopy was rapidly achieved. Jet ventilation was successfully commenced, and muscle relaxation was added.

We have since used desflurane to induce anesthesia rapidly and smoothly after topically anesthetizing the airway in three additional patients with pathology somewhat similar to the one described. By

using this technique, it is possible to benefit from the low blood solubility of desflurane and achieve rapid and smooth induction of anesthesia for the adult patient with the compromised airway.

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The Esophageal Detector Device: Ellick's Evacuator Versus Syringe

To the Editor:—It was interesting to read the work of Salem *et al.* regarding the efficacy of the self-inflating bulb in detecting esophageal intubation in the presence of a nasogastric tube or endotracheal tube cuff deflation.¹ The use of the esophageal detector device was first described by Wee in 1988.² Since then, a few studies demonstrating its efficacy have been reported. In his original description, Wee recommended the use of a 60-ml syringe with *gentle aspiration* to ascertain the position of the tube. Subsequently, Nunn used a compressed Ellick's evacuator in place of a syringe for this purpose.³ According to Nunn, the Ellick's evacuator applies a negative pressure of 9 kPa (approximately 67.5 mmHg). We believe that the use of the Ellick's evacuator, though more elegant, can cause airway collapse in patients with increased airway resistance, for example, chronic obstructive pulmonary disease, emphysema, or asthma. This can produce false-negative results, that is, failure to aspirate air even when the tube is correctly placed in the trachea. We are aware of two cases of false-negative results using Ellick's evacuator to confirm the position of an endotracheal tube in patients with chronic obstructive pulmonary disease in this hospital. Similarly, Baraka has reported three patients with asthma or upper airway obstruction in whom the use of the self-inflating bulb produced false-negative results.⁴

We believe that the application of a high negative pressure using Ellick's evacuator, as opposed to gentle aspiration using a 60-ml syringe, is more likely to cause airway collapse and, hence, a false-negative result in patients with increased airway resistance.

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