Tracheal Tube/Laryngeal Mask Exchange for Emergence

To the Editor.—Coughing and gagging on the tracheal tube at the end of the anesthetic may result in acute hemodynamic changes, increased intracranial and intraocular pressure, and hypoxia. To date, the only approaches to the avoidance of such coughing are the use of opioids and tracheal extubation, with the patient deeply anesthetized. There are problems with both, and we consider that exchanging the tracheal tube for the laryngeal mask airway (LMA) offers a possible solution. Accordingly, we report 10 patients undergoing major neurosurgery in whom such an exchange occurred.

The 10 patients comprised 7 undergoing elective clipping of intracranial aneurysms and 3 having intracranial tumors removed. Patients were ASA physical status I–II, aged 40–74 yr, and weighed 55–98 kg. No patient was considered at risk of aspiration. Standard monitoring was applied, with arterial and central catheters and a peripheral nerve stimulator. Anesthesia was induced with 2 mg·kg⁻¹ propofol and 5–10 μg·kg⁻¹ fentanyl, and anaesthesia was maintained with oxygen-air/sevoflurane mixture (minimum alveolar concentration 0.2–0.5) and a fentanyl infusion of 3–10 μg·kg⁻¹·hr⁻¹. Patients were paralyzed, and their lungs were ventilated via a reinforced tracheal tube. Muscle relaxation was with vecuronium and maintained via an infusion. Labetalol was given by infusion, as required to maintain baseline blood pressures during the procedure. The fentanyl infusion was ceased approximately 1 h before the end of the procedure.

Before the exchange, the nasogastric tube was suctioned and removed, and 0.5 mg·kg⁻¹ propofol was given. The oropharyngeal cavity was suctioned, the tracheal tube was removed, and an appropriately sized LMA inserted by an experienced LMA user. Neuromuscular blockade was reversed with neostigmine and glycopyrolate. After the application of dressings, and when the train-of-four ratio had returned to normal, anesthesia was discontinued. The LMA was removed by the anesthesiologist in the operating room or postanesthesia care unit when the patient was breathing adequately and could respond to commands. All adverse events were noted by the anesthesiologist who conducted the case. The hemodynamic data were analyzed in 1-min epochs.

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Reference

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