vasopressors and early surgery will help prevent morbidity and mortality.

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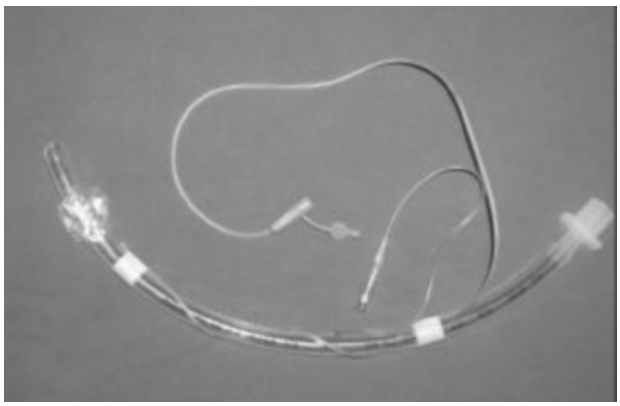

FIGURE Endotracheal tube with feeding tube.

On smooth extubation without coughing and bucking

To the Editor:
Having just received the Journal and read Dr. Orlando Hung's editorial[1] and Dr. Michael Stix *et al.*'s article[2] about trying to achieve smooth emergence from anesthesia and extubation (by intra-tracheal lidocaine and exchanging an endotracheal tube (ETT) for a laryngeal mask prior to emergence), I would like to suggest another relatively simple way of achieving such goals.

Whenever I want to extubate a patient quite awake at the conclusion of anesthesia without all the coughing and bucking, I prepare an ETT that will allow me to instil 2% lidocaine into the trachea prior to extubation.

A 3.5 or 5 F.G. infant feeding tube is secured at it's distal tip with about 6 cm length of 1 cm "Micropore" tape to the ETT one cm above the cuff, with the end hole of the feeding tube free from obstruction. The feeding tube is then wound around the ETT snugly and the upper part of the feeding tube is secured again with 1 cm "Micropore" tape to the upper part of the ETT, at the 22 or 24 cm mark of the ETT.

While the patient is still paralyzed or in a deep anesthetic state, I can instill 4 mL of 2% lidocaine through the infant feeding tube, wait a few seconds, then deflate the ETT cuff to let the lidocaine run down into the trachea below the ETT cuff, ventilate the patient once with the cuff still deflated, then re-inflate the cuff. This should provide adequate topical anesthesia to the trachea for about 15 to 20 min. If time to extubate has gone beyond 15 min, repetition of the above manoeuvre before the 20 min "deadline" is up will extend the "tracheal anesthesia" state.

This method has served me well over the last few years. I have learned to time the instillation of lidocaine, so that when the patient is awake enough to be safely extubated, the trachea is still anesthetized topically. A word of caution is warranted. All the suctioning of the oropharynx should be completed before reversing or lightening anesthesia as the oropharynx is not anesthetized topically. Also I have not used this method yet in patients intubated nasotracheally.

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2 *Stix MS, Borromo CJ, Sciortino GJ.* Learning to exchange an endotracheal tube for a laryngeal mask prior to emergence. Can J Anesth 2001; 48: 795–9.

Electroconvulsive therapy with thiamylal or propofol during pregnancy

To the Editor:
We describe our experience of administering anesthesia to a depressive patient during pregnancy for electroconvulsive therapy (ECT) with thiamylal or propofol. A 31-yr-old pregnant (21 weeks and four days) woman underwent ECT 14 times over a period of 65 days. While the patient laid in a supine position in the operation room, anesthesia was induced with either thiamylal (4 $mg \cdot kg^{-1}$) or propofol (1.5 $mg \cdot kg^{-1}$) followed

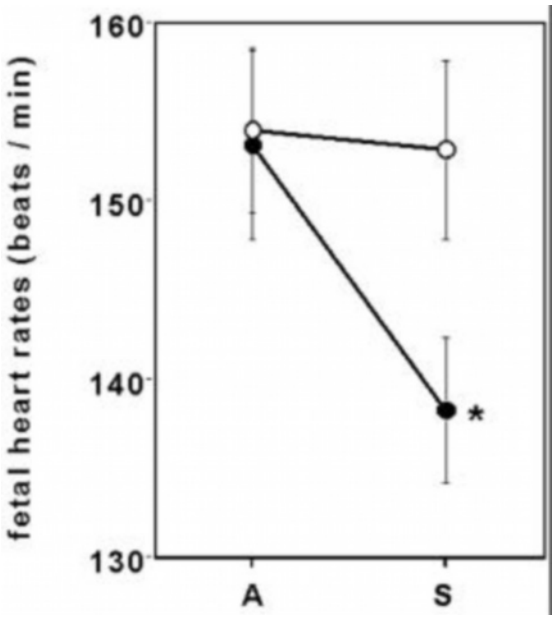

FIGURE Effects of thiamylal (open circles) and propofol (closed circles) on fetal heart rate. Data are shown as mean ± SD, $n=7$, each. $^*P < 0.05$ between thiamylal and propofol.

by suxamethonium (1 mg·kg^{-1}). Subsequently, thiamylal was used seven times and propofol was used for the remainder. Together with the blood pressure, heart rate and pulse oxymetry, a non-stress test, which recorded the fetal heart rate (FHR) to detect unusual fetal conditions, was also recorded. Comparisons of the effects of thiamylal and propofol on the FHR and duration of fetal sleep were performed by one-way analysis of variance followed by Sheffe's test.

The duration (mean ± SD) from the time thiamylal was administered to fetal sleep was 220 ± 180 sec, significantly shorter than that of propofol (440 ± 100 sec). However, the duration from thiamylal or propofol administration to fetal awakening were 1040 ± 240 sec and 1030 ± 180 sec respectively, with no significant difference between the two anesthetics. The FHR (mean ± SD, beats·min^{-1}) before administering thiamylal was 154 ± 5, and 152 ± 5 while sleeping. On the other hand, the FHR before injecting propofol was 153 ± 5, and 138 ± 4 while sleeping. The FHR was significantly depressed by propofol compared to thiamylal (Figure). There were no differences in mean arterial pressure and heart rate of the mother between thiamylal and propofol.

There were a few reports on ECT during pregnancy[1] but few have addressed the use of propofol.

Propofol is said to be a better induction agent for ECT than thipentone,[2] but propofol is not approved for use in pregnant patients in many countries. This patient was experiencing severe nausea after administration of thiamylal. After explaining the disadvantages of propofol administration and obtaining informed consent, we used propofol when the patient felt severe nausea or vomited preoperatively. There have been several reports on the maternal and neonatal effects of propofol used for Cesarean delivery. Moore *et al.* found no difference between propofol and thiopentone.[3] On the other hand, the laboratory investigation by Alon *et al.* suggested a potential risk of severe maternal bradycardia with propofol.[4] The direct effect of these anesthetic agents on the fetus is still unknown. In the case presented, thiamylal did not change FHR; however, propofol decreased FHR significantly. A decrease in FHR is thought to be dangerous for the fetus, because the compliance of fetal heart muscle is small and the cardiac output depends on heart rate. From a (fetal) cardiovascular viewpoint, propofol for ECT during pregnancy should be used with caution, specially in an immature fetus and/or a fetus with cardiovascular complications.

This patient gradually improved with ETC. She delivered a healthy baby, who is now three years old and well.

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