polarizing neuromuscular blockade. These findings are strikingly similar to those noted in our dog study. 2

We share Dr. Merin's concern that SCh-induced cerebral stimulation in the dog may differ somewhat in intensity and duration when compared with humans. However, the alert clinician should be aware that SCh may produce clinically meaningful cerebral effects in humans. While differences in the cerebral response to SCh between healthy dogs and brain-injured humans may be attributed to differences in species susceptibility, probably far more important are variations in anesthetic depth, baseline cerebral function, cerebral compliance, and the prior administration of nondepolarizing neuromuscular relaxants.<sup>2</sup>

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## REFERENCES

- Hoppe JO: Observations on the potency of neuromuscular blocking agents with particular reference to succinylcholine. ANESTHE-SIOLOGY 16:91–124, 1955
- Lanier WL, Milde JH, Michenfelder JD: Cerebral stimulation following succinylcholine in dogs. Anesthesiology 64:551–559, 1986
- Mori K, Iwabuchi K, Fujita M: The effects of depolarizing muscle relaxants on the electroencephalogram and the circulation during halothane anesthesia in man. Br J Anaesth 45:604– 610, 1973
- Oshima E, Shingu K, Mori K: EEG activity during halothane anesthesia in man. Br J Anaesth 53:65–72, 1981
- Motokizawa F, Fujimori B: Arousal effect of afferent discharges from muscle spindles upon electroencephalogram in cats. Jpn J Physiol 14:344–353, 1964
- Brinling JC, Smith CM: A characterization of the stimulation of mammalian muscle spindles by succinylcholine. J Pharmacol Exp Ther 129:56–60, 1960
- Muldoon SM, Theye RA: The effects of succinylcholine and dtubocurarine on oxygen consumption. ANESTHESIOLOGY 31: 437–442, 1969
- Lam AM, Gelb AW: Succinylcholine and intracranial pressure— A cause for "pause". Anesth Analg 63:620, 1984
- Minton MD, Grosslight K, Stirt JA, Bedford RF: Increases in intracranial pressure from succinylcholine: Prevention by prior nondepolarizing blockade. ANESTHESIOLOGY 65:165–169, 1986

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## An Additional Use for the Esophageal Stethoscope

To the Editor:—During endotracheal intubation in adults, occasional tearing of the cuff occurs, particularly when McGill's forceps are used for assistance. We would like to share one solution to this problem. We now insert a well-lubricated pediatric esophageal stethoscope (size 12 Fr) through a new endotracheal tube (ideally 7.0 mm ID or larger) and advance it 2–3 cm past the end of the tube. With direct visualization, the McGill's forceps are again used, but now to grasp and guide the esophageal stethoscope through the vocal cords; the endotracheal tube is now advanced over the esophageal stethoscope through the vocal cords. The esophageal stethoscope is

then removed from the endotracheal tube, auscultation performed, and the tube secured when bilateral breath sounds are determined to be equal.

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