CORRESPONDENCE

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In Reply:—Dr. Storella raises interesting questions regarding our recent manuscript. First, he asks whether the duration of predrug stimulation affects train-of-four (TOF) fade during recovery. Our results indicate that the time to recovery of 70% TOF is not influenced by the duration and mode of predrug stimulation. Stimulating for different durations before injecting vecuronium produces differences in time to a given recovery of T1, but not in TOF ratio. Thus, previous duration or frequency of stimulation should not influence clinical assessment of residual block using TOF monitoring.

Second, Dr. Storella reports that maximizing preload eliminates any progressive increase in twitch tension. Because we applied a narrow range of preload values, in our study we did not address this issue. However, the preload that we apply is typical for neuromuscular studies in humans, making our results clinically relevant.

Third, Dr. Storella asks whether similar results might be expected using EMG monitoring. Without knowing whether the recruitment we observed is pre- or postsynaptic in origin, we are unable to speculate. However, now that two studies indicate that mode and duration

of predrug stimulation influence onset and recovery (as assessed by mechanical twitch tension), investigators who use EMG should examine this issue.

Finally, we agree with Dr. Storella that "a control" period should not be considered a control until it can be expected to be stable over time." Unfortunately, the brief period used by many investigators does not satisfy this criterion.

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Extubation of the Difficult Airway

To the Editor: — Topf and Eclaveal endorsed the use of a endotracheal tube exchanger for the extubation of the difficult airway. They advocated several criteria to confirm the correct positioning of a tube exchanger. These included a normal capnographic tracing from the distal tip, audible breath sounds from the tubing, the inability to speak clearly, and an eventual chest radiograph. It has been my experience, using a similar tube exchanger (Endotracheal Ventilation Catheter [ETVC], CardioMed Supplies, Gormley, ON) that a normal capnographic tracing can occur with hypopharyngeal placement, and near-normal speech is generally observed despite tracheal placement.

I concur with their recommendation that the tube exchanger should remain in the trachea until postextubation airway competency is assured. In my experience, using the ETVC, it has been possible to achieve this, in virtually all patients, without the instillation of local anesthetics. In a report of the first 202 patients extubated over an ETVC, all but five patients tolerated this without a need for topical anesthesia. In three patients, the device had been left in situ for 48-72 hs.² It is possible that this reflects differences in the properties of different tube exchangers. If for example, the ETVC became excessively pliable as a result of being warmed by body temperature, it might prove less effective as a reintubation stylet. Nonetheless, the ETVC has proven itself to be reliable in this regard.² Avoidance of local anesthetics in the airway offers the advantage of preserving protective reflexes against aspiration, particularly during the vulnerable postextubation period when laryngeal incompetence and decreased airway reflexes may exist.3

Although the ETVC has generally been well tolerated, it is recommended that this device not be used in areas where it may be mistaken for a oro- or nasogastric tube.

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References

- 1. Topf AI, Eclavea A: Extubation of the difficult airway. An esthesiology 1996; 85:1213-4
- 2. Cooper RM: Clinical use of an endotracheal ventilation catheter for airway management: 202 consecutive cases. Can J Anaesth 1996; 43:90-3
- 3. Burgess GE, Cooper JR, Marino RJ, Peuler MJ, Warriner RA: Laryngeal competence after tracheal extubation. Anesthesiology 1979; 51:73-7

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