Succinylcholine Pretreatment Unsatisfactory

To the Editor:—The article by Dr. Baraka fails to convince us of the usefulness of the technique, even on aesthetic grounds. Baraka reports that a pretreatment dose of succinylcholine of 0.15 mg/kg resulted in no fasciculation in 80 per cent of the patients tested. A subsequent full dose of succinylcholine 45–60 sec later resulted in the absence of fasciculations in 80 per cent of the patients. However, 20 per cent of the patients did visibly fasciculate. No determination of the incidence of fasciculations in an identical patient population pretreated with d-tubocurarine before the full dose of succinylcholine is made. It is thus impossible to judge whether the observed incidence of fasciculation in Baraka's study is an acceptable ideal.

We believe that the reasons for the prevention of fasciculation with succinylcholine administration should be reviewed. Pretreatment with d-tubocurarine or pancuronium not only blocks visible movement, which may be troublesome, but it also blunts the increases in serum potassium and creatine phosphokinase (CPK). Increases in serum potassium may be life-threatening to some patients, while increases in CPK may be an indication that skeletal muscle damage has occurred.

Postoperative myalgia after succinylcholine administration is frequent, and may be decreased by prior d-tubocurarine administration. Parenthetically, Stooling and Peterson found no correlation between visible fasciculations and postoperative muscle pain.

Also, the method proposed requires two doses of succinylcholine. Other investigators have clearly demonstrated that successive doses of succinylcholine may have an adverse effect on cardiac rhythm, which may be minimized by d-tubocurarine pretreatment. Finally, pretreatment with a nondepolarizing muscle relaxant will prevent increases in intracocular and intragastric pressure. Whether these changes are self-tamed is not known.

In conclusion, the method offered by Baraka may provide optimal neuromuscular blockade; however, the several objections detailed above far outweigh any advantage of the method. d-Tubocurarine and other nondepolarizing relaxants remain the more satisfactory agents for pretreatment when succinylcholine is to be administered.

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References

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To the Editor:—Dr. Baraka reported a study in which he found mitigation of gross fasciculations following small-dose pretreatment with succinylcholine. The gross observations are similar to those one would obtain with d-tubocurarine or pancuronium pretreatment. The reason for pretreatment is not mitigation of gross fasciculations per se, but rather prevention of the patient's complaint of "I hurt all over" the following day. Were Dr. Baraka's patients questioned on this matter the day after? If postoperative myalgia was prevented, Dr. Baraka has given us some useful information for clinical practice.

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