CORRESPONDENCE

ELANA B. DOERING, PH.D., M.D.
Resident in Anesthesia
Hospital of the University of Pennsylvania
34th & Spruce Streets
Philadelphia, Pennsylvania 19104

REFERENCE

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In Refy.—In our previous research, we showed a dissociation between explicit and implicit memory in surgical patients who experienced adequate anesthesia with isoflurane.* The purpose of our most recent study was to determine whether a similar dissociation could be observed with other anesthetic regimes. For this purpose, we restricted our analysis to those patients who, like the vast majority of surgical patients, showed no explicit memory whatsoever for any aspect of their surgical experience, including the words presented on the audiotape, as measured by a test of free recall. We were somewhat surprised to find that some of our patients anesthetized with sufentanil/nitrous oxide displayed hints of explicit memory for surgical events; but our protocol, which was designed to provide a replication of our isoflurane study (in which no such hints were apparent), required that these patients be eliminated from statistical analysis. To repeat our findings: with isoflurane, implicit memory was spared to some degree in patients for whom explicit memory was abolished entirely; however, when sufentanil abolished explicit memory, it also abolished implicit memory. This direct comparison, removed from our paper at the request of the editor to avoid publication repetition, is documented elsewhere.2

Unfortunately, we have no way of gauging the accuracy of these particular patients’ “vague, dreamlike” reports. For the most part, they were generic thoughts and images that could pertain to any surgical procedure; perhaps it was inaccurate to refer to them as “recollections,” but they were made in response to a question about memory, so to be conservative, we characterized them as such. (We hasten to add that all of these patients were adequately anesthetized according to standard


To the Editor.—I was one of the volunteers partially paralyzed to a Ti-Ti ratio of 0.2 with atracurium in the study reported by Sharpe et al.1 During the first phase of this study, I was lying supine. While in that position, I found it difficult to lift my limbs off the bed. All attempts to do so failed in midcourse. Although my tongue was lying limp in my throat, I was not choking. Difficult phonation was not due to inability to breathe but to not being able to lift my lips off my teeth, so that I could only sip. I could not focus my eyes, but I did not have diplopia. At the end of the study, I was turned on to my right side. In that position, I could move my arms freely and kick my legs with ease, as long as I confined all movements to the plane of the bed. I could purse my lips again, and my speech cleared. My vision improved also, particularly

Partially Paralyzed: A Personal Experience
Intractable Cardiac Arrest in Children Given Succinylcholine

To the Editor—Intractable, unexpected cardiac arrest has been reported, especially in children, following induction of anesthesia with halothane and succinylcholine (Sch). In some cases, the child was subsequently shown to have Duchenne’s muscular dystrophy (DMD).1

During the past 12 months, four boys younger than 8 years of age have died in the United States during or following halothane and Sch (Malignant Hyperthermia [MH] Hotline data). Evidence of massive rhabdomyolysis was noted in all, and hyperkalemia and acidosis in most. In one case, the diagnosis of DMD was made based on the absence of dystrophin in the muscle specimen.

In the other cases, necrotizing rhabdomyolysis was noted on muscle specimens obtained at autopsy. Whether these changes are indicative of DMD in all cases is unclear.

This catastrophe is not limited geographically. The German MH Hotline (courtesy of Dr. Uwe Schulte-Sasse of Heilbronn) has accumulated 11 similar cases.

We speculate that six cases of this syndrome of sudden, intractable cardiac arrest would be expected each year in the United States, with an approximate 60% mortality rate.

Typically, the child is apparently normal with no major motor developmental delays but manifests this abnormal response shortly after administration of Sch. Based on data obtained during resuscitation, the arrest is likely due to hyperkalemia, although rhabdomyolysis and acidoses are also striking features. Hyperkalemia is present during resuscitation, limiting its success.

The earliest sign is a serious arrhythmia, such as pronounced bradycardia, that progresses rapidly to asystole or ventricular fibrillation.

When such a syndrome occurs in a child, we suggest immediate therapy for hyperkalemia, including glucose, insulin, bicarbonate, and calcium. Dantrolene is an appropriate secondary drug because it is not acutely toxic and the clinical differentiations from malignant hyperthermia susceptibility have not been clarified. Even in the absence of a direct relationship, dantrolene would not be harmful and might be helpful.

Surviving children should be evaluated for muscular dystrophy. We suggest that muscle specimens be frozen and analyzed for dystrophin levels.

We have notified the Food and Drug Administration of this potential problem and recommend that anesthesiologists carefully consider the indications for use of Sch in young children.

A full report concerning these cases is in preparation.

HENRY ROSENBERG, M.D.
Department of Anesthesiology
Hahnemann University
Broad and Vine Streets
Philadelphia, Pennsylvania 19102-1192

GERALD A. GRONERT, M.D.
Department of Anesthesiology
University of California, Davis
TB 170
Davis, California 95616

REFERENCES

A Double Tube Technique of Adult Fiberoptic Assisted Tracheal Intubation

To the Editor—The problems associated with fiberoptic bronchoscope (FOB) assisted endotracheal intubation addressed by Marsh1 result mainly from attempts to pass relatively large internal diameter endotracheal tubes (ETT) over small external diameter scopes. Marsh considered the problem of the size discrepancy permitting the bevelled tip of the ETT to protrude laterally from the FOB so that it may catch on structures such as the aryepiglottic folds. To minimize the size discrepancy, he suggested that one can thread a smaller ETT with the

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