CORRESPONDENCE

Anesthesiology
70:878, 1989

More on Succinylcholine and Trismus in Children

To the Editor:—Our recent letter to the editor covered some issues about the use of succinylcholine that we felt were important to discuss.[1] Dr. Rosenberg's reply certainly points out some of the differences in opinion that exist in this area of controversy.[2] However, we feel obliged to clarify one mistaken impression that Dr. Rosenberg has about the route of administration of succinylcholine in Charlottesville. The intramuscular route of administration of succinylcholine is used in less than 2% of our patients. Therefore, this explanation for the lower incidence of masseter spasm is not substantiated. It is our feeling that part of the explanation for the lower incidence of masseter spasm is the larger dose of succinylcholine that is given. We use 2 mg/kg intravenously in infants and children.

FREDERIC A. BERRY, M.D.
Professor of Anesthesiology and Pediatrics

CARL LYNCH III, M.D., PH.D.
Associate Professor of Anesthesiology
Department of Anesthesiology
University of Virginia Health Sciences Center
Charlottesville, Virginia 22908

REFERENCES

1. Berry FA, Lynch C III: Succinylcholine and Trismus. ANESTHESIOLOGY 70:161–162, 1989
2. Rosenberg H: In Reply. ANESTHESIOLOGY 70:162–163, 1989

(Accepted for publication January 24, 1989.)

Anesthesiology
70:878–879, 1989

Use of the Cell Saver in Patients with Sickle Cell Trait

To the Editor:—The cell saver is commonly used today for many different types of operations, including hepatic transplantation.[1] Use in patients with sickle cell trait has been advocated;[2] however, the potential to induce sickling in the salvaged blood is a cause for concern.

A 22-yr-old black female with sickle cell trait underwent hepatic transplantation for end stage liver disease secondary to chronic non-A, non-B hepatitis. A Haemonetics Cell Saver III, operated in the manual mode (20% longer wash cycle than automatic mode to enhance heparin removal), was used to salvage blood during the transplant. Approximately 300 ml of blood was collected in the cell saver reservoir, at which time samples from the patient and the reservoir were sent for sickle cell smear. The blood in the reservoir was then immediately processed by the cell saver. A sample of the processed blood was also sent for a sickle cell smear. Samples from the patient and the reservoir revealed no evidence of sickling. However, the processed blood revealed a 50% incidence of sickling and therefore was not reinfused to the patient. The case proceeded uneventfully, and there were no postoperative complications. There was no evidence of sickling on any subsequent smears done on blood obtained from the patient and she was discharged from the hospital 18 days later.

Black and Dearing[2] reported using a Haemonetics Cell Saver in a patient with sickle cell trait undergoing cardiopulmonary bypass, without apparent complications. They did not perform a microscopic examination of the processed blood prior to reinfusion of the red cells; however, an examination of the patient's blood at 24 h showed no evidence of sickling.

Blood samples drawn from our patient and the reservoir (immediately prior to processing) had no indication of sickling, but the blood drawn immediately after processing was severely affected. Therefore, sickling could be attributed to the cell saver washing process.

A recent communication from Romanoff *et al.*[3] suggested that blood from patients with sickle cell trait could be stored in acid-citrate-dextrose (ACD) and citrate-phosphate-dextrose (CPD) and reinfused without untoward sequelae, with the exception of its use in exchange transfusions in neonates. Although this could be true for whole blood, there are no data to suggest that cell saver packed red cells may not exhibit sickling during storage.

In view of the massive amount of sickling seen in the processed blood from this patient, the efficacy of using the cell saver for patients with sickle cell trait must be questioned.

DAN BRAJTBORD, M.D.
Anesthesiology Resident

DENNIS JOHNSON, M.D.
Staff Anesthesiologist

MICHAEL RAMSAY, M.D.
Director of Transplant Anesthesia

WILLIAM PAULSEN, PH.D.
Director of Anesthesia Research and Biomedical Engineering

THOMAS SWYGERT, M.D.
Staff Anesthesiologist

VICTOR RAMON, M.D.
Staff Anesthesiologist

DAREL HARGIS, BS, CP
Perfusionist, Psicor, Inc.

Department of Anesthesiology
Baylor University Medical Center
3500 Gaston Avenue
Dallas, Texas 75246

REFERENCES

1. Brajtbord D, Paulsen AW, Ramsay MAE, Swygert TH, Valek TR: Controversies associated with autotranfusion during hepatic transplantation (abstract). ANESTHESIOLOGY 69:A171, 1988
2. Black HA, Dearing JP: Exchange transfusion prior to cardiopulmonary bypass in sickle cell anemia. J Extra-Corp Technol 12: 82–85, 1980
3. Romanoff ME, Woodward DG, Bullard WG: Autologous blood transfusion in patients with sickle cell trait. ANESTHESIOLOGY 68:820–821, 1988

(Accepted for publication January 24, 1989.)

Anesthesiology
70:879, 1989

A Humidification Device for Nasal Oxygen

To the Editor:—Inhalation of dry oxygen causes uncomfortable symptoms such as nasal dryness, stuffiness, and itching, despite flows as low as 3 l/min. We have devised a simple, inexpensive means of humidification of oxygen for use with nasal cannulae. As shown in figure 1, the Y-piece of the breathing circuit is attached to an Airlife brand (American Pharmaseal Company) or similar humidifier bottle *via* a double male 22-mm corrugated tubing adaptor. Humidification is achieved by bubbling oxygen through water, the humidity being low enough to avoid condensation in the long narrow tubing that is connected to the nasal cannulae.

We have tested the device on 40 unselected women undergoing cesarean section under regional analgesia. Unannounced change from dry to humidified oxygen was always followed by statements that breathing was suddenly easier, while change from humidified to dry oxygen led to complaints of discomfort. Flow rates of up to 5 l/min were well tolerated. Pulse oximetry revealed no differences in oxygen saturation between inhalation of dry *versus* humidified oxygen.

We recommend use of this simple device for any situation requiring inhalation of nasal oxygen by conscious patients.

I. DAVID ELSTEIN, M.D.
Fellow in Obstetric Anesthesia

GERTIE F. MARX, M.D.
Professor of Anesthesiology

Albert Einstein College of Medicine
Department of Anesthesiology—J 1226
1300 Morris Park Avenue
Bronx, New York 10461

(Accepted for publication January 24, 1989.)

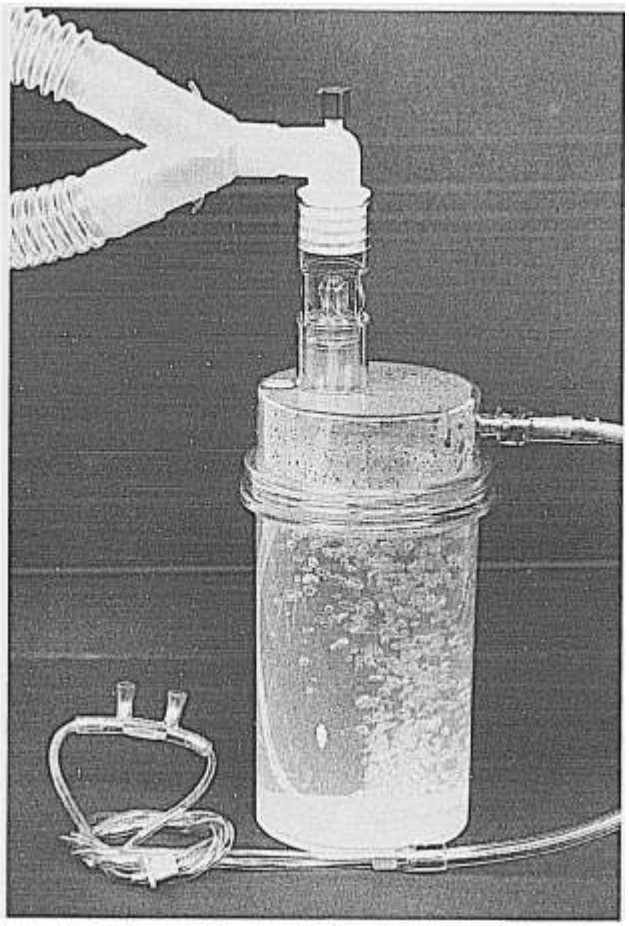

FIG. 1. Humidification device for nasal oxygen (from top to bottom): Y-piece of anesthesia breathing circuit; double male 22-mm adaptor; humidification bottle; and nasal cannula.

Anesthesiology
70:879–880, 1989

Postoperative Apnea in a Full-term Infant

To the Editor:—We read with interest the report of postanesthetic apnea in a healthy full-term infant.[1] We recently cared for a term infant who experienced a similar single episode of apnea, accompanied by bradycardia, 6 h after a 2-h general anesthetic. We write to support