sequelae of these two episodes were mild motor impairment of the intrinsic muscles of the hands and feet, as well as significantly distressing burning pain and deep muscle pain affecting all four extremities in a diffuse distribution.* Following lumbar spinal fusion to correct the mechanical derangement causing his back pain, parenteral opioids were administered *via* a continuous intravenous infusion for postsurgical pain control. Not only did the parenteral opioids effectively manage the postoperative pain, but as a secondary outcome, they also abolished the deep muscle pain and burning pain associated with the GBS.

In light of this brief case report, Connelly *et al.*'s underlying assumption, that their patient's response to opioid analgesics was typical of GBS patients, might be in error. A case control experimental design, as used by these authors, does not allow generalization from its results. The outcome of such studies simply points the way for further research.

*Ennis JH: The physician–patient relationship: A patient–physician's view. Canadian Family Physician 36:2215–2220, 1990

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(Accepted for publication August 2, 1991.)

Anesthesiology
75:914, 1991

In Reply:—We appreciate Ennis's interest in our case report, and certainly recognize individual variations in patients' responses to therapy. In general, burning, hyperesthetic pain is often believed to be neurogenic in origin, and it is well accepted that neurogenic pain responds poorly to opiods.

We certainly agree that this topic warrants further investigation.

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(Accepted for publication August 2, 1991.)

Anesthesiology
75:914–915, 1991

A Palatable Gelatin Vehicle for Midazolam and Ketamine

To the Editor:—The medical community continues to search for an ideal sedative medication for patients undergoing office and surgical procedures and in the intensive care unit. When we choose a route of administration for sedative medications in patients of low chronologic or mental age, the amount of associated pain can be especially important.

Two agents increasingly used for oral sedation are midazolam and ketamine.[1–4] Unfortunately, neither of these drugs is available in oral formulation in this country, and the intravenous forms of both of these medications are quite unpalatable unless mixed with a flavoring. A recent letter to the editor proposed one formulation.[2] We would like to present some alternatives.

During our 5-yr experience with these medications, we have used melted PopSicle®, orange juice, apple juice, flavoring extracts (cherry and banana), Hershey's chocolate syrup, crème de maraschino (cherry syrup), cola, and flavored gelatin with and without sugar. Although all these formulations can be used to deliver the drug, they meet with variable acceptance by the patient. In addition, nausea and vomiting have been noted in some of these patients if they are not anesthetized after becoming sedated. Vomiting, when it occurs, occurs most often in outpatients after the sedation has begun to resolve.

At present we prefer flavored gelatin, sweetened with sugar, as the vehicle for delivery. It is used for sedation in the pediatric intensive care unit, the operating rooms, and the clinics. We have chosen the sugared form because of the problems of administering aspartame (NutraSweet®) to children with phenylketonuria. Our dose is 0.4–0.8 mg/kg for midazolam and 4–8 mg/kg for ketamine. Onset time is as rapid as with other flavorings (10–20 min). The duration of sedation varies from 20 min to 3 h.

The gelatin mixture is made in ice cube trays. It is prepared by adding ¾ cup of boiling water to a small package of flavored gelatin (one that makes 2 cups) and allowing this to cool at least to 40°C. The liquid gelatin is then added to the drug in a ratio of at least 1.3 ml gelatin to every 1 ml drug. Cubes are made containing 5, 10, or 15 mg midazolam or 100 or 250 mg ketamine, and the mixture is allowed to set in a refrigerator. Once set, the gelatin may be administered as prepared or may be cut into portions if fractional doses are needed (for example, a 5-mg cube is cut in two to provide 2.5 mg). The *p*H

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of this preparation is less than 4.0; therefore, both drugs should remain stable.

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(Accepted for publication August 2, 1991.)

Anesthesiology
75:915, 1991

The Risk of Tracheal Aspiration of Surgically Produced Foreign Bodies

To the Editor:—A 49-yr-old woman who had undergone craniofacial resection of a fibrodysplastic ethmoid tumor 2 weeks earlier and reoperation for acute cerebral edema and decompression was returned to the operating room for bifrontal craniotomy and repair of a cerebrospinal fluid fistula under general anesthesia. The fistula repair included the placement of fat into the defect. The fat tissue was harvested from the patient's leg and served as a base of support for the fascial graft, which was then placed over the defect in the dura mater.

The course of the general anesthetic was uneventful. At the conclusion of surgery, secretions were suctioned from the posterior pharynx prior to reversal of neuromuscular blockade and tracheal extubation. Two pieces of yellow fat of approximately 2 cm × 2 cm each, were retrieved from the hypopharynx. This represented a portion of the fat that had been used to support the fascial graft in the dural defect. These two pieces of fat had migrated out of the cranium, through the surgical defect in the ethmoid sinuses, and into the posterior pharynx.

If the fat had not been discovered by suctioning at the time of extubation, or if it had migrated to the hypopharynx after extubation, pulmonary aspiration of the fat could have occurred.

In the event of partial airway obstruction, more time could be spent making the diagnosis of fat aspiration. However, the diagnosis would be hampered by difficulty detecting the fat on chest x-ray, because fat is so radiolucent and virtually invisible on x-ray. The radiologic diagnosis would likely be made by inference based on atelectasis with complete obstruction or air trapping, hyperinflation, and possibly mediastinal shift with partial obstruction. Failure to consider fat aspiration in the differential diagnosis of airway obstruction would also complicate and delay the institution of therapy.

This case is reported for the purpose of alerting the anesthesiologist to the danger of aspiration of any surgically produced foreign body (fat, bone, blood clots, or synthetic material). The differential diagnosis of unexplained hypoxemia and/or airway obstruction following craniofacial surgery should include aspiration. Based on our experience, we recommend routine laryngoscopy at the end of these types of procedures to rule out material in the pharynx that might be missed by blind suctioning.

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(Accepted for publication August 2, 1991.)

Anesthesiology
75:915–916, 1991

Hypoxia among the Experts

To the Editor:—Twice during the past year while serving as an expert witness for the defense, I have had to rebut the testimony of board-certified anesthesiologists who, while acting as experts for the plaintiff, asserted that an esophageal intubation must have occurred based solely on the "hard evidence" of a blood gas obtained during cardiopulmonary resuscitation (CPR): "It is my opinion that these blood gases, even if

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