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## Comparing the Efficacy of Epidural Opiates with that of Patient-controlled Analgesia

*To the Editor:*—Two recent Clinical Reports<sup>1,2</sup> compared the effects of intramuscular morphine to those of patient-controlled analgesia (PCA) using morphine and to epidural morphine. In both reports, the authors concluded that, while epidural morphine provided superior pain relief, it was associated with more troublesome side effects and less patient satisfaction. I have two comments regarding interpretation of the data. First, epidural infusions of lipid soluble opiates (fentanyl, meperidine) can provide effective analgesia while avoiding the itching and peaks and troughs in pain relief associated with intermittent boluses of epidural morphine. The results of these studies, therefore, should not be extrapolated to indicate that PCA therapy provides analgesia with less side effects than all epidural opiates. Second, the results of a study on obstetric patients should not be extrapolated to critically ill patients. In patients undergoing major abdominal or thoracic surgery, patient satisfaction with the technique may not be the desirable end point. In these patients, it is far more desirable to provide analgesia so that these patients can cooperate with pulmonary toilet. This improves their pulmonary function and may prevent postoperative complications.<sup>3</sup>

In summary, patient satisfaction and less itching with PCA morphine compared to a single bolus of epidural morphine should not be generalized to make conclusions about the epidural technique *versus* the PCA technique. While patients may be more satisfied with the control

they have while using a PCA device, pain relief and prevention of postoperative complications are the ultimate goals.

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*In Reply:*—We thank Dr. Hord for his comments and agree that our results examine specific techniques in a subgroup of patients with postoperative pain. However, epidural morphine is most commonly given following cesarean section as a single dose, and sedation (whether due to epidural morphine or treatment of side effects) is a unique drawback in this patient population. For these reasons, we feel our conclusions are valid for this group of patients and this common practice.

Although bolus epidural administration of lipid soluble opiates enhances analgesia compared to systemic administration,<sup>1</sup> we disagree with Dr. Hord's comments concerning the advantages of continuous infusions of these agents. Epidural fentanyl administration does not differ from intravenous administration in dosage of fentanyl, plasma fentanyl concentrations, or pain relief during the first 12 h following abdominal or lower extremity surgery.<sup>2</sup> Not surprisingly, continuous epidural fentanyl infusion is associated with pruritus (treatable pruritus occurring in 15% of patients *vs.* 5% in patients receiving PCA in our study<sup>3</sup>), urinary retention, and somnolence.<sup>4</sup>

Although we agree that our results should not be extrapolated to all agents, techniques, and patients, it is less clear how one should determine the most desirable endpoint of analgesic therapy. The study of Yeager *et al.*<sup>5</sup> did not test the effect of epidural morphine (or PCA, although many of their patients received this therapy) on outcome in critically ill patients. Likewise, epidural opiate-induced pruritus and urinary retention may be more than troublesome side effects. They are associated with recurrence of herpes simplex infection<sup>6</sup> and the need for urinary catheterization, respectively, which may lead to morbidity in the critically ill or immunocompromised patient. We are not arguing that epidural opiate therapy should be discontinued or the search for nonopiate agents for intraspinal analgesia abandoned. Rather, when data are inadequate to conclude that one therapy is safer

or better than another, it seems reasonable to ask the patient which she would prefer.

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*In Reply:*—While it is true that the continuous epidural infusion of opiates may avoid some of the side effects associated with bolus epidural administration, as used in our study, the former technique requires the continuous presence of or availability of skilled nursing care. The newer modalities of postoperative analgesia should be available to all patients and not necessarily those requiring an intensive care setting. The purpose of the study was not to downplay the role of epidural opiates but to compare these different forms of postoperative analgesia out of the ICU setting on healthy patients who, after all, constitute the majority of patients undergoing elective surgery. In such patients, the same degree of specialized nursing is not necessarily available and analgesic efficacy, together with simplicity of technique, need to be balanced against patient safety and nursing acceptance.

In this setting, both Eisenach *et al.*<sup>1</sup> and our group<sup>2</sup> found patient satisfaction to be an important consideration when comparing these techniques. Dr. Hord should not make the mistake of overinterpreting our conclusions to reflect the needs of critically ill patients, but to

represent the application of these newer approaches to analgesia out of the ICU in a very different patient population.

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### Blind Nasal Intubation of an Apneic Neonate

*To the Editor:*—The recent correspondence from Gouverneur<sup>1</sup> prompts me to describe another approach to tracheal intubation of infants.

I was asked to assist in the intubation of the trachea in a 7-week-old, 2-kg infant having severe apneic episodes. A diagnosis of trisomy 13 (Patau Syndrome) had been made, but this was not known by the staff involved in resuscitation. Micrognathia was obvious and laryngoscopy revealed only the proximal epiglottis but not the glottis.

A pediatric malleable metal stylet was employed to curve the 2.5-mm ID Portex endotracheal tube into a suitable shape and, while observing the anterior neck, blind nasal tracheal intubation was successful at the first attempt.

Other reported approaches to overcoming difficult tracheal intubation in neonates include conventional blind nasal tracheal intubation,<sup>2</sup> blind nasal tracheal intubation with the patient in the prone position,<sup>3</sup> anterior commissure laryngoscope with optical stylet,<sup>4</sup> nasopharyngeal intubation,<sup>5</sup> tracheostomy,<sup>6</sup> and fiberoptic endoscopy.<sup>7</sup> Although Berry<sup>8</sup> has stated the age range for using the stylet in blind nasotracheal intubation to be "from three years through adult," I have since 1981 used the technique in 14 younger patients, including five infants of 2.9-4.3 kg body weight (two were stillborn).

The small size endotracheal tubes are rather soft and floppy and very little "feel," necessary for blind tracheal intubation, is transmitted up the tube. In addition, they do not, in contrast to adult sizes, maintain a suitable distal curve. Therefore, a lubricated malleable metal stylet (fig. 1) is used to provide the latter, but without protruding from the end of the tube. It also enables the tube to be manipulated in a way not possible without it. I shape the tube roughly to a right angle with the limbs approximating the respective lengths of nasal passage and

pharynx. Subsequent adjustments to the curvature, *i.e.*, more obtuse or acute, and distal limb length are made in the light of experience at each attempt until tracheal intubation is obtained. To locate the glottis, either the breath sounds, preferable in the young, or the external visual signs described by Jacoby<sup>9</sup> and Bennett *et al.*<sup>\*</sup> may be used.

In contrast to Berry, I have not found it necessary when using the stylet, for any age of patient, to have "a short sharper angle at the tip."<sup>8</sup> The anterior angulation required to enter the larynx can be obtained by manipulation of the stylet supported tube.

The same method can be similarly applied when blind oral tracheal intubation is indicated.

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