

Anesthesiology
69:632, 1988

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

To the Editor:—Two recent Clinical Reports^{1,2} 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.³

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.

ALLEN H. HORD, M.D.
Assistant Professor of Anesthesiology
Section of Anesthesiology
The Emory Clinic
1365 Clifton Road, N.E.
Atlanta, Georgia 30322

REFERENCES

1. Eisenach JC, Grice SC, Dewan DM: Patient-controlled analgesia following cesarean section: A comparison with epidural and intramuscular narcotics. *ANESTHESIOLOGY* 68:444-448, 1988
2. Harrison DM, Sinatra R, Morgese L, Chung JH: Epidural narcotic and patient-controlled analgesia for post-cesarean section pain relief. *ANESTHESIOLOGY* 68:454-457, 1988
3. Yeager MP, Glass DD, Neff RK, Brinck-Johnson T: Epidural anesthesia and analgesia in high-risk surgical patients. *ANESTHESIOLOGY* 66:729-736, 1987

(Accepted for publication June 8, 1988.)

Anesthesiology
69:632-633, 1988

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,¹ 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.² 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 study³), urinary retention, and somnolence.⁴

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.*⁵ 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 infection⁶ 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.

JAMES C. EISENACH, M.D.
Assistant Professor

DAVID M. DEWAN, M.D.
Associate Professor
Department of Anesthesia
The Bowman Gray School of Medicine
300 South Hawthorne Road
Winston-Salem, North Carolina 27103

REFERENCES

1. Lomessy A, Magnin C, Viale J, Motin J, Cohen R: Clinical advantages of fentanyl given epidurally for postoperative analgesia. *ANESTHESIOLOGY* 61:466-469, 1984
2. Estok PM, Glass PSA, Goldberg JS, Freiberger JJ, Sladen RN: Use of patient controlled analgesia to compare intravenous to epidural administration of fentanyl in the postoperative patient (abstract). *ANESTHESIOLOGY* 67:A230, 1987
3. Eisenach JC, Grice SC, Dewan DM: Patient-controlled analgesia following cesarean section: A comparison with epidural and intramuscular narcotics. *ANESTHESIOLOGY* 68:454-457, 1988
4. Mackersie RC, Shackford SR, Hoyt DB, Karagianes TG: Continuous epidural fentanyl analgesia: Ventilatory function improvement with routine use in treatment of blunt chest injury. *J Trauma* 27:1207-1210, 1987