Does Surgical Site Correlate with Incidence of Side Effects, Complications, and Problems Induced by Epidural Morphine?

To the Editor—The recent article by Ready et al.1 addressed a question that concerns physicians and nurses when morphine is used epidurally for postoperative pain. Despite the importance of this work, I would like to address several issues raised in the paper.

First, Table 1 reported data on morphine dose and pain according to surgical site. For example, thoracic surgery patients received twice as much morphine in 24 h as patients undergoing perineal surgery. Tables 2 and 3 described side effects, complications, and problems for all patients without specifying different surgical sites. Thus, because groups were not homogeneous for surgical site and dose of morphine, it would have been more informative to know whether the complications and side effects were different among patients undergoing thoracic, abdominal, lower extremity, or perineal surgery.

Second, respiratory depression in two patients is described. In the first case, the lowest respiratory rate was 14 breaths/min; \( P_{a\text{O}_2} \) was 192 mmHg; \( S_a\text{O}_2 \) was 99%; and \( P_{a\text{CO}_2} \) was 59 mmHg. The patient was also obese (151 kg), a condition associated with respiratory impairment.2 In the second case, except for the low respiratory rate, there was no other way for the reader to evaluate respiratory depression; however, in the Discussion, the authors emphasized the usefulness of assessment of consciousness in establishing a diagnosis of respiratory depression.

Finally, I fail to understand why blood gas analysis is not included.
in the Appendix A protocol as a mandatory test when the likelihood of respiratory depression is present.

ANDREA DELLA PUPPA, M.D.
Department of Anesthesia
Ospedale Civile di Belluno
32100 Belluno, Italy

Anesthesiology
76:868, 1992

In Reply.—It bears repeating that the primary emphasis of our work was the safety of epidural morphine for postoperative analgesia on surgical wards. More detail with regard to incidence of side effects according to surgical site was not considered essential in this context, although it is true that this information could have been presented and might have been of interest to some readers.

In response to Puppa’s comments regarding our experience with respiratory depression, it should be noted that the two cases we identified fit our operational definition—i.e., naloxone was administered. On any occasion that such treatment is used, it is based, at least initially, on a clinical diagnosis of respiratory depression made at the bedside. The level of sedation in case 1 (3 on our 0–5 scale) was a major factor in the decision to administer naloxone. In case 2, the decision was based primarily on the observation of a respiratory rate of 6 breaths/min. The highest sedation score in that patient was 2.

In our teaching we encourage the administration of naloxone if there is a reasonable suspicion of respiratory depression in patients receiving epidural morphine. We prefer an occasional unnecessary treatment to a failure to treat the condition early. We make no claim of a causal relationship between respiratory depression and epidural morphine administration in the two cases reported and cannot be certain the naloxone was really necessary. As Puppa points out, obesity was also a risk factor in case 1.

We do not believe it necessary to specify in our standard orders all circumstances when blood gas analysis is necessary. Our emphasis is on early diagnosis and treatment of the rare cases of respiratory depression we see, with the option for blood gas analysis as needed. It should be recalled that our study included only patients who received epidural morphine on surgical wards. We treat many other patients who are admitted to our intensive care unit after surgery. More frequent blood gas analysis is carried out in that population, when indicated.

L. BRIAN READY, M.D., F.R.C.P.(C.)
LORIE WILD, R.N., M.N.
Department of Anesthesiology RN-10
University of Washington School of Medicine
Seattle, Washington 98195

(accepted for publication February 19, 1992)

An Old but Useful Form of Fluid Resuscitation

To the Editor.—We recently found ourselves in a position where active fluid resuscitation to a shipwreck victim was necessary. Unfortunately, because there was a complete absence of modern resuscitation equipment, we were forced to improvise.

A young boy, about 20 kg, accompanied by his teenage sister, had been drifting in a small boat for approximately 10–14 days after the sinking of a larger vessel. Seven other occupants of the boat had died of dehydration. At the time of discovery, the boy was severely dehydrated and responsive only to painful stimuli. He had a weak, irregular pulse rate of 25–30 beats/min. We were unable to administer oral fluids.

We transferred the child to a nearby island where we fashioned a rectal tube connected to a funnel and administered 70 mL/kg warm water to which we had added table salt (approximately 15 g) and sugar (100 g). To promote retention, the child’s buttocks were occluded for 20 min after administration of fluid.

After 45 min, the child’s state of consciousness improved dramatically. His pulse rate increased to 45 beats/min and his respirations to 10 breaths/min. His first blood pressure, taken at this time, was 70 mmHg and after another half hour was in excess of 90 mmHg. After transfer by helicopter to the nearest city, he was hospitalized for several days with good recovery.

We urge all anesthesiologists who may find themselves in similar situations to remember that satisfactory fluid resuscitation can be achieved by this old means of therapy.

DOUGLAS G. WELLS, F.F.A.R.A.C.S.
COLIN R. TREDREA, F.F.A.R.A.C.S.
DOUGLAS COOPER, M.D.
St. Luke’s Regional Heart Center
Davenport, Iowa 52803

(accepted for publication February 19, 1992)