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Anesthesiology
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In Reply:—We agree that epidural catheter migration into the intrathecal or intravascular space is a possibility and concern with epidural analgesia during labor. However, as discussed in our¹ and other's² work, patient-controlled epidural analgesia (PCEA) need not worsen and may lessen the consequences of such migration. In the event of intrathecal migration of the catheter, the low basal rate (6 ml/h, providing bupivacaine 7.5 mg/h) should not result in dangerously extensive spinal anesthesia, nor should a patient-administered dose of 4 ml (5 mg bupivacaine). This is in contrast to larger doses of bupivacaine typically administered by continuous infusion (12-15 mg/h) or intermittent bolus (25 mg bupivacaine), both of which may produce extensive or total spinal anesthesia. In the event of intravascular migration of the catheter, the maximum dose of bupivacaine available over 1 h (25 mg) is extremely unlikely to produce toxicity, and is much less than might be administered by intermittent boluses in an attempt to establish anesthesia.

We also agree, and state in the final sentence of our paper, that close patient monitoring is essential with PCEA as with any epidural analgesia technique during labor. However, we disagree with the suggestion that anesthesia staffing needs could appropriately be decreased by having family practitioners or obstetricians, who are poorly trained

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Inappropriate Use of the *t*-test

To the Editor:—I read with interest the article¹ examining caffeine and halothane contracture testing in swine to detect malignant hyperthermia. However, I believe that the statistical methods and subsequent conclusions deserve comment.

A total of 108 muscle bundles from 11 swine were tested; 9 swine were tested twice, 4-6 weeks apart. Data then were analyzed with a two-tailed, unpaired *t*-test. In doing so, the investigators violated a critical assumption required by the *t*-test—that observations in each sample must be independent.² In general, multiple observations on the same subject cannot be considered independent. If all of the 108 observations were independent, a total of 108 observations from 11 swine would be equivalent to 108 observations from 108 swine. The data should be reanalyzed to determine whether the conclusions are warranted.

MINDA STRATTON, M.S., R.N., C.C.R.N.

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to manage the complications of regional anesthesia, administer epidural anesthesia during labor.

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