

CORRESPONDENCE

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Midazolam in Obstetric Anesthesia—A Reply

To the Editor:—In the initial letter to the editor on the subject of midazolam use as an adjunct drug with regional anesthesia in obstetrics, Camann *et al.*¹ noted that its "superior amnestic qualities . . . may be counterproductive in the obstetric unit." They employed doses of from 2–7 mg iv immediately after the umbilical cord was clamped, but failed to correlate dose employed with the mentioned undesirable side effect of maternal amnesia.

In a follow-up letter, Heyman *et al.*² confirmed the problem of unwanted amnesia for the birth of the baby. They suggested delaying administration of midazolam "until after pediatric ministrations to the neonate in the operating room are completed, and the baby is brought to the mother and shown to her . . ." Using this technique, they report no further complaints of amnesia for the birth experience. They failed to mention the elapsed time from delivery until the administration of midazolam.

Most recently, Seidman *et al.*³ made the rather strong statement that "the use of midazolam in obstetrics should, therefore, be limited to special indications." This statement is not supported by any references but, rather, appears to be based upon the particular philosophy of the authors regarding maternal participation during the entire peripartum period. In addition, they neglect to mention what any of these special indications might be.

We have been successfully using midazolam at our institution in the delivery suite for the past 9 months. The drug is used as an adjunct to epidural anesthesia/analgesia for delivery. The dose of midazolam ranges from 2–4 mg iv. We do not administer midazolam until after the baby has been removed from the mother following the initial bonding period. Typically, this period lasts 15–20 min from delivery. We routinely employ

two sources of patient follow-up for the birthing experience: 1) postoperative rounds by the anesthesiologist, and 2) a patient questionnaire sent to the patient's home following discharge. From both sources, we attempt to elicit any unpleasant experiences by directed, leading questions related to the perioperative period. All patients are seen within the first 24 h post-delivery, and the response from the questionnaires is above 80%. While we certainly have our share of problems, nobody to date has mentioned or complained of an unpleasant birthing experience that we can relate to midazolam's amnestic properties. We strongly feel that midazolam is a very useful adjunct for increasing maternal comfort during the birthing experience with regional anesthesia/analgesia. Like all drugs, it must be used at the appropriate time and in the appropriate dose. In their hands, the other modalities noted by Seidman *et al.* may be equally effective in providing maternal comfort.

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3. Seidman SF, Marx GF: Midazolam in obstetric anesthesia (letter). *ANESTHESIOLOGY* 67:443, 1987

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Epidural Ketamine Does Not Produce Analgesia

To the Editor:—I read with great interest the article by Ravat *et al.*¹ They compared the epidural ketamine with that of morphine, and could not confirm the analgesic action. We reported previously that the neural mechanism, in the spinal cord, of the analgesic action of anes-

thetics must be considered by two mechanisms: the direct action on the neural transmission at the spinal cord dorsal horn, and the indirect action exerted through the action on the supraspinal pain inhibition system.² It is well known that the opioid analgesia is exerted