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Propofol during Cesarean Section

To the Editor:—We read with interest the recent publication by Dailland *et al.* on the use of propofol for cesarean section.¹ Our results describing placental transfer of propofol after an induction dose are generally similar, although propofol concentrations in our patients were higher because of shorter induction-to-delivery times.² Our findings after infusions of propofol also are similar.³

The incidence of awareness reported by Dailland *et al.* is very high. We have used propofol 2 mg · kg⁻¹ (pregnant weight) for induction of anesthesia followed by either N₂O and enflurane 1% or infusions of propofol at 6 or 9 mg · kg⁻¹ · hr⁻¹ in over 80 patients without patient awareness. Dailland *et al.* discontinued the anesthetic agents during the uterine incision-to-delivery interval and acknowledged that continuing the anesthetic would be more appropriate (especially since no evidence for improved neonatal outcome with their technique was presented). Although the authors suggested that a higher propofol dose would decrease the incidence of awareness, this approach is not without problems.⁴⁻⁶

Compared to a standard thiopental/enflurane technique for cesarean section, a propofol bolus and infusion at 6 mg · kg⁻¹ · hr⁻¹ provided faster maternal recovery with comparable neonatal outcome.⁵ However, an infusion of 9 mg · kg⁻¹ · hr⁻¹ caused lower neonatal Neurologic and Adaptive Capacity Scores, which were inversely correlated to propofol concentrations.⁶ Because of the rapid placental transfer of propofol, we believe that a high infusion rate of propofol with long induction-to-delivery times is not desirable for the neonate.

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Patient-controlled Epidural Anesthesia during Labor May Be Hazardous

To the Editor:—In a recent paper, the use of patient-controlled epidural analgesia (PCEA) during labor was demonstrated to establish effective analgesia in labor without complications directly related to PCEA.¹ Furthermore, PCEA was associated with a trend toward less total bupivacaine use, and the possibility of a decreased need for staffing in the busy obstetric anesthesia service was proposed.

However, regardless of apparently problem-free PCEA, there remains anxiety about development either of systemic toxicity from inadvertent intravascular injection or of subarachnoid block. This concern is heightened by the fact that over 50% of epidural catheters migrate inward or outward from the original position.² In the above-mentioned report, 2 of 100 epidural catheters migrated into an epidural vein and caused signs and symptoms of intravenous injection of local anesthetic.² Crawford³ reported nine cases of potentially life-threatening complications after introduction of epidural anesthesia in labor: 3 of these were a consequence of catheter migration. A serious complication (such as prolonged hypotension) can occur after even a test dose (2 ml 0.5% lidocaine) injection.³ The patient receiving PCEA is able to inject a 4-ml bolus.

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Although anesthesia personnel were immediately available, it is possible that the time elapsed from the effect of catheter migration to its recognition may be prolonged, and consequently that the ability to manage this complication promptly and successfully may be impaired. Since life-threatening complications are quite rare (1:3,000),³ it seems that further investigation involving a much larger population is required in order to establish the safety of PCEA use during labor.

As for the ability of PCEA to decrease the need for fully skilled anesthesia personnel in a busy obstetric anesthesia service, other alternatives to fully trained anesthesiologists are suggested in the literature and include family practitioners,⁴ obstetricians,⁵ and midwives trained to administer intermittent epidural doses of local anesthetic *via* the epidural catheter.

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