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LOW DOSE BUPIVACAINE INFUSION

Sirs,—We read with interest the work by Drs Li, Rees and Rosen (1985) on continuous extradural infusion of bupivacaine and we would like to confirm their conclusion that an infusion of 0.125% bupivacaine 10 ml h⁻¹ is optimal.

In our study of 45 patients, 80% of patients on a similar regimen required no or only one “top-up” for a mean infusion time of 7 h (range 3–13.5 h). After a preload of Hartmann’s solution 1 litre an extradural catheter was sited at the L3/4 space. A 3-ml test dose of 0.25% bupivacaine was given, followed 5 min later by a further 12 ml. An infusion of 0.125% bupivacaine was commenced 30 min later using an IVAC syringe pump set to deliver 10 ml h⁻¹.

If analgesia was inadequate, a bolus of 10 ml of infusate was given and repeated, if necessary. The patient’s arterial pressure was recorded initially at 5 min and then at 30-min intervals (Datascope: Accutor). The patients were positioned to avoid aorto-caval compression.

The mothers were assessed hourly by the anaesthetist for analgesia, motor blockade and levels of sensory analgesia. Co-operation of the mother and her participation in the delivery were assessed by the midwife. Post-natally, mothers were interviewed for their evaluation of benefit during labour and delivery and to enquire as to the duration of blockade after delivery. Fifty-six percent of mothers had good pain relief with the infusion alone for a mean infusion time of 6 h 30 min until delivery (range 3–12.5 h). Twenty-four percent of mothers needed only one extra bolus of infusate during a mean infusion time to delivery of 8 h (range 3 h 12 min–13 h 30 min). Twenty percent of mothers needed more than one bolus. Mean infusion time to delivery was 10 h 42 min (range 3 h 5 min–16 h 15 min).

In general, sensory level regressed with time; hence, more bolus doses were required for the longer labours. No patient had motor blockade intense enough to prevent her turning herself. There was good cardiovascular stability and no complication relating to the extradural.

The infusion was continued until after delivery, providing good analgesia with effective maternal effort. Most mothers were fully mobile shortly after discontinuation of the infusion. This system provides safe and effective continuous analgesia and approaches the ideal for both 1st and 2nd stage labour. Perhaps the most significant aspect of this method was that the midwives considered it advantageous for both mothers and themselves. This is particularly important, since midwives are practitioners in their own right and their opinion is very much valued.

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PULSE OXIMETRY DURING REPAIR OF CONGENITAL DIAPHRAGMATIC HERNIA

Sirs,—The pulse oximeter is a useful addition to the anaesthetist’s armamentarium. This Journal recently addressed this issue in an Editorial (Hanning, 1985) and some specific clinical applications have been reported in the literature (Friesen, 1985). I have had an opportunity to use this monitor in a different clinical situation—the reduction of a congenital diaphragmatic hernia.

The patient was a full-term, 3-h old, 3.7-kg male with an x-ray diagnosis of left congenital diaphragmatic hernia. The trachea was intubated at birth, and ventilation controlled with 100% oxygen (pancuronium 0.1 mg kg⁻¹ h⁻¹). A ventilator...