

1. If epidural analgesia enables the mother to be delivered in a comfortable manner, alert and receptive to her newborn, does this not enhance mother-infant bonding and thus benefit the child?

2. Is there any evidence whatsoever of lasting adverse effects of epidural analgesia on the child?

Dr Thomas also refers to a report¹ that forceps delivery and malposition of the fetal head were five and three times more common respectively under epidural analgesia than they were in its absence. Other studies² have reported a low frequency of instrumental deliveries. In any case, I would suggest that no cause-and-effect relationship has been proven and that epidural analgesia is most appropriate where, for example, the fetus is in an occipitoposterior position or where forceps rotation and delivery is indicated.

Epidural analgesia is considered protective to the infant in conditions such as breech presentation,³ multiple pregnancy^{4,5} and pre-eclampsia. The caesarean-delivered infant also appears to be in better condition where epidural analgesia has been used, provided the patient is tilted to avoid postural hypotension. In all these situations regional analgesia is beneficial both to the mother and to the infant. In other conditions where an epidural anaesthetic is provided upon request, the tangible benefits to the mother must be weighed against the very uncertain and unproven adverse effects on the child. I believe, therefore, that the trend towards more widespread use of epidural analgesia is both legitimate and desirable.

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1. Hoult *et al.* *Br Med J* 1977; 1: 14.
2. Maltau and Andersen. *Acta Obstet Gynecol Scand* 1975; 54: 401.
3. Crawford. *J Obstet Gynaecol Br Comm* 1974; 81: 867.
4. Crawford. *J Obstet Gynaecol Br Comm* 1975; 82: 929.
5. Weekes *et al.* *Br Med J* 1977; 2: 730.

Sir: In reply to Dr Fleming's questions: First, it has been shown that infants exposed to bupivacaine are more likely to be cyanotic and unresponsive after birth.¹ Bonding is a two-way process. A mother, no matter how relaxed and comfortable after her epidural, will not establish a completely satisfactory relationship with her drugged baby. The work of Klaus and Kennell has demonstrated the importance of early contact, and the problems that can arise from what may seem only minor disruptions to this.²

Second, the direct effects of the drug will wear off in two to three days, but two recent studies have shown behavioural and motor abnormalities detectable up to six weeks after birth.^{1,3} There is also a significant association between epidural anaesthesia and its related interventions with the subsequent development of infantile colic, a condition which persists

for about three months.⁴ These are probably secondary effects related to the early change in the maternal-infant relationship.

In regard to instrumental deliveries, O'Driscoll *et al* associated traumatic intracranial haemorrhage in infants with forceps delivery, and wrote, "Enthusiasm for epidural anaesthesia has been tempered by the knowledge that it leads to a sharp increase in the number of forceps deliveries. This form of analgesia was used in only 4% of primigravidae in 1979".⁵

Dunn, in a critical review of modern obstetric practice, posed the general question, "Where are the carefully controlled studies that should have been done in the first place to assess the hazards of this new approach to labour?"⁶ This question could now be asked about epidural anaesthesia. Until these studies have been done, the views expressed in Dr Fleming's final sentence must be deplored as irresponsible.

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1. Rosenblatt DB *et al.* *Br J Obstet Gynaecol* 1981; 58: 407.
2. Klaus and Kennell. *Maternal infant bonding*. St Louis: CV Mosby, 1976.
3. Murray AD *et al.* *Child development* 1981; 52: 71.
4. Thomas DB. *Aust Paediat J* 1981; 17 (in press).
5. O'Driscoll *et al.* *Br J Obstet Gynaecol* 1981; 88: 577.
6. Dunn P. *Lancet* 1976; 1: 790.

Narcotic analgesics in headache

Sir: In referring to our product Mersyndol (MJA, November 14, 1981), Drs Mendelson and Little mentioned that Mersyndol contains caffeine. This used to be the case. However in mid-1978, caffeine was deleted from the formulation of Mersyndol. The active ingredients in each tablet of Mersyndol are now decapryn (doxylamine succinate) 5 mg, codeine phosphate 9.75 mg and paracetamol 450 mg.

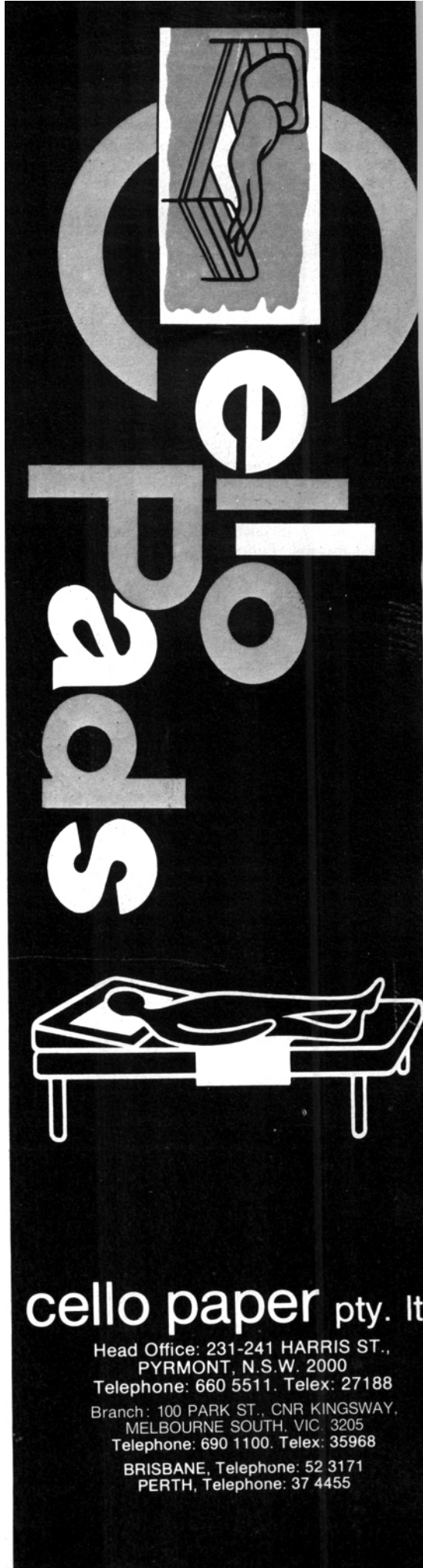
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General practitioners and hospitals

Sir: No longer should general practitioners accept the situation where we are not only virtually barred from contributing to the management of our hospitalised patients, but little or no notice is taken of the information we can provide about them.

Recently a 68-year-old woman was admitted to a district hospital. The referring general practitioner, in requesting admission, gave his diagnosis as left hemiplegia with possible cerebral tumour, as he had observed personality changes over a period of two years. The specialist physician who investigated her diagnosed a left parietal infarct.

The patient was transferred to the rehabilitation unit under a rehabilitation medical officer, but her condition deterior-



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ated and she was transferred back to the acute ward. A scan showed a left parietal infarct with surrounding oedema. She was treated with steroids, improved and was moved back to rehabilitation. This cycle was repeated some days later.

On her return to the rehabilitation unit, a neurologist diagnosed a cerebral tumour in the left parietal region. Neurosurgery was considered inappropriate, and the patient is terminally ill.

It is true that early consideration of the general practitioner's original diagnosis would not have altered the outcome for the patient, but considerable confusion and bewilderment caused to the patient and her family could certainly have been avoided. This diagnosis was not a guess, but was based on long-term clinical observation and knowledge of the patient.

Surely it is time that the services of the family physician can once again be used and his opinions taken into account in the care of hospitalised patients. General practitioners can often make a unique contribution to patient care and management.

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Accuracy and reproducibility of Dial-A-Flo infusion meters

Sir: With ever-increasing demands on nursing time, the supervision of intravenous fluid administration has become more difficult. A partial solution has been achieved by the use of infusion pumps, but their cost precludes extensive usage. The advent of a simple "dial in" system (Dial-A-

Flo)* which fits into the intravenous line, to control IV fluid rates is therefore welcomed. One of the authors (NB) had had previous experience with this system abroad, where on testing it had been found to be inaccurate. Since that time the system has been modified and updated. This communication presents the results of a study whose aims were: (a) to determine the accuracy and reproducibility of performance of Dial-A-Flo infusion meters; (b) to examine the effects of infusion height above the patient on the performance of Dial-A-Flo meters.

We set up Dial-A-Flo infusion meters according to instructions contained in the product package, taking care to purge all trapped air from the system. We connected a bottle containing water for injection (500 ml) to the flow meter via a flexible drip chamber (Tuta Labs, Australia) and taped the outlet catheter from the flow meter to a small, pre-weighed glass beaker. We turned the flow meter on to the required flow rate and allowed it to flow for one hour. We then weighed the beaker plus water and determined accurately the weight of water collected. We tested each of 10 flow meters at six settings over the performance range (5, 10, 30, 60, 100 and 210 ml/min), determined the mean (\pm S.E.M.) flow rates and expressed them as a percentage of the rate indicated on the Dial-A-Flo setting. Initially we performed studies with the infusion bottle 30 inches above the patient (in this case, beaker) as recommended by the manufacturers. Subsequently, on the basis that intravenous drip bottles are often put at heights greater than 30 inches, we tried out the system with a height of 40 inches.

The results show that there is considerable variability in Dial-A-Flo performance even when set up as recommended by the manufacturers. In all instances, except the lowest flow rate 5 ml/hr, less fluid was delivered than expected (Table 1). When the height of the infusion bottle was elevated to 40 inches above the outlet, more fluid than expected was delivered (Table 2).

It would thus appear that the Dial-A-Flo may be acceptable for use in patients where accurate fluid volumes are not critical. We hope that the information presented will allow clinicians to make individual decisions as to the practicability of this potentially economic system.

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* Sorenson Research, U.S.A., Agents: Abbott Hospital Products, Kurnell 2231.

Chlamydia and urethritis

Sir: I read with interest the article 'Chlamydia trachomatis and respiratory disease in infants' (MJA, October 3, 1981). Venereologists around the world have become increasingly aware of late of the less than benign nature of the *Chlamydia trachomatis* organism, and the article reinforces this view. It is disturbing that non-specific urethritis (NSU) seems to be becoming more common in Australia, and the fact that 40-50% of cases of NSU are due to *Chlamydia* makes it difficult to dismiss this troublesome condition as just a mild nuisance.

In the last three months at the Melbourne Communicable Diseases Centre we have treated 866 cases of NSU in males compared with only 227 cases of gonococcal urethritis. Even if only 40% of these NSU cases are due to *Chlamydia*, they must represent a sizeable reservoir of the organism in the young sexually active population. Better and swifter diagnostic methods for the detection of chlamydial infection, earlier and more adequate treatment of adult infection, and the tracing and treatment of female sexual partners of men with chlamydial urethritis are urgently called for. Otherwise we are likely to see more chlamydial respiratory disease in infants in the near future.

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TABLE 1: The variability in performance of Dial-A-Flo infusion meters, set up 30" above the outlet as recommended by the manufacturers

Dial-A-Flo meter flow rate (ml/hr)	Measured flow rate (ml/hr)	% error between meter and actual flow rate
5	5.2 \pm 0.3	+ 4.2 \pm 6.8
10	9.2 \pm 0.9	- 7.6 \pm 9.5
30	24.8 \pm 0.9	- 17.4 \pm 2.9
60	51.9 \pm 0.5	- 13.5 \pm 0.9
100	90.0 \pm 0.71	- 10.0 \pm 0.71
210	181.3 \pm 2.4	- 13.7 \pm 1.2

Values are shown as mean \pm S.E.

TABLE 2: The effects of increasing infusion height from 30" to 40" on Dial-A-Flo performance

Dial-A-Flo meter flow rate (ml/hr)	40" above outlet		30" above outlet	
	Measured flow rate ml/hr	% error	Measured flow rate ml/hr	% error
10	10.6 \pm 0.5	+ 7.5 \pm 5.3	9.2 \pm 0.9	- 7.6 \pm 9.5
60	67.8 \pm 1.6	+ 13.0 \pm 2.7	51.9 \pm 0.5	- 13.5 \pm 0.9
100	113.7 \pm 1.4	+ 13.7 \pm 1.4	90.0 \pm 0.7	- 10.0 \pm 0.7

Values are shown as mean \pm S.E.

Harmful fertility programs

Sir: I am writing to draw attention to a small group of women patients whom I see in my counselling practice, and who I believe may be sustaining unnecessary psychological harm whilst participating in fertility/infertility programs.

I think that such programs have potential for impairing the sexuality of the female