CORRESPONDENCE

this route is dependent on patient-nurse communication and nursing response, and this is mentioned in the discussion [1]. The aim in any pain study is to test the severity of pain and quality of pain relief experienced by the patient during the postoperative period. Two assessments of pain over 24 h may not be enough to give an adequate idea of the quality of pain. Baseline assessment at the time of arrival from theatre, before any analgesic injection is given, is essential. Pain relief scores at more frequent assessments should have been added (beside visual analogue (VAS) and verbal pain scores) to improve the sensitivity of these tests in detecting the amount of resulting pain relief.

From baseline assessments, the pain intensity difference (PID) and summed PID could have been calculated, both of which have been shown to be more sensitive [3] in revealing significant differences when VAS failed to do so.

Last, controlling another factor—the nature of the operation—might be prudent in any controlled pain study. The authors did not specify the type of operations, but classified them as only major and minor surgery according to specific criteria. These do not rule out the possibility of patients within the same category having a different quality of pain.

A. AL-HASANI
Leicester Royal Infirmary
Leicester

Sir,—It is true that the use of a fixed i.m. dose of morphine is not the ideal method to study the morphine-sparing effects of a drug. Ketorolac has been shown to produce a morphine-sparing effect in other studies. The study in question was designed to see if there was any significant reduction in the use of morphine when this was prescribed in the usual manner in our hospital after orthopaedic surgery. This approach may be more relevant to clinical practice, as the use of patient-controlled analgesia is unlikely to be the standard method of providing analgesia for all patients in the near future.

I am surprised at the suggestion that pain measurements should have been made before any analgesics were given. All patients received intravenous morphine and either ketorolac or placebo at the end of surgery, as we felt that to withhold analgesia for the purpose of studying pain would be unethical. The use of more frequent pain assessments may be of value, but could also influence the patient's demand for analgesia. This study aimed to reproduce the routine postoperative care as closely as possible, whilst making sufficient observations from which valid conclusions could be made.

It is possible that there were differences in the quality of pain between patients in the same group, for example between patients having hip and knee replacements. A much larger study would be required to determine this and to investigate the influence of other factors influencing pain perception such as previous surgery, preoperative pain and personality.

J. KINSELLA
Glasgow Royal Infirmary
Glasgow

PATIENT-CONTROLLED ANALGESIA BY PROXY

Sir,—Further to the recent report of problems with a patient-controlled analgesia system (PCAS), which had been reprogrammed by clerical interference [1], I wish to report a case in which a patient inadvertently received morphine 89 mg over a period of 8 h via a PCAS.

A 26-yr-old gravida 2 patient (weight 67 kg, height 157 cm) was scheduled to undergo a lower segment Caesarean section because of inadequate pelvimetry. Previously she had undergone Caesarean sections under general anaesthesia but her medical history was otherwise unremarkable, with no history of opioid abuse. Preoperative assessment included instructions on the use of a PCAS for postoperative pain relief.

Intraoperative management with spinal anaesthesia was uneventful, with no complaint of discomfort during the procedure. A PCAS (Graseby) was attached to the patient's i.v. infusion with an Abbott Mini-Bore PCAS giving set. The PCAS was loaded with a 50-ml syringe containing morphine sulphate 2 mg ml⁻¹. It was programmed with a bolus dose of 1 mg, a lock-out time of 3 min and no background infusion.

Eight hours after the operation, anaesthetic advice was sought, but there was only 6 ml of solution remaining in the syringe. The patient was fully conscious, with a ventilatory frequency of 16 b.p.m. She still complained of slight pain on movement, but none at rest.

The PCAS chart revealed that the patient had used 89 mg of morphine over the 8 h after surgery. The consumption per hour was as follows: first 1 h 12 mg, second 1 h 3 mg, third 1 h 25 mg, fourth 1 h 16 mg; over the next 4-h period another 33 mg of morphine. No programming error was found on the PCAS. There was no evidence of extravasation of morphine. At this stage, the patient admitted to giving her husband to her husband during visiting hours, and had asked him to press the switch every 3 min. It had seemed an ideal way of getting good analgesia without having to rouse herself from slumber to press the switch.

The patient was warned how inappropriate and potentially dangerous this practice is. The PCAS was reloaded and reprogrammed with a lock-out time of 6 min. The nursing staff were asked to watch for ventilatory depression, and the patient was monitored with a pulse oximeter. She remained pain free at rest and only had slight pain on movement over the next 16 h. She consumed an additional 21 mg of morphine. SpO₂ remained at 97% with Fio₂ 0.28.

This case differs from others reported [2, 3] in that the patient required no resuscitation, and the unusually large dose of opioid was administered by her husband. This case demonstrates that we must continue to emphasize strongly that the P in PCAS means patient and not by proxy.

F. Y. LAM
Rotherham District Hospital
Rotherham


VETERINARY USE OF "XYLOCAINE" SPRAY

Sir,—The Association of Veterinary Anaesthetists wishes to draw attention to a problem experienced in cats with the new formulation of the pump pack Xylocaine Spray (Astra Pharmaceuticals Ltd). An Astra Xylocaine spray has been used for many years to desensitize the larynx before tracheal intubation in the cat. The product has never carried an animal product licence, but has been used widely without apparent ill effect.

Several reports have been received in recent months describing adverse reactions to the new spray formulation. These include laryngeal oedema, upper respiratory tract obstruction and excessive airway secretion. This has culminated in a recommendation from Astra that the spray should not be used in cats [1]. The Association of Veterinary Anaesthetists has suggested several alternative techniques to facilitate feline tracheal intubation [2] and would welcome further ideas. We endorse the recommendation that the new pump pack should not be used in cats.

P. M. TAYLOR
Animal Health Trust
Newmarket


2. Taylor PM. Use of Xylocaine pump spray in cats. Veterinary Record 1992; 130: 583.