Sir,—We read with interest the paper by Kavanagh and colleagues [1] which demonstrated no benefit in terms of pain scores or PCA morphine requirements when a balanced analgesic regimen combining opioid, local anaesthetic and a non-steroidal analgesic drug was administered before thoracic surgery. This carefully conducted study casts doubt on the clinical value of pre-emptive analgesia when applied in a practical manner to a major surgical procedure associated with severe postoperative pain.

We would, however, point out three features in the design of this study which limit its relevance as a rigorous evaluation of pre-emptive analgesia. First, all patients, including those in the control group, received fentanyl before surgical incision. Although the doses used were modest (1 μg kg⁻¹ bolus and 1 μg kg⁻¹ h⁻¹ infusion) they are known to be capable of a significant, although short-lasting, analgesic effect. The high lipophilicity of this compound is expected to significantly alter the postoperative analgesic experience. Third, our study used two groups (n = 15 in each) as opposed to their study with eight groups (n = 7 in each). Fourth, our study was double-blinded. Fifth, we utilized i.m. midazolam in our control group. Finally, although the authors have demonstrated thermographic effects of unilateral paravertebral block [3], confirmatory studies of the analgesic effectiveness of this technique are lacking [4].

Drs Richardson, Sabanathan and Shah raise an important point in referring to the possible postoperative development of neuronal sensitization. This issue has been discussed before [5–7] and may help explain the late postoperative increased use of PCA morphine in the pre-emptively treated group [1]. It is possible that the greater early (0–6 h) postoperative analgesic consumption in the control group resulted in pre-emption of subsequent late post-operative pain in that group, thereby resulting in higher late (12–24 h) postoperative analgesic requirements in the treatment group [1].

Drs Doyle and Bowler make three points about the methodology which we shall address in order. First, the issue of intraoperative opioid use before incision was discussed in the paper [1], and was originally raised by us in earlier correspondence [8, 9]. We agree that such use of opioid at induction of anaesthesia confounds the study, however it conforms to common clinical practice.

However, we are unaware of any data addressing the relative pre-emptive analgesic efficacy of lipophilic vs hydrophilic opioids.

The technique of intercostal block was described in detail in the methods section [1], where we acknowledged that testing the blocks may have enhanced the chances of demonstrating an analgesic effect in the treatment group, but that blinding would have been difficult to maintain. Although the authors cited studies suggesting variable effectiveness of intercostal block [10, 11], a recent review suggests that the overall usefulness of the technique remains questionable [4]. Furthermore, as discussed in our article [1], the pathways subserving post-thoracotomy pain may not be limited to the intercostal nerves.

Finally, the issue of pre-incisional vs post-incisional administration is raised. Our original study examined the precise effect of timing of administration of analgesics in patients undergoing thoracotomy [12]. We have recently confirmed these findings using lumbar extradural bupivacaine in patients undergoing lower abdominal surgery [13]. The current study [1] assumed the potential benefit of pre-emptive administration and sought to explore the combined benefits of pretreatment with multimodal analgesia. In addition, the intercostal blocks were only one of three pre-emptive modalities used, and all the modalities were chosen as being simple interventions applicable to most lateral thoracotomy surgical procedures.

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