Should we use epidural analgesia or patient-controlled analgesia after laparotomy?

THE DILEMMA

A 67-year-old lady undergoes an elective hemicolectomy for a suspected tumour. How would you provide postoperative analgesia: epidural or patient-controlled analgesia?

EPIDURALS CAN REDUCE COMPLICATIONS AND SIDE EFFECTS

In a wide-ranging review of randomized trials with epidural/spinal (neuraxial) anaesthesia, either alone or in combination with general anaesthesia, *vs* general anaesthesia alone, neuraxial anaesthesia showed a significant reduction in both postoperative mortality and morbidity (Rodgers et al, 2000). Overall 30-day mortality was reduced by one third in the neuraxial block group. This was attributed to reductions in deep vein thromboses, pulmonary emboli, pneumonia, respiratory depression, transfusion requirements, and myocardial infarction.

The delivery of opiates to the epidural space, in much smaller quantities than is required for patient-controlled analgesia (PCA), is likely to result in fewer systemic side-effects, e.g. nausea, vomiting, itching. The dilute solutions of local anaesthetic that are used minimize the side-effects of motor block and urinary retention. Epidurals, if sited correctly and looked after properly on the ward, provide excellent postoperative analgesia with minimal side-effects and few complications (Donato et al, 1995).

Patrick Dill-Russell
Specialist Registrar
Chelsea and Westminster Hospital
London SW10 9NH

Donato S, Malissano AM, Dogareschi T et al (1995) Postoperative epidural analgesia. *Chir Ital* **47:** 26–9

Rodgers A, Walker N, Schug S et al (2000) Reduction in postoperative mortality and morbidity with epidural/spinal anaesthesia; results from overview of randomised trials. *Br Med J* **321:** 1493–7

DO NOT UNDERESTIMATE THE IMPORTANCE OF KEEPING THE PATIENT IN CONTROL

Opiate PCAs with or without a continuous background infusion can provide very good analgesia post laparotomy. Advantages include patient satisfaction and a feeling of being in control of their own pain management, the ability to incorporate an antiemetic simultaneously and the inherent safety factor that sedation acts as a limit to further self-administration.

PCA also has the advantage of taking into account not only the interpatient variations in analgesic requirements but also in the same patient during the recovery period. It is non-invasive and avoids the potential complications associated with central neuraxial blockade (e.g. post dural puncture headache, subarachnoid or intravenous injection, failure/missed segments motor blockade and urinary retention).

By controlling their plasma levels themselves, patients are able to reach their analgesic requirements with less peaks and troughs and maintain that level. After patient education at the preoperative visit to explain use and to allay fears about addiction and overdose, very effective analgesia can be achieved.

Julian Stone
Specialist Registrar
Royal Surrey County Hospital
Guildford
Surrey GU2 7XX

Jorgensen H, Wetterslev J, Møiniche S, Dahl JB (2001) Epidural local anaesthetic versus opioid based analgesic regimens on postoperative gastrointestinal paralysis, PONV and pain after abdominal surgery. In: *Cochrane Library.* Issue 3. Update Software, Oxford