

PD-6. EPIDURAL ROPIVACAINE / FENTANYL VERSUS BUPIVACAINE / FENTANYL FOR POSTOPERATIVE ANALGESIA FOLLOWING LUMBAR DISC SURGERY

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Ropivacaine is a new long-acting amino amide local anesthetic, structurally related to bupivacaine. In this prospective randomized double blind study, we compare the clinical efficacy of ropivacaine-fentanyl versus bupivacaine-fentanyl epidural infusion for post-lumbar spine surgery analgesia.

Ninety-seven patients, ASA status I/II scheduled for lumbar disc surgery were enrolled in this study. patients were randomly assigned to receive one of the postoperative epidural infusion regimens:

Group I (n = 28) received ropivacaine 0.125% and fentanyl 2 mg/mL.

Group II (n = 36) received bupivacaine 0.125% and fentanyl 2 mg/mL.

Group III (n = 32) received bupivacaine 0.0625% and fentanyl 4 mg/mL.

Patients were similar with respect of the demographic data and received the same anesthetic management. Before closure of the wound, an epidural catheter was inserted under vision from a separate stab and it was advanced on the dura. The wound was closed and, before extubation, all patients received 6 mL bolus of the study regimen. Extubation was done and the study epidural infusion was started at a rate of 8 mL/hr and was titrated to a maximum of 14 mL/hr. Over the next 48 hours following surgery, pain relief at four hourly interval using the visual analogue scale (VAS), sedation score, heart rate (HR), blood pressure (BP), respiratory rate (RR), temperature (T), sensory and motor block, and the side effects of the study drugs, all were recorded.

All patients experienced effective pain relief at rest (VAS < 40 mm) with low pain scores on mobilization. The difference in pain scores between groups was not significant except for group III that showed significantly higher pain scores in the first postoperative day (P < 0.05). The incidence of nausea, vomiting and pruritus was highest in group III, followed by group I and then group II (9%, 3%, and 2% for nausea, 6%, 3%, and 2% for vomiting, and 9%, 3%, and 2% for pruritus in group III then group I and II respectively). The P value was < 0.05 for nausea and pruritus in group III compared to group I. Group I showed the least incidence of motor blockade then group III and group II respectively (3%, 6%, 22%). The incidence of hypotension was not significantly different between groups, while urine retention was more frequent in group II (17%), and less in group I (7%) and group III (6%) respectively. Patient satisfaction was the highest in group I (96%), less in group III (91%) and group II (83%) respectively.

We recommend the use of ropivacaine 0.125% and fentanyl 2 mg/mL for continuous epidural infusion post spinal surgery in view of its efficacy and patient satisfaction.

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3. Brockway MS, Bannister J, McClure JH, et al. Comparison of extradural ropivacaine and bupivacaine. *Br. J. Anaesth.* 1991; 66 : 31 - 7.

	Group I (n = 28)	Group II (n = 36)	Group III (n = 32)
Hypotension Nausea Vomiting	14.3% 3.6% 3.6%	19.4% 2.6% 2.8%	18.8% 9.4% * 6.2%
Pruritus	3.6%	2.8%	9.4% *
Respiratory depression	0%	0%	3.1%
Excessive sedation	0%	0%	3.1%
Numbness of lower limbs	7.4%	16.6% *	6.2%
Retention of urine	7.4%	16.6% *	6.2%

Table : Incidence of complications among the three groups represented as percentage of patients. * P < 0.05 for group II or III versus group I.