

Systematic review of nerve block and incisional local anaesthetics for analgesia in herniorrhaphy

Narinder Rawal¹, and Henrik Kehlet² on behalf of the PROSPECT (PROcedure-SPECific postoperative pain management) Working Group.

Background and Goal of Study: The PROSPECT initiative is a collaboration of surgeons and anaesthesiologists that provides evidence-based recommendations for PROcedure-SPECific pain management.¹ Given that local anaesthetic techniques are widely used for analgesia in herniorrhaphy, PROSPECT examined the evidence to support this practice.

Materials and Methods: Systematic literature review (1966–January 2004) using the Cochrane protocol; randomised trials in adult herniorrhaphy of inguinal nerve block (INB) or wound infiltration (WI) using local anaesthetics (LA) vs. placebo (or pre- vs. post-incisional administration) reporting pain scores (VAS 1–100 mm). Where possible, data were grouped and weighted mean differences (WMD) and odds ratios (OR) calculated.

Results: Total number of studies (n)=16; 20–100 patients per study.

Pre-incisional INB ± pre-incisional WI vs. placebo (n=7). Reduction in: VAS scores at rest 0–6 h (n=6), and 48 h (n=1) but not 8–24 h (n=2), WMD at 3 h -18.21 p=0.002 (n=2); VAS scores on movement at 3–10 h (n=1) and 1–24 h (n=1); and morphine use WMD -4.58 mg/24 h p=0.04 (n=3).

Intra-operative INB + intra- + postoperative WI vs. placebo (n=2). Reduction in: VAS scores on lying, sitting and walking for 0 h–10 days (n=1) and at rest for 0–24 h (n=1); and supplementary analgesic use (n=2).

Intra-operative WI vs. placebo (n=4). Reduction in: pain at rest at 1–3 h (n=3), 5, 12 (n=1), and 48 h (n=1) but not 4, 6 (n=1), 5 (n=1) or 24 h (n=1) or 10 days (n=1), WMD at 3 h -35.83 p=0.006 (n=2); pain on movement at 4, 6 (n=1), 24 and 48 h (n=1); and number of analgesic tablets WMD -0.65 p=0.01 (n=2).

Pre- vs. post-incisional INB or WI (n=3). Non-significant for pain scores (n=3); or supplementary analgesic use (n=2 out of 3).

Conclusion(s): This review supports the current clinical practice of using local anaesthetic techniques for analgesia in herniorrhaphy, and shows that they provide significant and clinically meaningful reductions in pain regardless of whether they are given pre-, intra- or postoperatively.

References:

1) Kehlet H, Bonnet F, Camu F *et al.* *European Journal of Anaesthesiology* 2003; **20** (Supplement 30); 6.