

HERNIORRAPHY

SUMMARY RECOMMENDATIONS

The recommendations of the *PROSPECT Working Group* are graded A–D, based on the level of evidence from the studies, which is in accordance with the Oxford Centre for Evidence-Based Medicine (CEBM website accessed Dec 2003, Sackett 2000). In the context of PROSPECT, recommendations based on procedure-specific evidence are grade A (randomised clinical trials), those based on transferable evidence are grade B (randomised clinical trials) or grade C (retrospective studies or case series) and those based on clinical practice are grade D (Click here for further information on levels of evidence and grades of recommendation).

PROSPECT provides clinicians with supporting arguments for and against the use of various interventions in postoperative pain based on published evidence and expert opinion. Clinicians must make judgements based upon the clinical circumstances and local regulations. At all times, local prescribing information for the drugs referred to must be consulted.

The following pre-, intra- and postoperative interventions have been evaluated for the management of postoperative pain following herniorraphy:

Pre-operative

Recommended

Systemic

- **Conventional NSAIDs (Grade A) or COX-2-selective inhibitors (Grade A)**

Local anaesthetic techniques

- **Inguinal nerve block/field block/infiltration, pre-operatively and/or intra-operatively (Grade A)**
- **Long-acting local anaesthetics (Grade D)**

Not recommended

Systemic

- Clonidine (Grade D)
- Corticosteroid (Grade D)
- Gabapentin/pregabalin (Grade D)
- Ketamine (Grade D)

Local anaesthetic techniques

- Epinephrine (Grade A), dextran (Grade D) or corticosteroid (Grade D) as part of a local anaesthetic solution
- Paravertebral nerve block (Grade D)

Other local analgesics

- Wound infiltration with clonidine (Grade D)
- Wound infiltration with conventional NSAIDs (Grade A)
- Topical conventional NSAIDs (Grade D)

Intra-operative

Recommended

Local anaesthetic techniques

- **Inguinal nerve block/field block/infiltration, pre-operatively and/or intra-operatively (Grade A)**
- **Long-acting local anaesthetics (Grade D)**

Operative anaesthetic techniques

- **Local anaesthesia ± sedation OR general anaesthesia in combination with local anaesthetic techniques (inguinal nerve block/field block/infiltration) (Grade A)**
- **Long-acting local anaesthetics (Grade D)**

Operative techniques

- **Open or laparoscopic surgery (Grade D)**
- **Mesh techniques (Grade A) – no recommendations for one particular open mesh technique, prosthesis type or mesh fixation technique over another due to limited available pain data**

Not recommended

Systemic

- Clonidine (Grade D)
- Gabapentin/pregabalin (Grade D)
- Ketamine (Grade D)

Local anaesthetic techniques

- Epinephrine (Grade A), dextran (Grade D) or corticosteroid (Grade D) as part of a local anaesthetic solution
- Local anaesthetic instillation (no needles) at closure (Grade D)
- Extraperitoneal instillation of local anaesthetic during laparoscopic surgery (Grade A)
- Paravertebral nerve block (Grade D)

Other local analgesics

- Wound infiltration with clonidine (Grade D)
- Wound infiltration with conventional NSAIDs (Grade A)
- Wound infiltration with strong opioid (Grade A)

Operative anaesthetic techniques

- Epidural anaesthesia (Grade D)
- Spinal anaesthesia (Grade D)

Operative techniques

- Open non-mesh surgery (Grade A)

Nerve section/cryoanalgesia techniques

- Surgical division of the ilioinguinal nerve (Grade A)
- Cryoanalgesia (Grade A)

Postoperative

Recommended

Systemic

- **Conventional NSAIDs (grade A) or COX-2-selective inhibitors (grade A)**
- **Paracetamol, for routine pain therapy in combination with conventional NSAIDs/COX-2-selective inhibitors (Grade B)**
- **Weak opioids for moderate-intensity pain when conventional NSAIDs/COX-2-selective inhibitors plus paracetamol are not sufficient or are contraindicated (Grade B)**
- **Strong opioids as rescue analgesia only (for high-intensity pain), in addition to non-opioid analgesia (Grade B)**

Not recommended

Systemic

- Gabapentin/pregabalin (Grade D)
- Ketamine (Grade D)

Local anaesthetic techniques

- Continuous infusion with local anaesthetic by a catheter in the wound (Grade D)
- Single/repeat dose of local anaesthetic by a catheter in the wound (Grade A)
- Postoperative subcutaneous infiltration with local anaesthetic (Grade D)

Non-pharmacological techniques

- TENS (Grade A)

Overall PROSPECT Recommendations for management of pain after herniorrhaphy

Recommended	
Pre-/intra-operative	<ul style="list-style-type: none"> Local anaesthesia ± sedation OR general anaesthesia in combination with local anaesthetic techniques (inguinal nerve block/field block/infiltration) Long-acting local anaesthetics in preference to short-acting local anaesthetics Open or laparoscopic surgery, depending on factors other than postoperative pain Mesh techniques in preference to non-mesh techniques
Postoperative 0–6 hours (including the post anaesthetic care unit [PACU])	<p>For postoperative analgesia in addition to that provided by intra-operative local anaesthetics:</p> <ul style="list-style-type: none"> Base medication: conventional NSAIDs or COX-2-selective inhibitors (use weak opioids when conventional NSAIDs/COX-2-selective inhibitors are contraindicated), combined with paracetamol Add weak opioid when $VAS > 30 < 50^*$ Add strong opioid when $VAS \geq 50^*$
Postoperative Beyond 6 h	<ul style="list-style-type: none"> Continue base medication: conventional NSAIDs or COX-2-selective inhibitors (use weak opioids when conventional NSAIDs/COX-2-selective inhibitors are contraindicated), combined with paracetamol Add weak opioid when $VAS > 30 < 50^*$ Add strong opioid when $VAS \geq 50^*$

* $VAS \geq 50$, on a scale of 1–100 mm = high-intensity pain

$VAS > 30 < 50$, on a scale of 1–100 mm = moderate-intensity pain

$VAS \leq 30$, on a scale of 1–100 mm = low-intensity pain

Not recommended

- Spinal anaesthesia
- Epidural anaesthesia
- Systemic clonidine, corticosteroid, gabapentin/pregabalin or ketamine
- Epinephrine as part of a local anaesthetic solution
- Intra-operative wound instillation with local anaesthetic
- Paravertebral nerve block
- Postoperative single/repeat wound injection, or postoperative continuous wound infusion, with local anaesthetic
- Wound infiltration using conventional NSAIDs, clonidine or strong opioids
- Topical conventional NSAIDs
- Nerve section, cryoanalgesia techniques or TENS