HAEMORRHOIDECTOMY

SUMMARY RECOMMENDATIONS

Notes on PROSPECT recommendations

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.

Pain after haemorrhoidectomy and aims of the PROSPECT review

Haemorrhoidectomy is associated with moderate-to-severe postoperative pain. Multiple pharmacological treatments, anaesthetic strategies and surgical techniques have been investigated for postoperative analgesia.

PROSPECT guidelines for postoperative pain management after haemorrhoidectomy were previously published in 2010 (Joshi et al) and 2017 (Sammour et al). However, many studies were published since the last recommendations, so the aim of this review (Bikfalvi et al 2023) was to update the literature and recommendations for management of pain after haemorrhoid surgery. The literature search period was January 1, 2016 to February 2, 2022.

The unique PROSPECT methodology is available at https://esraeurope.org/prospect-methodology/.

Summary of recommendations and key evidence

Summary of recommendations and key evidence for pain management in patients undergoing haemorrhoid surgery	
Pharmacological treatment	Paracetamol combined with NSAIDs or COX-2 selective inhibitors administered preoperatively or intraoperatively and continued postoperatively • No additional studies investigating these drugs have been published since 2010 (Joshi 2010)
	Dexamethasone (intravenous, single dose) • No additional studies investigating steroids have been published since 2010 (Joshi 2010) • Two trials included previously included intramuscular betamethasone; however, dexamethasone is commonly used as an antiemetic and a simple increase in the dose to 0.1–0.2 mg/kg will provide extra analgesia (De Oliveira 2011)
	Laxatives • This recommendation is based on evidence included in the previous review (London 1987; Kecmanovic 2006)
	Topical metronidazole, diltiazem, sucralfate or glyceryl trinitrate • Procedure-specific evidence found that the following provided effective analgesia: topical metronidazole (Lyons 2017; Xia 2018; Xia 2020; Abbas 2020; Razzaq 2020; Xia 2022), topical diltiazem (Xia 2020; Huang 2018; Yadav 2018; Bader 2020; Abidi 2021), topical sucralfate (Xia 2020; Vejdan 2020), and topical glyceryl trinitrate (Liu 2016; Vahabi 2019) • The choice of postoperative topical treatment should be left to the preferences of the surgeon and tailored to the individual characteristics of the patient
	Botulinum toxin • New evidence indicates that local injection of botulinum toxin reduces postoperative pain (Alvandipour 2021; Sirikurnpiboon 2020; Cheng 2022), but anal incontinence was not an outcome mentioned in the studies included

	• However, the cost of this intervention may be prohibitive in routine practice
	Opioid for rescue • Due to concerns about opioid-related adverse effects such as postoperative nausea and vomiting (Frauenknecht 2019), constipation with subsequent pain on defecation, and their contribution to the current opioid crisis (Soneji 2016), opioids should only be considered as rescue analgesics, if the recommended approaches are not adequate
Anaesthetic and analgesic strategies	Bilateral pudendal nerve block • Evidence indicates benefit of the bilateral pudendal nerve block (also called ischiorectal block) (Li 2021; Mongelli 2021; Di Giuseppe 2020; He 2021; Kumar 2016; Nadri 2018) • However, the risk of nerve injury and subsequent pudendal neuralgia, especially if the block is performed blindly, should be balanced against the analgesic benefit
Surgical procedures	The surgical technique should be left to the type of hemorrhoids and surgeon's experience and expertise • Of note, Milligan-Morgan haemorrhoidectomy is more painful than stapled haemorrhoidopexy, LigaSure haemorrhoidectomy and ultrasonic procedures, which in turn are more painful than transanal haemorrhoidal de-arterialisation or rubber band ligation • This finding is based on review of 54 studies investigating different surgical techniques
Other modalities	Acupuncture • Perioperative acupuncture can be recommended as an analgesic adjunct based on procedure-specific evidence (Qin 2020; Wu 2018; Yeh 2018; Wang 2020) • However, heterogeneity in the studied techniques, along with a pain score reduction of less than one unit, and the required specific training preclude wide dissemination in clinical practice

COX, cyclooxygenase; IV, intravenous; NSAIDs, non-steroidal anti-inflammatory drugs.

Interventions that are NOT recommended

Analgesic interventions that are not recommended for pain management in patients undergoing haemorrhoid surgery.

Timing	Intervention	Reason for not recommending
Pharmacological treatments	Oral metronidazole	Conflicting procedure-specific evidence
	Intramuscular sebacoyl dinalbuphine ester	Limited procedure-specific evidence
	Topical atorvastatin	Limited procedure-specific evidence
	Topical baclofen	Limited procedure-specific evidence
	Topical lidocaine with diclofenac	Limited procedure-specific evidence
Anaesthetic and analgesic strategies	Spinal anaesthesia	Limited procedure-specific evidence
	Intrathecal hydrophilic opioid	Limited procedure-specific evidence
	Perianal infiltration with tramadol	Limited procedure-specific evidence
	Perianal infiltration with plain local anaesthetic	Lack of procedure-specific evidence
	Perianal infiltration with liposome bupivacaine	Lack of procedure-specific evidence
	Perianal infiltration with liposome bupivacaine combined with aloe vera	Limited procedure-specific evidence
Surgical procedures	Milligan-Morgan haemorrhoidectomy	Lack of procedure-specific evidence
	Ferguson haemorrhoidectomy	Conflicting procedure-specific evidence
	Injection of aluminium potassium sulfate and tannic acid combined with mucopexy	Conflicting procedure-specific evidence
Other modalities	Postoperative medication checklist	Lack of procedure-specific evidence
	Topical Shuangjin ointment with beta-sodium aescinate	Limited procedure-specific evidence
	Modified Buzhong Yiqi decoction combined with Gangtai ointment	Limited procedure-specific evidence
	Sitz bath with Xiaozhi	Limited procedure-specific evidence
	Karamardadi yoga with sodium diclofenac	Lack of procedure-specific evidence
	Oral Venoplant	Limited procedure-specific evidence
	Oral flavonoids with Centella Complex	Lack of procedure-specific evidence

Overall PROSPECT recommendations table

Overall recommendations for pain management in patients undergoing haemorrhoid surgery	
Pharmacological treatment	• Paracetamol combined with NSAIDs or COX-2 selective inhibitors administered preoperatively or intraoperatively and continued postoperatively • Dexamethasone (intravenous, single dose) • Laxatives • Topical metronidazole, diltiazem, sucralfate or glyceryl trinitrate • Botulinum toxin • Opioid for rescue
Anaesthetic and analgesic strategies	• Bilateral pudendal nerve block
Surgical procedures	• The surgical technique should be left to the type of hemorrhoids and surgeon's experience and expertise. Of note, Milligan-Morgan haemorrhoidectomy is more painful than other surgical techniques
Other modalities	• Acupuncture

COX, cyclooxygenase; NSAID, non-steroidal anti-inflammatory drug.

PROSPECT publication

PROSPECT guideline for haemorrhoid surgery: A systematic review and procedure-specific postoperative pain management recommendations.

Bikfalvi A, Faes C, Freys SM, Joshi GP, Van de Velde M, Albrecht E. on behalf of the PROSPECT Working Group of the European Society of Regional Anaesthesia and Pain Therapy (ESRA).

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PROSPECT guideline for haemorrhoid surgery-infographic