VAGINAL DELIVERY WITH PERINEAL TEARS OR EPISIOTOMY

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. As anaesthetists are greatly involved in pain management in the obstetric context, the PROSPECT Working Group extends the postoperative context to the postpartum period.

Pain after vaginal delivery with perineal tears or episiotomy and aims of the PROSPECT review

A vaginal delivery is frequently associated with significant postpartum pain, particularly in the context of episiotomy or perineal tears (Declercq 2008). This may interfere with a mother's ability to take care of her infant and herself, and is a risk factor for persistent pain and for postpartum depression (ACOG committee opinion No. 742, 2018; Eisenach 2008; Lu 2024). However, in this setting, pain management remains poorly explored and evidence-based recommendations are scarce.

The aim of this PROSPECT review (Luxey 2024) was to evaluate the available literature about the effects of pharmacological (systemic and regional analgesia) and non-pharmacological approaches, as well as surgical interventions, on acute pain after vaginal delivery with perineal tears or episiotomy, and to develop evidence-based, procedure-specific recommendations for postpartum pain management in this setting.

The unique PROSPECT methodology is available at https://esraeurope.org/prospect-methodology/. The methodology considers clinical practice, efficacy, and adverse effects of pharmacological and non-pharmacological analgesic techniques, and ensures a critical assessment of the clinical relevance of each included study (Joshi 2019). PROSPECT methodology has been updated now for future reviews (Joshi 2023).

Literature databases were searched up to March 2023. This systematic review was registered at PROSPERO: CRD42022342275.

Summary of recommendations and key evidence

Summary of recommendations and key evidence for pain management after vaginal delivery with perineal tears or episiotomy
Pharmacological treatment
Paracetamol and NSAIDs are recommended for first-line treatment of postpartum pain among women with perineal tears or episiotomy • The oral route is preferred over the rectal route as it offers similar analgesic benefits • Evidence supporting paracetamol vs placebo in this setting came from a Cochrane meta-analysis and an additional RCT (Abalos 2021; Skovlund 1991) • Similarly, evidence supporting use of oral NSAIDs vs placebo included a Cochrane meta-analysis and a further RCT (Wuytack 2016; Harrison 1992) • Of note, paracetamol and oral NSAIDs are excreted in low concentration in breast milk, and ibuprofen breast milk concentration decreases with breastfeeding duration (Rigourd 2014)
Regional analgesic strategies
Epidural morphine (≤2 mg) is recommended for postpartum pain treatment among women with labour epidural analgesia and severe perineal tears • Evidence supporting use of epidural morphine after childbirth vs placebo included three RCTs (Niv 1994; Macdonald 1984; Solano 2012); in these studies, epidural morphine doses ranged from 1 to 4 mg • As adverse effects, and in particular respiratory depression, depend on the dose of epidural morphine, we recommend the use of an epidural morphine ≤2 mg, corresponding to the minimum effective dose • Women treated with epidural morphine should benefit from respiratory monitoring according to SOAP guidelines (Bauchat 2019)
Non-pharmacological therapies
Ice or chemical cold packs are recommended for first-line treatment of postpartum pain due to their simplicity of use • The technique (either ice packs or gel pads) remains at the clinician's discretion • Evidence for the analgesic effects of ice or chemical cold packs among women who had vaginal birth with episiotomy or perineal tears is reported in three systematic reviews (Kim 2020; East 2020; Şolt Kırca 2022)

• No adverse effects were reported in any of the included studies; in particular, no injury related to cold application
TENS is recommended as adjuvant for postpartum pain treatment • Evidence supporting TENS in this setting is limited (Pitangui 2012; Zakariaee 2019) • However, TENS is not associated with dangerous adverse effects
Acupuncture is recommended as adjuvant for postpartum pain treatment • Evidence in this setting is limited (Francisco 2018; Pitangui 2012; Kwan 2014) • However, acupuncture is not associated with dangerous adverse effects
Surgical techniques
When a perineal suture is indicated, a continuous suture compared with an interrupted suture for the repair of episiotomy or second-degree perineal tears is recommended for the outcome of pain • The main criteria to indicate perineal suturing or not depends on the severity of the tears and not the level of pain associated • Evidence supporting continuous suturing vs interrupted suturing in this setting came from a Cochrane meta-analysis and an additional RCT (Kettle 2012; Ain 2022) For women with first-degree or second-degree perineal tears, no suturing or glue compared with suturing is recommended for the outcome of pain • Evidence in the context of uncomplicated first-degree or second-degree perineal tears indicated that non-suturing is associated with less perineal pain than suturing without increased local complication (Lundquist 2000; Swenson 2019). These results were confirmed in another RCT published after the cut-off for the search of the present systematic review (Lallemant 2023) • Included data on glue for first-degree or second-degree perineal tears repair is from four studies comparing glue to suturing (Swenson 2019; Mota 2009; Atesli 2020; Bowen 2002), overall in favour of glue for pain scores. A fifth study was published after the cut-off for the search of the present systematic review and again favoured surgical glue vs suture (Caroci-Becker 2023)

COX, cyclooxygenase; NSAID, non-steroidal anti-inflammatory drug; RCT, randomised controlled trial; SOAP, Society of Obstetric Anesthesiology and Perinatology; TENS, transcutaneous nerve stimulation.

Interventions that are NOT recommended

Interventions that are not recommended for postpartum pain management among women with perineal tears or episiotomy.

Intervention	Reason for not recommending
Tramadol	Insufficient evidence
Butorphanol and other opioids	Insufficient evidence
Perineal infiltration	Lack of evidence
Pudendal nerve block	Insufficient evidence
Topical perineal local anaesthetics	Lack of evidence
Hydrocortisone cream	Lack of evidence
Ointments	Lack of evidence or insufficient evidence

Overall PROSPECT recommendations table

Overall recommendations for postpartum pain management among women who had vaginal delivery with perineal tears or episiotomy			
Intervention	**Recommendation**	**Level of evidence**	**Strength of recommendation**
Paracetamol and NSAIDs*	• Recommended for first-line postpartum pain treatment • The oral route is preferred over the rectal route	Paracetamol: moderate NSAIDs: high	Strong
Epidural morphine	• Recommended for postpartum pain treatment among women with severe perineal tears • As adverse effects, and in particular respiratory depression, depend on the dose of epidural morphine, we recommend the use of an epidural morphine ≤2 mg, corresponding to the minimum effective dose • Women treated with epidural morphine should benefit from respiratory monitoring according to SOAP guidelines (Bauchat 2019)	High	Strong
Ice or chemical cold packs	• Recommended for postpartum pain first-line treatment due to their simplicity of use • The technique (either ice packs or gel pads) remains at the clinician's discretion	High	Strong
Acupuncture	• Recommended as an adjuvant for postpartum pain treatment	Low	Strong
TENS	• Recommended as an adjuvant for postpartum pain treatment	Moderate	Strong
No suture vs suture	• For women with first-degree or second-degree perineal tears, no	High	Strong

	suturing compared with suturing is recommended for the outcome of pain		
Continuous suture vs interrupted suture	• For episiotomy or second-degree tears, when a perineal suture is indicated, a continuous suture compared with an interrupted suture is recommended for the outcome of pain	High	Strong
Glue vs suture	• For women with first-degree or second-degree perineal tears, glue compared with suturing is recommended for the outcome of pain	Moderate	Strong

*No study compared the effect of NSAIDs combined with paracetamol with both alone.

NSAIDs, non-steroidal anti-inflammatory drugs; SOAP, Society of Obstetric Anesthesiology and Perinatology; TENS, transcutaneous nerve stimulation.

PROSPECT publication

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PROSPECT recommendations: vaginal delivery with perineal trauma – infographic