

ERAS Analgesia Protocol for Elective Colectomy

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Authors: T Phan, C Scarff, D Scott, on behalf of the department of Anaesthesia and Acute Pain Medicine

This Enhanced Recovery After Surgery (ERAS) protocol covers the pain management for elective colectomies. Clinician preference and individual patient requirements would inform the final management plan. However, much of the protocol is to formalise what is already considered best practice and sensible. All contra-indications, relative or absolute, need to be considered in relation to any drug or therapy suggested in the guidelines.

The aims of pain management in ERAS patients are to focus on improving mobility while limiting impairment of function. Analgesia needs to be established effectively with a view to limiting side effects of analgesic drugs and regional techniques. Transition to oral analgesia should be done as soon as is practicable.

Period	Laparoscopic colectomy, or Lap assisted	Open colectomy
Preop		Epidural ¹ : Load with 10 – 15 mL 0.2% Ropivacaine + 100 ug fentanyl. Commence post-op preparation (as per APS guidelines ¹) of Ropivacaine 0.2% + Fentanyl + adrenaline while intraop.
Intraop	Paracetamol 1g IV Parecoxib 40mg IV ²	
	Opioid IV (eg. morphine or fentanyl)	
	TAP or other fascial plane block (single shot or catheters) if converting to open	TAP or other fascial plane block if epidural contraindicated or inadequate
	Anti-emetics as per PONV guidelines ³	
Recovery	Opioid titration by PACU nurses	Assessment and management of optimal block. Prompt referral for review if inadequate epidural block. ⁴
	Ketamine infusion if pain not responding to usual doses of opioid: refer to APS ⁵	Consider ketamine
Postop	PCA opioid: cease when tolerating oral diet and can transition to oral analgesia.	Epidural solution: as per APS guidelines. Cease on D2 post op if practical.

<p>Postop orders D0⁶</p>	<p style="text-align: center;">Regular Paracetamol 1g IV/oral Q6h regularly Celecoxib 200mg po bd regularly (start 24hrs post parecoxib). Cease after 3-days.</p> <p style="text-align: center;">PRN <i>When PCA is taken down or when epidural is ceased</i> Oral immediate release opioid (eg. endone) AND Subcutaneous opioid Tramadol or Tapentadol if considered suitable Anti-emetics: as per protocol: 5HT antagonist (and a second agent if at risk of PONV)</p>	
<p>Pain management on the ward</p>	<p>Standard PCAs (including fentanyl) will be managed by the ward nurses and doctors</p> <p>Non-standard PCAs or patients predicted to have difficult pain control will be seen by the APS team</p> <p>PCAs should cease by D1 if possible or D2 at latest unless there is a specific need⁷</p>	<p>All epidurals will be managed by the APS team. The aim is for a motor sparing block with avoidance of hypotension.</p> <p>Epidurals will be removed on the morning of D2 unless there is a specific need⁷</p>
<p>Discharge analgesia planning: All patients should have a clear, written plan for post-discharge medications including analgesics. Opioids should be of limited and tapering doses in most cases. A GP letter should also include discharge analgesia planning.</p>		

Legend: D0=operative day, D1=day 1 postop, D2=day 2 postop; APS=Acute Pain Service; IV= intravenous; PCA=Patient Controlled Analgesia; TAP= transversus abdominal plane block; PONV=Post Op Nausea and Vomiting

¹ Epidurals have been used effectively as part of ERAS protocols. As the majority of colectomies are laparoscopic the scope of epidural practice is reduced. However, they should be considered as standard for larger open laparotomies or patients having open procedures with pain control issues or respiratory comorbidities. Intraoperatively, vasodilatation resulting from the epidural should be treated with vasopressors. The initial epidural solution should contain ropivacaine 0.2%, fentanyl 4 ug/mL and adrenaline 2 ug/mL; the addition of adrenaline to the epidural solution should be standard.

² COX-2 selective NSAIDs avoid any inhibition of platelet function and have fewer gastrointestinal side effects. In the absence of significant renal dysfunction, they are suitable for ERAS patients who maintain hydration and will start oral intake within 4hrs of surgery. Avoid in patients who have, or are at risk of, renal impairment, CCF and IHD.

³ Early oral intake is a very important part of ERAS, patients are offered fluid and food once they arrive on the ward. As a result, management of PONV is essential.

⁴ Failed or ineffective epidural blockade worsens patients' outcome. So it is important to address the issues promptly in recovery and on the ward.

⁵ Patients who do not settle with normal doses with opioid, consideration should be given to ketamine as it is opioid sparing and is helpful as an analgesic in itself. These patients should be referred promptly to the treating anaesthetist and the APS.

⁶ Anaesthetists should write/amend the post-op orders in order to facilitate a consistent prescribing pattern on the ward.

⁷ At day 2 ERAS patients should have the urinary catheter removed and IV fluids stopped. As a result a transition to oral opioids is important.