Oesophagectomy/Gastrectomy Enhanced Recovery Analgesia Guidelines

Brighton and Sussex University Hospitals NHS Trust

On admission prescribe **all pre-hospital analgesia** (including opioid patches) – unless contraindicated (e.g. AKI, acute confusion, sepsis)		
Consider 100-300mg PO **Gabapentin pre-operatively** unless contraindicated		
Thoracic Epidural[1] for all patients; **Optimise** as required. Consider **opioid-only bolus** via epidural: If patient is **hypotensive** or still in pain **despite bolus from pump** **Avoid early transition to PCA**[2]**: consider re-site or serratus catheter instead** **Remove** Epidural on postoperative **day 4**		
Consider **regional blocks**[3] **with catheter** for **thoracotomy pain** (serratus plane, erector spinae plane, paravertebral) – **Only after epidural removed**		
Epidurals/Local Anaesthetic catheters managed by anaesthetists/Acute Pain Team	**Review by Pain Team Monday to Friday (HDU and ward)**[4]	
Prescribe analgesia as below when **oral (PO)** or **jejunostomy (JEJ)** route available[5]	**Do not give medication via NG tube**[6]	**Avoid NSAIDS** & **slow release opioids**
Paracetamol 1 gram 4–6hrly (PO/IV/JEJ) max 4grams in 24 hrs - reduce dose to 500mg QDS if patient weighs <50kg[7]		

Age < 65 years & normal renal function	**Age > 65 years age & normal renal function**	**Abnormal renal function**
Morphine[8] **(IR) 5 - 20 mg 2 hourly PO/JEJ PRN** lowest effective dose - monitor renal function IF intractable side effects* with morphine switch to **Oxycodone**[8] **(IR) 2.5 - 10mg 2 hourly PO/JEJ PRN**	**Morphine**[8] **(IR) 2.5 - 10 mg 2 hourly PO/JEJ PRN** lowest effective dose - monitor renal function **Age>85: Morphine (IR) 2.5-5 mg 4 hourly PO/JEJ PRN** IF intractable side effects* with morphine switch to **Oxycodone**[8] **(IR) 1.5 - 5 mg 2 hourly PO/JEJ PRN** **Age>85: Oxycodone (IR) 1.5-2.5 mg 4 hourly PO/JEJ PRN**	**eGFR 30 - 60** **Morphine**[8] **(IR) 2.5 - 5mg 4 hourly PO/JEJ PRN** IF intractable side effects* with morphine switch to **Oxycodone**[8] **(IR) 1.5 - 2.5mg 4 hourly PO/JEJ PRN** **IF eGFR < 30** **Consider oxycodone (IR) 1.5 - 2.5mg 4 hourly PO/JEJ PRN**
Naloxone 100 - 400 micrograms iv stat prescribed for opioid toxicity following algorithm (https://nww.bsuh.nhs.uk/EasysiteWeb/getresource.axd?AssetID=168753&type=full&servicetype=Attachment)		
Consider **Gabapentin** if pain poorly controlled but monitor renal function and stop if side effects** not tolerated		
Gabapentin[9] **300mg PO/ JEJ TDS** **Jej tube: open capsules and flush well**	**Gabapentin**[9] **100 to 300mg PO/JEJ TDS** Give 100-200mg for patients with co-morbidities*** **Jej tube: open capsules and flush well**	**eGFR 30-60 Gabapentin**[9] **100mg to 200mg PO/JEJ TDS** **eGFR <30 Gabapentin 100mg PO/JEJ BD** **Jej tube: open capsules and flush well**
Anti-emetics: Ondansetron 4 mg BD PRN PO/JEJ/IV/IM; Prochlorperazine 3-6 mg BD Buccal; Cyclizine[10] 50mg TDS PRN PO/JEJ/IV (**avoid if age >75**); **Laxatives**: Senna 15mg BD PO/JEJ PRN; Macrogol 3350 up to 3 sachets per day PO/JEJ PRN https://viewer.microguide.global/BSUH		
*Morphine side effects: respiratory depression confusion, hallucinations, sedation, Nausea and Vomiting, itching	**Gabapentin side effects: sedation, hallucinations, dizziness, tremor *** Co-morbidities: frailty, dementia, previous ADRs, **avoid if age >85**	
NSAIDs can be considered at any stage if Age < 65 years & normal renal function and approved by consultant surgeon		
Review opioids and gabapentin prior to discharge.[11] **Lidocaine plasters discontinued on discharge - not prescribed in primary care**[12]		

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Rationale

1. Thoracic epidural is the analgesia gold standard and every effort should be made to achieve a well working epidural. A lumbar epidural should be considered when attempts to site thoracically have failed. You can find troubleshooting guidelines on microguide and on the back of the epidural charts. Any problems with epidurals whilst patients are on HDU please contact the Acute Pain Team or 1st on call anaesthetist out of hours.
2. Opioids administered via PCA have side effects such as ileus, nausea and vomiting (which will further aggravate pain), and opioid-induced ventilator impairment which will affect respiratory function. Also PCA may not provide good pain relief which will further affect respiratory function and should not be started before postoperative day 4 instead of an epidural. It can be considered after day 4 when analgesia is still an issue after following these guidelines. Please contact Pain Team to optimise analgesia before starting PCA.
3. Pain around the chest drain or thoracotomy wound may persist after epidural catheter removal (normally on day 4); this may affect breathing, coughing, moving and increase the risk of respiratory complications. The desired option would be to apply Lidocaine plasters and if this is not effective consider a regional block with catheter. Do not combine Lidocaine plasters with epidurals or perineural local anaesthetic infusions because of the risk of local anaesthetic toxicity. The use of Lidocaine plasters is not currently in the above pathway and requires auditing prior to a formulary application.
4. The Acute Pain Team will review these patients daily (Monday to Friday) even when they are in HDU; please follow their expert advice.
5. These patients are kept NBM for several days. Until the oral route becomes available they are fed by a feeding jejunostomy. Analgesics such as Paracetamol, morphine, oxycodone and gabapentin can be administered by the feeding jejunostomy until the oral route becomes available. Patients should not have oral tablets until at least day 5 post op. Please liaise with surgeons for when the jejunostomy can be used.
6. Do not give any medication down the NGT. The NGT should not be used for medication or feeding.
7. Regular Paracetamol should be prescribed for all patients. It can be administered IV until jejunostomy/oral route becomes available.
8. Rescue analgesia i.e. PRN Oramorph/Oxycodone should be prescribed for all patients when jejunostomy/oral route becomes available.
9. Gabapentin can be considered for acute postop neuropathic pain such as pain from chest drain. It can be opened and the granules given via the jejunostomy route if required.
10. Avoid Cyclizine as it may cause confusion, especially if patients are on HDU.
11. Please stop opioids and gabapentin commenced during this hospital admission before discharge. Inadequately prescribed discharge analgesia may contribute to opioid and gabapentin dependence. Patients should be discharged on a limited supply of PRN opioids and should be advised to see their GP if pain is still an issue after discharge.
12. Lidocaine plasters are not prescribed by GPs and should not be included in discharge analgesia.

IDEAL POSTOP ANALGESIA REGIME

POSTOP DAY 0	Epidural & regular IV Paracetamol
POSTOP DAY 1	Epidural & regular IV Paracetamol
POSTOP DAY 2	Epidural & regular IV Paracetamol
POSTOP DAY 3	Epidural & regular IV Paracetamol
POSTOP DAYS 4	Regular IV Paracetamol and **planned** step-down from epidural (consider regional block with catheter) +/- drugs overleaf