Suggested Enhanced Recovery Anaesthesia Regime - Primary Hip or Knee Arthoplasty - Summary Clinical Guideline

Reference No: CG-CLIN/4120/23A

Royal Derby Hospital Primary Arthroplasty:

Suggested Enhanced Recovery Anaesthesia Regime

Instructions given at preop assessment clinic

- Carbohydrate drink
- Avoid taking ACE inhibitors or AT II converting enzyme inhibitors the night before or morning of surgery.

Premedication (day of surgery): prescribed at

- Carbohydrate drink before 6.30 am
- Paracetamol 1-2g
- Gabapentin 100/300mg (mainly TKR or robust THR pts) use lower dose with frailty and **renal function (CKD 3 or worse)**
- Oxycontin 5/10 mg use lower dose if frail, eGFR 20-40, or >75 yrs, and combination of NIDDM and BMI >30
- **Omit oxycontin if pt has eGFR <20**

Anaesthesia:

- Suggested lower dose spinal anaesthesia*:3 mls 0.375% Levobupivacaine (plain) THR
  1.8 - 2.2 mls 0.5 % bupivacaine (heavy) TKR

  Consider 3mls+ Prilotekal with diamorph TKR

  300 mcg Diamorphine improves pain post op but may result in catheter particularly males

- Midazolam 1-3 mg iv
- prophylactic anti-emetic - cyclizine/ondansetron
- tranexamic acid 1g slow iv bolus
- propofol ivi - TCI @ 0-2.5ug/ml
- +/- ketamine 5mg iv bolus or fentanyl 25 mcg increments if patient stimulated by surgery
- +/- paracetamol 1g iv with +/- ketoralac iv
- Dexamethasone up to 20mg for **TKR.** Nausea and Analgesia effect
- Multimodal antiemesis including droperidol if using diamorph

*NB low dose spinal encourages early regression of motor block which enables earlier mobilisation.

Perioperative fluid balance management:

- Intraoperative administration of vasopressor & iv fluids should be judicious i.e. volume/type of iv solution should be appropriate to the estimated blood loss and the patient's clinical condition (usually 1 litre crystalloid)**.**

- Continue IV fluids until BP stable and patient drinking
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- Selective urinary catheterisation should be considered on pt request, prostatic symptoms, pt on diuretics, and pts >80 yrs). Aim for removal early on day 1. Absence of a catheter encourages pt early mobility onto commode and early physiotherapy.

- **Low threshold for patients with CKD 3 or worse. This ensures urine output is monitoring post op. NSAIDS should be avoided.** This allows for a larger volume of IV fluids to be administered intraop. Remove when U and E's are acceptable post op for CKD 3 pts. Surgeons should be informed. Low dose gabapentin (100mg) and oxycodone should be prescribed for analgesia along with lower dose prn opiates.

Saphenous and IPACK nerve block for TKR

- This block is performed mid thigh using U/S and contributes to the surgical Local Anaesthetic Infiltration (LAI) analgesia.
- As it is more peripheral than a Femoral Nerve Block it still allows straight leg raise and mobility.
- 5-10 mls 0.75% levobupivacaine into the neurovascular bundle.
- IPACK block for posterior capsule or surgical infiltration of 20 mls 0.25% levobupivacaine

Levobupivacaine local anaesthetic infiltration (LAI) regime:

- intraoperative infiltration of 100ml of 0.125% levobupivacaine 1.25 mg/ml .

Cryocuff placement

- Post op appropriately sized cryocuff placed and filled with iced water for TKR

Enhanced Recovery THR and TKR analgesia regimes

Use EPMA order set for Ortho under 75/over 75 years

Premed

Paracetamol 1-2g

Gabapentin 100/300mg (mainly TKR or robust THR pts) use lower dose with frailty and **renal function (CKD 3 or worse)**

Oxycontin 5/10 mg use lower dose if frail, eGFR 20-40, or >75 yrs, and combination of NIDDM and BMI >30

Omit oxycontin if pt has eGFR <20

Post op

Regular paracetamol 1g po

+/- NSAID+/- PPI if not contra-indicated (Including renal impairment)

Gabapentin 100/300mg po bd depending on frailty (limited to 5 days). Use for mainly TKR but also THR if pt is robust and difficult pain issues. (Sedation noted with THR pts as less painful)

Omit oxycontin if pt has eGFR <20 and oramorph QDS from day 0

TKR - Oxycontin po BD 5-10mg for up to 3 days. **(5mg BD in frail, elderly and moderate renal impairment).** Increase night time dose to 20mg for younger, more robust patients.

Then tramadol 50 - 100mg QDS from day 3

Consider oramorph 5-10 mg QDS in very frail or eGFR <20 from day 0

THR – Oxycontin 5/10/20 mg first evening only, then Tramadol 50 - 100mg QDS **(lower dose in frail, elderly and mild renal impairment)**

Single evening dose

Then tramadol 50 - 100mg QDS from day 3

Consider oramorph 5-10 mg QDS in very frail or eGFR <20 from day 0

If codeine is chosen by patient choice to replace tramadol this needs to be scheduled to start after Oxycontin has finished. Most older pts do not like codeine though due to side effects.

Antiemetic regular ondansetron oral 4mg BD

Laxatives – Sodium Docusate 200mg BD,

Senna 2 at night or patient preference

PRN drugs (Reduce dose with frailty, reduced renal function)

TKR – first line morphine 5-10mg S/C as per protocol

Oramorph 10-20mg as per protocol,

THR – oramorph 10-20 mg as per protocol

morphine 5-10mg S/C prn as per protocol

cyclizine 50mg TDS S/C (Omit for >80yrs)

ondansetron 4 mg IV QDS if unable to orally

TTO's

Regular paracetamol and opiate (Codeine or tramadol) depending on patient tolerance, continue inpatient prescription

Finish 5 day course Gabapentin for TKR. Generally not required for THR's unless difficult pain control

Oramorph prescription for TKR's (1 bottle) for breakthrough pain and THR if needed frequently as an inpatient.

NSAIDS if <70 yrs, no renal impairment with PPI cover.

Laxatives