PERI–OPERATIVE GUIDELINES FOR ELECTIVE PRIMARY MAJOR JOINT SURGERY

Enhanced Recovery After Surgery: ERAS.

EXCLUSIONS – although the vast majority of patients are suitable for inclusion in ERAS there may be a rare patient who is not. Any patient unsuitable should be flagged up pre-operatively either by the senior surgeon or anaesthetist.

PRE-OPERATIVE

Education: All patients should have a full pre-assessment and any concerns dealt with prior to the day of surgery.

All patients should attend the joint school prior to admission.

Admission on the day of surgery should be the goal and considered routine unless there are specific concerns requiring admission.

Patients should have MSSA and MRSA screening and if positive eradication therapy started prior to admission.

Fasting: 6 hour fast for solids as usual.
AM list – No breakfast, water until 1 hours prior to surgery. Consider a glass of water on admission.
PM list – Light breakfast (tea & Toast) before 7am, water until admission at 11am.

No routine pre operative S/C Clexane.

All usual medications on the morning of surgery except certain diabetic medication, diuretics and anticoagulants unless otherwise stated by the anaesthetist. (ACE inhibitors and angiotensin receptor blockers should also be withheld on the day of surgery unless the patient has known heart failure).

Avoid Sedative pre-medication where possible.

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INTRA OPERATIVE

Main aim is to minimize the surgical stress response. Minimally invasive surgery & anaesthesia where possible:

Plain Spinal anaesthesia is recommended for the majority of patients.

Additional local anaesthetic adjuvants for postoperative pain in knee replacements include;

1. Adductor canal block with additional surgical infiltration of the posterior capsule.
2. Surgical local anaesthetic infiltration (LIA or CALEDONIA technique).

Mild hypotension is the norm and helps to reduce blood loss in hip replacements. Prolonged and severe hypotension should be avoided particularly in those at risk of renal injury and those with known hypertension, ischaemic heart disease, aortic stenosis or carotid stenosis & the elderly.

Antibiotics: should be administered as per protocol. Cefuroxime is the antibiotic of choice.

Antiemetics: including Dexamethasone 9.9mg +/- Ondansetron 4mg or Granisetron 1mg for **all** patients.

Tranexamic Acid 15mg/kg IV bolus for all (prior to tourniquet release in knee surgery). An additional 1g oral dose at 6-8 hours postoperatively may also be administered if necessary.

In the very elderly, propofol sedation may be preferable to midazolam to reduce postop confusion.

POST OPERATIVE

All patients to ortho ward post-operatively. Avoid HDU/ward 1 if at all possible (infection control).

Plan to encourage mobilisation as soon as practical from day 0. ENSURE oral ephedrine 30mg PRN prescribed.

Analgesia: Knee replacements usually more painful than hip replacements**. See protocols on HEPMA**

Regular paracetamol.

NSAIDs (unless contraindicated) with regular PPI or ranitidine if needed.

PCA may be useful on the first post operative night, otherwise:

Oral Oxycodone/oromorph IR (in an appropriate dose). **Avoid modified release opioids**. Potent opioids should be reviewed & reduced/stopped prior to discharge unless this is agreed with the Acute Pain Team. Patients discharged on potent opioids should have this reviewed by the GP as early as possible & be discharged with the minimum dose & quantity.

Consider continuing regular tramadol if patient on this preoperatively.

Oxygen: As required to maintain SaO2 > 92%. Nasal prongs are preferred.

DVT Prophylaxis: As per Hairmyres Orthopaedic Protocol. Mobilise early.

Diet & fluids: Normal diet as soon as possible.

IV fluids down as soon as adequate oral intake established and the patient's blood pressure has normalized, **ideally in recovery**. In patients at risk of renal injury fluids **may** be continued for a longer specified period. (Remember there is as much blood loss or more postoperatively as intra-operatively)

Hypotension: In the early postoperative period mild/moderate hypotension (MAP <20% of preop) is normal. Prolonged or severe hypotension should be treated initially with increased intravenous fluids if the patient looks hypovolaemic +/- oral ephedrine 15-30mg. Check Hb if hypotension persists. Consider other causes and escalate to seniors if not improving. AVOID excessive fluid therapy.
Consider withholding ACE inhibitors and angiotensin receptor blockers on day 1 post op if hypotension a problem unless the patient has known heart failure. Consider withholding NSAIDs if urine output low & check U&Es.

Laxatives: Consider prescribing lactulose 15mls bd and senna 15mg od as routine.

Bloods: Routine bloods as early as possible on postop day 1. Repeat if required.

Transfusion: Whilst unnecessary blood transfusion is unwarranted some studies have demonstrated that a transfusion policy that is too restrictive is also harmful. Specific haemoglobin triggers should be considered for each individual patient e.g. Hb level +/or clinical symptoms of anaemia.

Mobility: Oral ephedrine may be helpful for orthostatic hypotension (30mg, 30 minutes prior to mobilisation). This is particularly prevalent in post hip replacement or bilateral knees.

Otherwise as per current Physiotherapy Plan:
Up to sit as soon as possible (day 0) with regular mobilisation/walks from day 1 unless complications eg: hypotension, bleeding etc. preclude mobilisation. **Beware Falls risk** in patients with any significant motor block secondary to regional anaesthetic blocks.

Nausea & Vomiting: Follow current protocol

Ondansetron/Granisetron	1st Line
Stemetil/Dexamethasone	2nd Line
Cyclizine	3rd Line

Urine Output: Avoid catheterization.

Discharge: Aim for 1-2 days.
Identify Social & OT issues early & plan for discharge from admission date.
Discharge when agreed discharge criteria met (**no need for further medical review prior to discharge unless specific concerns raised**).

Pain Relief on D/C: **Please refer to guidance in the Acute Pain Service Handout for Junior Doctors.**

Any questions contact Dr Grant Haldane (DECT 5723) or Emma Scott ERAS Nurse on 4517

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General Discharge Criteria Following Joint Replacement

- **All patients medically fit for discharge including all bloods being satisfactory.**
- **Wound clean and dressing dry.**
- **Active range of movement 0-70 degrees, Straight leg raise acceptable (Discharged from physio & OT).**
- **Independent with all transfers.**
- **Mobilising unaided with an appropriate walking aid; usually sticks.**
- **Independent on stairs if required.**
- **Independent with all personal ADLs and domestic ADLs.**
- **Equipment issued if required.**

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