Renal Impairment- prescribing at the end of life

For patients with GFR below 50 ml/min or with rapidly deteriorating renal function

This document is intended to highlight special considerations when prescribing for this group of patients. For further guidance on symptom management please refer to LCH Symptom Management in the Last Days of Life Guidance or Y&H Symptom Management Guidance

Assess the patient

- Nausea and itch are common symptoms with GFR less than 10 mL/min. Seek specialist advice for the management of itch.

General

- Caution with NSAIDs – be aware of increased bleeding tendency.
- Estimate of GFR (eGFR) reported by pathology labs can be used for most patients
- However, consider calculating creatinine clearance(ml/min) using the Cockroft - Gault formula in the following circumstances:
    - At extremes of muscle mass (BMI <18 kg/m2 or > 30 kg/m2)
    - Elderly patients (aged 75 years or older)
    - Patients taking nephrotoxic drugs / drugs with narrow therapeutic index
    - Other comorbidities or clinical concern

  Cockcroft-Gault formula:

    - CrCL (mls/minute) = $\frac{n \times (140-age) \times weight\ (Kg)}{Serum\ creatinine\ (micromoles/L)}$

      where n = 1.04 (females) n= 1.23 (males) or online calculator at www.mdcalc.com
- Leave buprenorphine and fentanyl patches in place and continue to change as usual.

Pain management

- Paracetamol is safe to use. Use a maximum of 3g/day if GFR <10 mL/min.
- For patients able to take oral medication, avoid codeine. Better tolerated oral options are:
    - Low dose oxycodone liquid (1.25 to 2.5mg PO to start with, minimum frequency 2 hours, up to 4 doses in 24 hours before medical review)
    - Low dose tramadol (immediate release), starting at 50 mg b.d. In case this is insufficient, prescribe 50 mg p.r.n (minimum frequency 4 hours, maximum of 2 extra doses in 24 hours)
- If GFR >10 and < 50 mL/min use oxycodone instead of morphine (unless patient also has synthetic liver dysfunction-then refer to liver failure- prescribing at the end of life.)
- If GFR <10 mL/min p.r.n oxycodone can still be used at reduced dose. Please seek specialist palliative care advice
- If converting from oral oxycodone to 24 hour CSCI of oxycodone divide the 24 hour PO dose of oxycodone by 2 (see Leeds Opioid Conversion Guide for Adult Palliative Care Patients) and prescribe p.r.n SC oxycodone at 1/6th of the background daily dose.
- For patients on morphine see Leeds Opioid Conversion Guide for Adult Palliative Care Patients for advice on conversion to oxycodone or seek specialist advice.

- For patients in the last days of life:
    - If not currently taking opioids start with oxycodone 1 to 2mg SC p.r.n. (minimum frequency 1 hour, up to 4 doses in 24 hours then medical review required).
    - If GFR <10 mL/min and a regular opioid is needed a 24 hour SC infusion of alfentanil via a syringe driver is suggested. Continue with oxycodone p.r.n. Please seek specialist palliative care advice regarding doses.
    - Monitor patient as decreased dose and increased dosing intervals may be required.

Agitation -
If not in the last days of life see local delirium guidance.

- Beware of increased sensitivity to sedatives and so may need to consider increasing dosing intervals.
- If medication is needed in the last days of life start with a low doses:
    - midazolam 2.5mg SC p.r.n (Minimum frequency 30 mins) Dose may need increasing if not effective. It is suggested that a p.r.n dose range is prescribed (2.5 to 5 mg)
    - haloperidol 0.5mg SC p.r.n. (Minimum frequency1 hour) Dose may need increasing if not effective. It is suggested that a p.r.n dose range is prescribed (0.5 to 3 mg)
    - review is needed if doses are ineffective or after 3 doses in 24 hours.

Nausea and vomiting

- Haloperidol and levomepromazine are used for uraemic nausea.
- Haloperidol, start with a low dose e.g. 0.5 mg SC p.r.n. A dose can be repeated after one hour. Maximum 4 doses in 24 hours then review required.
- Levomepromazine, start with 2.5mg to 6.25mg SC p.r.n. Up to 12.5 mg in 24hours then review required.
- $5HT_3$ antagonists e.g. Granisetron and Ondansetron can also be used, caution with constipation.

Retained respiratory secretions in the last days of life

- Non-pharmacological management is the most important component of treatment.
- Hyoscine butylbromide is the favoured drug treatment as it is non-sedating, 20mg SC 1 hourly p.r.n up to 80mg. It is short-acting therefore if effective consider a continuous subcutaneous infusion (typical starting dose 60mg SC over 24 hours, usual maximum dose of 80mg in 24 hours).
- Avoid hyoscine hydrobromide because of its central effects

For further advice or information please contact your local Specialist Palliative Care Team:
Wheatfields Hospice: 0113 2787249 St Gemma's Hospice 0113 2185500

Leeds Palliative Care Network

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