Impaired Liver Function - prescribing at the end of life.

For patients with synthetic liver dysfunction i.e. Low albumin/Raised INR/low platelet count /raised Bilirubin

Assess the patient

- Assess for liver failure: albumin, clotting, evidence of decompensation (ascites, hepatic encephalopathy, variceal bleeds).
- Consider nutritional status. If low muscle mass /low BMI, may require lower doses and increased dosing intervals.
- Monitor closely for constipation to avoid precipitation of hepatic encephalopathy. However at the end of life it may not be appropriate to treat constipation

Pain management Special considerations:

- If already on regular opioids seek specialist palliative care advice.
- Caution with NSAIDs.
- Paracetamol is safe to use – start at half the usual dose.
- Dihydrocodeine is preferable to codeine as it relies less on hepatic metabolism
- First line strong opioid if eGFR* >20mL/min/1.73m^2 is morphine, starting at a low dose, e.g. morphine sulphate injection 1.25 mg subcutaneous (SC) 2 hourly p.r.n. Max 4 doses in 24 hours then seek review.
- If morphine is contraindicated or eGFR* 10 - 20 mL/min/1.73m^2 prescribe oxycodone (below eGFR* of 20 mL/min/1.73m^2 prioritizing renal dysfunction is felt to be safer). Start at a low dose e.g. oxycodone injection 1 mg SC 2 hourly p.r.n. Maximum of 4 doses in 24 hours then seek medical review.
- If eGFR* <10mL/min/1.73m^2 seek specialist advice.

* For extremes of weight eGFR may not be accurate – seek specialist advice.

Agitation (Consider reversible causes)
Special considerations:
May have hepatic encephalopathy -

- Grade 1, altered mood/behavior; sleep disturbance (reversal of pattern).
- Grade 2, increasing drowsiness; confusion, slurred speech.
- Grade 3, stupor; incoherence; restlessness, significant confusion.
- Grade 4, coma.

If medication is needed start with a low dose e.g. midazolam 1.25 mg SC p.r.n or haloperidol 1mg SC p.r.n. Increase the dosing interval (e.g. double the dosing interval).

Nausea and vomiting Special considerations:

- Avoid metoclopramide.
- If using haloperidol start with a low dose e.g. 1 mg SC p.r.n. A dose can be repeated after one hour. Maximum 3 doses in 24 hours then seek medical review.
- If using levomepromazine start with a low dose, e.g. 2.5 mg SC p.r.n. A dose can be repeated after one hour. Maximum 12.5mg in 24 hours then seek medical review.

Noisy respiratory secretions

- No drug modifications needed, but avoid hyoscine hydrobromide because of its central effects.

Breathlessness Special considerations:

- For guidance on use of morphine see pain advice above.

Pruritus

- Aqueous cream and menthol 1% or 2% (e.g. Arjun® or Dermacool®)
- Antihistamine-chlorphenamine
- Seek specialist advice if symptoms are persisting

Please contact your local Specialist Palliative Care Team for further advice or information
Wheatfields Hospice 0113 2787249 St Gemmas Hospice 0113 2185500 LTHT 0113 2433144

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