TORBAY & SOUTH DEVON SPECIALIST PALLIATIVE CARE SERVICE

INSTRUCTIONS FOR USE OF SUBCUTANEOUS SYRINGE PUMPS

Indications for using a subcutaneous syringe pump [SCSP]:

1. Altered level of consciousness in a dying patient
2. Persistent nausea and vomiting e.g. in bowel obstruction
3. Inability to swallow
4. Poor compliance with oral medication

The syringe pump is simply another method of administration of medication for patients who are symptomatic.

ANALGESICS

Morphine – dose per 24 hours: no ceiling dose but:

1. Start at 10-15mg/24 hours in opioid naïve patients (less in very elderly/frail)
2. See conversion table for calculating doses, changing from oral to SCSP use and using other opioids. See conversion table for calculating doses, changing from oral to SCSP use and using other opioids e.g. converting the total daily dose of oral morphine to the total daily dose of subcutaneous morphine by dividing by 2, e.g. MST 60mg bd=120mg/day =morphine 60mg/24 hours by SCSP.
3. **Caution:** in patients with **significant renal impairment (suspected eGFR <30)** aim to avoid morphine because of significant risk of opioid accumulation/toxicity. Alternative opioids such as oxycodone/fentanyl/alfentanil may be more appropriate. Please seek advice from Specialist Palliative Care team (see guidance on prescribing at end of life in renal failure)
4. **Patches** - Transdermal opioid patches should not be started in the terminal stage since it takes too long to titrate against a patient's pain. If the patient is already established on a patch, it may be appropriate to continue with it and add in additional medications via the SCSP.

ANTIEMETICS

1. **Metoclopramide** useful for gastric stasis and upper gastrointestinal obstruction. Avoid in patients with colic. Non-sedating.
Dose per 24 hours: 30-60mg *(BNF dose range is 30-100mg/24h)*
Dose per prn injection: 10mg 6-8 hourly
2. **Haloperidol** useful in chemically induced vomiting (e.g. hypercalcaemia, renal failure), and/or in patients with psychotic features. Sedating at higher doses. Use lower dose in the elderly.
Dose per 24 hours: 2.5-5mg (up to 10mg if being used for sedation as well)
Dose per prn injection: 1-3mg od-bd
3. **Levomepromazine** good antiemetic especially with co-existing anxiety, very sedating at higher doses.
Dose per 24 hours: 6.25-25mg (*BNF dose range 5-25mg/24h)*
Dose per prn injection: 6.25mg 6-8 hourly
4**. Cyclizine** relatively non-sedating, useful in mechanical bowel obstruction or raised intracranial pressure, but precipitates out when mixed with Hyoscine Butylbromide.
Dose per 24 hours: 50-150mg **Dose per prn injection:** 50mg 8 hourly (max. 150mg/24hours)

ANTISPASMODICS

Hyoscine butylbromide (Buscopan)
Dose per 24 hrs: 60-120mg (*BNF dose range 60-300mg/24h)*
Dose per PRN injection 20mg 4 hourly

D SEDATIVES

1. **Midazolam** useful for anxiety, breathlessness, restlessness and muscle stiffness in terminal phase. Also used as an anticonvulsant.
Dose per 24 hours: 10-60mg. Higher doses occasionally required. *(BNF start 10-20mg/24h usual dose 20-60mg/24h)*
Dose per prn injection: 2.5-10mg 4 hourly
Caution: respiratory depression is more likely when midazolam is given parenterally with morphine.

2. **Levomepromazine** useful as sedative but can lower fitting threshold
Dose per 24 hours: 12.5-50mg (higher doses occasionally required)
Dose per prn injection: 12.5-25mg 4 hourly

TERMINAL SECRETIONS

1. **Hyoscine butylbromide (Buscopan)** useful in respiratory secretions **when sedation not desired**
Dose per 24 hours: 60-120mg (*BNF dose range 20-120mg/24h)*
Dose per prn injection: 20mg 4 hourly
Suitable for use if suspected eGFR <30
2. **Hyoscine hydrobromide** useful in terminal stages **when sedation required** but can cause paradoxical agitation; usually given with a sedative, e.g. Levomepromazine or Midazolam.
Caution: avoid if suspected eGFR <30.
Dose per 24 hours: 1.2-2.4mg (*BNF dose range 1.2-2mg/24h)*
Dose per prn injection: 0.4-0.6mg 4 hourly (max. 2.4mg/24 hours)

AS REQUIRED (PRN) DOSES MUST BE PRESCRIBED

- Always ensure that adequate prn doses are clearly written on the syringe pump prescription sheet so that any trained healthcare professional visiting the home who does not know the patient can give extra medication when indicated. These prn medications are not the same as Just In Case Bag (JICB) medication.
- JICB medication should be prescribed when a clinical deterioration is anticipated but the patient does not yet need a syringe pump for current symptom control.
- A syringe pump should be started when clinically indicated and should not be delayed because JICB medications are already available. There is no requirement to use JICB medication prior to setting up a syringe pump.
- Ideally there should be no more than a 4-hour delay between the request for starting a syringe pump and it being set up for the patient.

24-hour advice line (Rowcroft Hospice) tel no: **01803 210800.** Calls go through to the hospice. The senior nurse will be able to answer queries or ask the doctor on call to ring you back.
Rowcroft Community Specialist Palliative Care Team - Mon – Fri 9-5 tel no: 01803 210811
Sat – Sun, bank holidays 9-1 (tel advice) tel no: 01803 210812

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