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.
Only prescribe medications in the pump infusion for managing current symptoms.
It is not good practice to prescribe a syringe pump in advance of when it may be needed.

ANALGESICS
Morphine – dose per 24 hours: no ceiling dose but
1. Start at 10mg/24 hours in opioid naïve patients (less in very elderly/frail)
2. See opioid 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 30mg bd = 60mg oral morphine/day = morphine 30mg/24 hours by SCSP.
Caution if eGFR <30, try to avoid if eGFR <15 because of significant risk of opioid accumulation/toxicity.
More "renal friendly" opioids such as oxycodone/fentanyl/alfentanil may be more appropriate.
3. **Transdermal Opioid Patches** - These should not be started in the last days of life because of length of time (24-48hrs) to reach adequate therapeutic drug levels. If the patient is already established on a patch, it is usually appropriate to continue with it and add in additional medications via the SCSP.

ANTIEMETICS
1. **Metoclopramide** useful for gastric stasis and sometimes in partial (but not complete) upper gastrointestinal obstruction. Avoid in patients with colic. Non-sedating. Avoid in Parkinson's Disease
Dose per 24 hours/SCSP: 30-80mg
Dose per prn injection: 10mg

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. Avoid in Parkinson's Disease
Dose per 24 hours/SCSP: 1-5mg
Dose per prn injection: 0.5-1.0mg

3. **Levomepromazine** good antiemetic especially with co-existing anxiety, very sedating at higher doses. Significant dose reduction in Parkinson's Disease
Dose per 24 hours/SCSP: 6.25-25mg
Dose per prn injection: 6.25mg

4. **Cyclizine** relatively non-sedating, useful in mechanical bowel obstruction or raised intracranial pressure, but precipitates out when mixed with Hyoscine Butylbromide. Preferable choice in Parkinson's Disease
Dose per 24 hours/SCSP: 100-150mg
Dose per prn injection: 50mg (max total daily dose of SCSP plus prn should not exceed 150mg/24hours)

ANTISPASMODICS
Hyoscine Butylbromide (Buscopan)
Dose per 24 hrs/SCSP: 60-120mg
Dose per PRN injection: 20mg

SEDATIVES

1. **Midazolam** useful for anxiety, breathlessness, restlessness and muscle stiffness in terminal phase. Also used as an anticonvulsant.

Dose per 24 hours/SCSP: 10-30mg. Higher doses occasionally required
Dose per prn injection: 2.5-10mg
Caution: respiratory depression is more likely when midazolam is given parenterally with morphine.

2. **Haloperidol** useful if features of confusion/delirium

Dose per 24 hours/SCSP: 2.5-10mg
Dose per prn injection: 1.0-5mg
Use lower doses in frail/elderly

3. **Levomepromazine** useful as a **sedative** but can lower fitting threshold

Dose per 24 hours/SCSP: 12.5-50mg Higher doses occasionally required
Dose per prn injection: 12.5-25mg

RESPIRATORY SECRETIONS

1. **Hyoscine Butylbromide (Buscopan)** Non-sedating.

Dose per 24 hours/SCSP: 60-120mg
Dose per prn injection: 20mg
Suitable for use if eGFR <30

2. **Hyoscine hydrobromide** only useful in last days of life **when additional sedation is required**. Can cause paradoxical agitation.

Caution if eGFR <30, try to avoid if eGFR <15.
Dose per 24 hours/SCSP: 1.2-2.0mg
Dose per prn injection: 400 micrograms (0.4mg). Maximum total daily dose of SCSP + prn should not exceed 2.4mg/24 hours)

AS REQUIRED (PRN) DOSES MUST BE PRESCRIBED ALONGSIDE THE SCSP INFUSION

- Do prescribe prn medications for all current and anticipated symptoms, even if the patient already has Just in Case Bag medications. This ensures an ongoing adequate supply of prn medication for symptom management.
- 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.
- Only prescribe medications in the pump infusion for managing current symptoms
- It is not good practice to prescribe a syringe pump in advance of when may be needed.

Parkinson's Disease: prescribing guidance

Renal impairment: prescribing guidance

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 hospice doctor on call to phone you back.

Rowcroft Hospice Community Specialist Palliative Care Team:
Mon to Fri 9-5 Tel no: 01803 210811
Sat & Sun, bank holidays 9-1 (Tel advice) Tel no: 01803 210812

Hospital Specialist Palliative Care Team:
Mon to Fri Tel no: 01803 655042/655043
Sat 9-5 via hospital switchboard

Consultants in Palliative Medicine, Torbay and South Devon NHS Foundation Trust/Rowcroft Hospice
GP Facilitator in Palliative Care, South Devon and Torbay.
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