COVID-19: Care of the dying patient when unable to obtain a syringe driver

At the end of life when the oral route is lost **effective management of symptoms is best achieved using a syringe driver** to deliver a continuous low dose of medication that can be easily titrated. This guidance provides options for care of a patient dying with COVID-19 **only when a syringe driver is unavailable**. Please see the Kirkwood Toolkit for management of end of life symptoms when a syringe driver is available.

Anecdotal evidence from Europe and from our respiratory colleagues locally suggests that the main symptoms experienced by COVID patients at end of life are breathlessness and panic/agitation/restlessness. The ideal medication for the dying COVID-19 patient should be one which is parenteral and treats all of these symptoms. In the absence of a syringe driver, long acting medications are preferable to avoid leaving patients symptomatic and reduce the close proximity of healthcare staff. Many of the medications we would normally give at end of life are short acting (hence the requirement for a syringe driver) but we have provided long acting options in this less than ideal situation.

We have included a flow chart for clinicians to use for the care of patients with COVID-19 symptoms **where the aim is for a comfortable death**.

Breathlessness and restlessness

Usual SC of choice would be midazolam, and this can still be used PRN at a dose of 2.5-10mg but is short acting.

IF SYRINGE DRIVER UNAVAILABLE:

(1) PHENOBARBITONE 200MG IM/IV PRN (200mg/1ml ampoules)

- Unlicensed for this indication, but licensed in epilepsy
- Usually reserved for cases of intractable distress at the end of life despite first line measures
- Is sedative, and can cause respiratory depression in high doses
- Cannot be administered SC due to viscosity and dilution requirements
- Long acting when administered PRN – either IM or as a slow IV injection
- Can be given undiluted as IM injection, for IV use - needs dilution to 10 times volume, given over 2 minutes (WFI or 0.9% saline)
- Please see flowchart for dosing intervals. Loading doses are typically required for symptomatic benefit, but can accumulate thereafter with a longer duration of action
- Maximum dose 1200mg/24hrs

(2) CLONAZEPAM 0.5MG SC

- Long acting. Should not be administered via syringe driver
- Starting dose 0.5mg OD SC (at night). Maximum dose 2mg/24hrs
- *This is an unlicensed medicine, please consider prescribing guidance. May be available as 1mg/1ml injection in some areas
- Some patients experience paradoxical agitation with benzodiazepines

If neither of these options are available – please speak to Kirkwood Hospice. The use of IV lorazepam may need to be considered in an inpatient setting, but this is not without caution and further discussion is advised.

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Agitation

IF SYRINGE DRIVER UNAVAILABLE:

(1) LEVOMEPROMAZINE 25-50mg SC PRN

- Given its long half-life and duration of action, can be administered in OD-BD regular dosing if required
- Maximum dose 300mg/24hrs
- Consider lower starting doses in renal failure

(2) PHENOBARBITONE 200MG IM/IV PRN

- Please see guidance on page 1

(3) HALOPERIDOL 3-5mg SC PRN

- Given its long half-life and duration of action, can be administered in OD regular dose if required
- Maximum dose 10mg/24hrs
- Consider lower starting doses in renal failure

Secretions

Please see Kirkwood Toolkit guidance 'End of life management of secretions' for alternatives to hyoscine butylbromide via syringe driver

Pain

Usual SC opioids are short acting when given PRN. Long acting preparations are available in the form of transdermal patches, SC opioids will still need to be given until this becomes effective.

There are a number of documents available on the Kirkwood Toolkit page to assist with conversions and switching opioids, including advice on what to do if a syringe driver is unavailable. These documents are as follows:

- Alternatives to common palliative care drugs – strong opioids
- Alternatives to common palliative care drugs – strong opioids via syringe driver
- Opioid conversion chart

Oromucosal and rectal medication

At the end of life, rectal treatments are not generally a first line measure. Should parenteral medication not be available, the use of rectal or buccal/sublingual medications can be considered. It should be noted however that these measures (particularly buccal/sublingual) mean increased levels of exposure for healthcare staff. Options include:

- Rectal diazepam 2-5mg as an alternative to midazolam. Maximum dose 30mg/24hrs in 3 divided doses
- Buccal midazolam 2.5-10mg PRN as an alternative to SC midazolam
- Sublingual lorazepam 0.5-1mg PRN as an alternative to midazolam. Please note not all brands are suitable for sublingual use. Maximum dose 4mg/24hrs

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Flowchart for management of symptoms in COVID-19 positive patients when no syringe driver is available

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COVID-19 positive patient with breathlessness/restlessness/agitation at end of life

Stat dose midazolam 2.5-10mg SC

If further PRN dose required within 30-90 minutes

Stat dose midazolam 5-10mg SC

If further PRN dose required within 30-90 minutes

Give loading dose of phenobarbitone 200mg IM or IV

(please see administration guidance on page 1 of this document)

If further PRN dose required within 30-90 minutes

Repeat dose of phenobarbitone 200mg IM or IV

Remains symptomatic

IF BREATHLESSNESS IS THE PREDOMINANT SYMPTOM, EITHER:

Continue to use midazolam 5-10 mg SC PRN

(please note this is short acting)

Or

Give stat dose clonazepam 0.5mg SC

(please see guidance on page 1)

IF AGITATION IS THE PREDOMINANT SYMPTOM:

Give levomepromazine 25-50mg SC PRN

Review effectiveness of above interventions (noting there may be a cumulative effect) and contact Kirkwood Hospice for advice as required

We would appreciate feedback as to effectiveness of intervention and whether other symptoms in COVID patients become prominent – please contact stephen.oxberry@kirkwoodhospice.co.uk with your experience and we can review our guidance.

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