Guidance on the management of symptomatic patients dying from COVID-19

Principles

An experienced clinician needs to exclude reversible causes before the diagnosis of dying is made. Hospital admission should be considered for patients with respiratory distress of unknown cause.

When caring for a patient dying from suspected or confirmed COVID-19, continue to use standard principles of holistic individualised care and symptom control. Many have mild respiratory symptoms and are already close to the end of life with other conditions, so will require 'standard' palliative care prescribing: see the prescribing guidance attached to the community drug administration chart that can be printed from the CCG End of Life Care template.

Dying from Covid-19

- Death from Covid-19 occurs via one or both of the following mechanisms:
    - Type 1 Respiratory failure from Acute Respiratory Distress Syndrome (ARDS)
    - Systemic shock from 'cytokine storm' that resembles bacterial septic shock

The most common terminal symptoms are: pyrexia, rigors, severe dyspnoea, cough, delirium and agitation. The terminal phase can be rapid, lasting just a few hours: these symptoms can develop rapidly and can be very distressing. Rapid access to medication is vital and often involves larger doses than in 'standard' palliative care practice.

Medication options

- The medications most likely to provide effective symptom control are:
    - Antipyretics for rigors and delirium
    - Opioids for dyspnoea and cough
    - Benzodiazepines for agitation
    - Antipsychotics for delirium and agitation
- The rapid onset of severe symptoms (and likely shortage of syringe drivers) means that stat doses of subcutaneous drugs may result in faster and better symptom relief.

Medication route

- If possible, insert a subcutaneous (SC) butterfly needle (or ideally a paediatric venflon if available) so that medications can be administered without multiple injections. These can last up to 72 hours and need to be changed earlier if there are signs of erythema or pain at the site.
- The oral route may not be available in the dying phase, but Oramorph can be helpful if given early.
- Lorazepam, morphine and oxycodone can be given sublingually (SL) and midazolam given buccally (BUC).
- Viral shedding is thought to occur rectally, so the PR route is best avoided.

Medication rationale

- As nursing and medical staffing levels will be lower during the peak of the pandemic, the aim is to provide effective symptom control without relying on frequent medication administration.
- Larger than usual stat doses may be required for effective symptom control. The severe terminal anxiety and breathlessness that many patients experience may require higher doses of sedative medication in order to reduce conscious level more rapidly and deeply than in 'traditional' palliative care practice.
- In the absence of staff to administer SC drugs frequently, the use of 'standard' lower doses increases the risk of poor symptom control and unacceptable distress for patients and their families.

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Pharmacokinetic considerations

- Morphine, oxycodone and midazolam are effective for around 4 hours after SC, SL and BUC administration.
- Absorption of morphine, oxycodone and midazolam is similar via oral, SL and BUC routes: use similar doses
- If already on morphine, remember that prn dose of morphine = 1/6th of current total morphine dose.
- As suggested below, hourly doses may be needed to ensure rapid symptom control
- Levomepromazine is a sedating antipsychotic with a duration of action between 12 and 24 hours: a single dose of 25 to 50mg SC will give significant anxiolysis and sedation within 60 minutes.
- The combination of all three medications is therefore likely to provide optimal symptom control for 18 to 24 hours from a single SC administration.
- Fentanyl and buprenorphine patches should not be started due to the slow onset of action (>12 hours)
- Pyrexia exacerbates agitation and delirium. NSAIDs are the preferred antipyretics as they have a longer duration of action than paracetamol: they are unlikely to hasten death in the context of end of life care.
- Oxygen is rarely of benefit in the terminal phase: opioids and sedatives are usually more effective for management of symptoms in this context.

Pharmacological Symptom Control for Patients Dying from Suspected or Confirmed Covid-19

An experienced clinician has decided that the person is imminently dying from COVID-19

If symptomatic from temperature > 37.5 C, give antipyretic (naproxen 500mg or paracetamol 1g) orally. A tepid compress will also help. Fans may encourage viral dispersion so are best avoided

If the patient is **severely distressed** by shortness of breath and / or agitated give the following together stat:

a) **Morphine 2.5 to 5 mg** (or Oxycodone 2.5 to 5 mg) SC or SL
b) **Midazolam 2.5 to 5 mg SC or BUC** (or Lorazepam 1mg SL)
c) **Levomepromazine 12.5 to 25 mg SC** (or Haloperidol 5mg SC)

Some patients dying from COVID-19 need the higher of these initial doses to achieve adequate relief of breathlessness and appropriate sedation. The lower doses may be more appropriate for the frail elderly.

Prescribe the following p.r.n. drugs, with a low threshold for dose escalation if needed:

Shortness of breath: **Morphine 2.5 to 5 mg SC / SL hourly.** Or Oxycodone 2.5mg SC / SL hourly

Agitation/panic: **Midazolam 2.5 to 5 mg SC / BUC hourly** (max 80mg/24hrs).
Or Lorazepam 1mg sublingual 2-hourly

Agitation / delirium: **Levomepromazine 12.5 to 25 mg SC hourly** (max 250 mg/24 hrs)
Or Haloperidol 1.5 to 3 mg SC hourly (max 15mg/24hrs)

Respiratory secretions: **Glycopyrronium 400 micrograms SC hourly** (max 1.2mg/24hrs).
Or hyoscine butylbromide 20mg SC hourly (max 120mg/24hrs)

If you think it appropriate, there may be lay person or clinical family member who you think would be safe and willing to administer these prn drugs. A 'handout' for them is on the next page, with longer dose frequencies for safety reasons. The list of pharmacies stoking End of Life drugs is at https://www.cambridgeshireandpeterboroughccg.nhs.uk/health-professionals/prescribing-information/controlled-drugs-and-palliative-care/palliative-care-prescribing/

If you need advice, contact Arthur Rank Hospice on 01223 675900 or Thorpe Hall Hospice on 01733 225900. Advice from a Palliative Care specialist nurse or Consultant is available 24/7: they will be pleased to help.

Dr Stephen Barclay and Palliative Care Consultants across the Cambridgeshire and Peterborough CCG area
sigb2@medschl.cam.ac.uk 30 03 2020