Guidelines for the Management of Common Symptoms in the Last Few Days of Life

LOROS
Hospice Care for Leicester, Leicestershire & Rutland

PAIN

Is the patient already taking oral morphine?

Yes

1. Convert to continuous morphine SC infusion via syringe driver

Total daily dose oral morphine (mg) / 2 = mg morphine/24hr

Increase the infusion as needed to control pain by 30% steps

2. Prescribe PRN morphine SC for breakthrough pain
= 1/6th 24hr dose morphine

Do not use the boost button
Increase the PRN dose in line with the SC infusion dose

If on oral oxycodone and SC morphine not appropriate conversion to SC oxycodone/24hr is 1/2 total daily oral oxycodone dose

Consult a palliative care specialist if:
1. Pain persists
2. Conversion is needed from other opioids

No

Is the patient in pain?

No

Prescribe in anticipation PRN
a) Diclofenac 100mg PR
b) Morphine 2.5mg-5mg SC

Yes

Is patient taking NSAID?

Yes

a) Morphine 2.5mg-5mg SC stat + PRN
b) Morphine 10mg-20mg/24hr
c) Haloperidol 3mg/24hr as prophylactic antiemetic

No

a) Diclofenac 100mg PR stat & 50mg PR BD
b) Morphine 2.5mg-5mg SC PRN
c) Review need for continuous morphine infusion later today

If Morphine unavailable, diamorphine (1/3 of oral morphine dose) may be used

NAUSEA AND VOMITING

Is patient already on an effective antiemetic?

Yes

Prescribe this if possible
- As SC infusion/24hr
- As PRN dosing

No

Is nausea or vomiting present?

Yes

- Give haloperidol 1.5mg by SC injection stat and PRN
- Review after 24 hours. If two or more PRN doses of haloperidol have been given, and are effective, consider haloperidol 5mg/24hr SC infusion
- Maximum total daily dose of haloperidol should not exceed 10mg

No

Prescribe in anticipation of the symptom developing:
- Haloperidol 1.5mg by SC injection PRN

- Alternative antiemetic: Stop haloperidol and prescribe levomepromazine 6.25mg by SC injection PRN (or a SC infusion of 6.25mg – 12.5mg/24hr)

OBJECTIVES

- To help make the last days of life comfortable and dignified
- To give guidance on the effective and safe use of drugs
- To increase confidence and satisfaction in providing palliative care

RESTLESSNESS AND AGITATION

A human presence often helps to calm agitated patients

Prescribe in anticipation of the symptom developing:
- Midazolam 2.5mg-5mg by SC injection PRN

Reduced Confusion, restlessness & agitation

Consider underlying causes:
- Uncontrolled pain
- Full bladder
- Full rectum
- Dyspnoea
- Anxiety or fear

and resolve where possible

Where anguish and anxiety are predominant:
- Give midazolam 2.5mg-5mg stat and PRN SC (this may need to be repeated after 30 minutes)
- If two or more doses have been given in 24 hours, with effect, consider starting a SC infusion of 5mg-10mg/24hr midazolam
- The SC infusion dose may need to be increased gradually to midazolam 30mg/24hr

Where delirium and psychotic features are predominant (e.g. hallucinations, confusion):
- Give haloperidol 5mg stat and 2.5mg-5mg PRN by SC injection up to a maximum total daily dose of 10mg. Consider giving haloperidol via a SC infusion
- If needed, consider a SC infusion of haloperidol 10mg + midazolam 10mg /24hr driver
- Levomepromazine 12.5mg-25mg stat by SC injection is an alternative to haloperidol. Consider a SC infusion of 12.5mg-50mg /24hr

RESPIRATORY TRACT SECRETIONS

- Noisy respiratory tract secretions can be a normal part of dying
- Consider whether they are troublesome or need treating at all
- Change in the positioning of the patient is the first step of management

Prescribe in anticipation of the symptom being troublesome:
- Glycopyrronium 200micrograms by SC injection PRN

Absence of troublesome secretions

Consider:
- Patient positioning
- Stopping I.V. or subcutaneous fluids or PEG feed

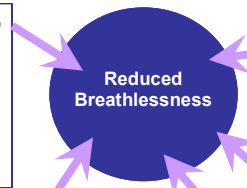
If Secretions are Troublesome:
- Give glycopyrronium 200micrograms SC as soon as symptom arises and PRN, up to every four hours
- If two or more doses of glycopyrronium have been given and are effective, consider a SC infusion of glycopyrronium 800micrograms /24hr
- Review after 24 hours

If symptoms persist, increase to a maximum of 1.2mg/24hr glycopyrronium

Supportive Information
- In a VERY SMALL number of patients, suction may be helpful
- This is a difficult symptom to treat and drugs may not be effective. Remember to reassure relatives and friends

Hyoscine hydrobromide is an alternative but is sedative and frequently causes confusion. (400micrograms SC stat and PRN, up to 2.4mg/24hr

BREATHLESSNESS



Is amelioration of underlying cause appropriate?
- **Removal of pleural, ascitic and pericardial fluid**
- **Treatment of chest infection**
- **Treatment of heart failure**
- **Treatment of pulmonary emboli**

Position patient
- **Sit up in bed**
- **Comfy reclining armchair with foot stool**

Trial of oxygen

Air flow across the face is helpful: use a fan or open a window

Severe respiratory distress
- **Calm and reassure the patient and carers by touch, talking and explaining**
- **Consider lorazepam 0.5mg-1mg SL PRN**
  midazolam 2.5mg SC stat and PRN
  midazolam 5mg-10mg/24hr SC infusion
- **Consider morphine 2.5mg SC stat and PRN**
  morphine 5mg-10mg/24hr SC infusion

NB: Prescribe prophylactic antiemetic (e.g. haloperidol 3mg/24hr) if opioid naïve patient.

General Guidance

- **Prescribe, in anticipation, via SC route**
- **Use water for injection (WFI)**
- **Consider non-drug strategies**
- **If problems persist seek advice**

THE USE OF MEDICINES IN SYRINGE DRIVERS

Medication	Indication	SC Starting dose /24 hours	Stock Ampoules available
Analgesic			
Morphine	**Pain Dyspnoea**	1/2 total daily dose of oral morphine	10mg/1ml
		10-20mg (starting dose if not already taking opioids)	30mg/1ml
Anti-emetic			
Metoclopramide	**Impaired gastric emptying**	30mg	10mg/2ml
Haloperidol	**Drug induced or metabolic cause of nausea**	2.5mg-5mg (up to 10mg)	5mg/1ml
Cyclizine	**Intestinal obstruction**	100mg-150mg	50mg/1ml
Levomepromazine	**Complex Nausea**	6.25mg-12.5mg	25mg/1ml
Sedative			
Haloperidol	**Terminal restlessness and agitation/Delirium**	2.5mg-5mg (up to 10mg)	5mg/1ml
Midazolam	**Terminal restlessness Myoclonic jerking Anticonvulsant**	5-10mg (up to 60mg)	10mg/2ml
Levomepromazine	**Terminal agitation and delirium**	12.5mg-25mg (up to 50mg)	25mg/1ml
Anticholinergic			
Glycopyrronium	**Terminal bronchial secretions**	0.6mg-1.2mg	600 micrograms/3ml
Hyoscine Hydrobromide (also anti-emetic)		0.6mg-2.4mg	600 micrograms/1ml
Hyoscine butylbromide	**Severe colic Intestinal obstruction**	60mg-180mg	20mg/1ml

Essential points in using opioids for pain management
- Morphine is the opioid of choice for injection
- To convert from oral morphine to subcutaneous morphine, divide the total 24 hr morphine dose by 2 to obtain the total 24hr morphine dose.
- Ensure adequate breakthrough (PRN) analgesia is prescribed = 1/6th daily dose morphine
- Do not use the boost button
- Increase dose if required by 30% increments

Compatibility chart for two drugs in Water for Injections (WF1) over 24 hours for Palliative Care use

Multiple factors affect drug stability and compatibility. This table is intended as a practical guide and conflicting reports do exist. Regular monitoring for precipitation, site problems and efficacy is essential, even if coded green. For further information seek specialist advice/ refer to www.palliativecaredrugs.com

G (green)	Reported compatible in WFI at doses detailed in these guidelines (data may be observed, physical or chemical or widely used but without supporting data) NB Crystallisation may occur with increasing concentrations
A (amber)	Use with caution (compatibility may depend on drug concentrations or the order of mixing - seek advice)
N/D	No data
N/A	Not usually applicable or not recommended
(s)	Combination is also "Green" Saline 0.9%

	Cyclizine Use WFI ONLY	Glycopyrronium	Haloperidol	Hyoscine Butylbromide	Levomepromazine	Metoclopramide	Midazolam
Glycopyrronium	N/D						
Haloperidol	G	N/D Commonly used by specialists					
Hyoscine Butylbromide	A	N/A	G				
Levomepromazine	N/A	G	N/A	G			
Metoclopramide	N/A	G	N/D (specialists use occasionally)	N/A	N/A		
Midazolam	A	G	G (s)	G (s)	G	G (s)	
Morphine Sulphate	G	G	* G (at lower concentrations)	G (s)	G	G (s)	N/D **Widely used in specialist units
Oxycodone	A	G	G	G	G	G	G

SEEK SPECIALIST ADVICE FOR COMBINING MORE UNUSUAL DRUGS OR MORE THAN TWO DRUG COMBINATIONS
Also see: www.palliativedrugs.com

Diamorphine: 2 drug combinations hold true if diamorphine is substituted for morphine sulphate with the following provisos: maximum concentrations must not exceed Diamorphine 20mg/ml + Cyclizine 20mg/ml, nor Diamorphine 50mg + Haloperidol 4mg/ml.

*May be incompatible at concentrations above 20mg/ml morphine + 2mg/ml Haloperidol. **May be incompatible at concentrations above 10mg/ml morphine + 5mg/ml Midazolam.

For further advice contact: Clinical Nurse Specialist .....

LOROS advice line 0116 231 8415

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