

SA Palliative Care Community Pharmacy Update

A joint initiative of SA Palliative Care Services and Ambulatory & Primary Health

Palliative patients commonly exhibit noisy breathing within the terminal phase (which is also known as death rattle) and pharmacotherapy relies on anti-cholinergic drugs.

Noisy breathing at end of life

Palliative patients are less able to swallow and expectorate respiratory secretions (including saliva) as they enter in the terminal phase. Pooling of secretions in the bronchi and oropharynx results in audible vibrations as the patient breathes. Underlying pathology may also contribute (e.g. respiratory tract infection).

Noisy breathing usually occurs when the patient has a reduced conscious state and is an indication that death is expected within days. The symptom can be more distressing for family and friends than for the patient. They may perceive the noise as an indication of choking or drowning. Pre-emptive communication from palliative care providers is essential and may be enough to alleviate anxiety.

There is no conclusive evidence that any treatments are effective with up to one third of patients receiving no benefit. Therefore, the decision to initiate treatment creates an ethical dilemma of balancing patient need with that of family and friends.

Anticholinergic drugs

Anticholinergic drugs block the action of acetylcholine at muscarinic receptors in the parasympathetic nervous system. They inhibit the formation of new secretions but have no impact on the clearance of existing secretions. Treatment should be initiated, as soon as noisy breathing is identified to improve effectiveness. This may require drugs to be pre-prescribed 'prn' in an 'anticipatory' basis.

Anticholinergic drugs may also cause significant adverse effects, so patients should be monitored closely so that futile and potentially harmful treatment is avoided.

No agent has been shown to be definitively superior to another, Therefore selection of agent should be based on the adverse effect profile, availability and cost. Administration should be via the subcutaneous or sublingual route.

Atropine and hyoscine hydrobromide cross the blood brain barrier and elicit central effects that may precipitate terminal delirium which can be misinterpreted as terminal restlessness. Atropine is not recommended for preventing noisy secretions in palliative care.

Hyoscine butylbromide and glycopyrrolate do not elicit CNS effects and are therefore less likely to contribute to terminal delirium.

Actions of anticholinergic drugs

PERIPHERAL	Atropine and hyoscine hydrobromide	Hyoscine Butylbr. glycopyrrolate	Resp	Inhibit bronchial secretions Inhibit mucociliary clearance in the bronchi
			Card.	Tachycardia, arrhythmia
			Eye	Pupil dilation, blurry vision
			GI tract	Inhibit saliva Constipation Modest reduction in gastric secretions
			Sm. musc	Relax bronchial, biliary and urinary tract smooth muscle Urinary retention
CENTRAL	Atropine and hyoscine hydrobromide	Hyoscine Butylbr. glycopyrrolate	Card.	Paradoxical bradycardia
			CNS	CNS stimulation – restlessness, agitation, delirium Hyoscine CNS depression – sedation, hypnosis, amnesia

Useful resources

- > Palliative Care Therapeutic Guideline, 3rd ed
- > Oxford Textbook of Palliative Medicine, 4th ed
- > Wee B, Hillier R, Interventions for noisy breathing in patients near to death. Cochrane Database of Systematic Reviews 2008

For more information

Contact the Advanced Practice Pharmacists:

> Lauren Cortis, Northern

lauren.cortis@health.sa.gov.au

8161 2454 / 0478 407 876

> Bel Morris, Central

belinda.morris@health.sa.gov.au

8222 6952 / 0478 407 874

> Paul Tait, Southern

paul.tait@health.sa.gov.au

8275 1732 / 0478 407 877

This update is intended to provide practical up to date and factual information relating to pharmacy and medicines management in the setting of Palliative Care and is based on critical review of available evidence. Individual patient circumstances must be considered when applying this information. Please feel free to distribute this update further to interested colleagues.

