Management of secretions in the terminal phase

Background:

Patients approaching the terminal stages of life are often unable to clear their upper respiratory tract secretions, also known as "noisy breathing", "death rattle", "sound in relation to respiration" or "respiratory tract secretions".

This symptom is commonly defined as noise produced by the oscillatory movement of upper airway secretions with the inspiratory and expiratory phases of respiration[1].

Despite this symptom occurring in 23- 44% of terminal patients[1,2,3] there is a lack of robust research to guide assessment or management. The mechanism remains uncertain, but presumably due to pooling of secretions in the upper airway and saliva due to reduced ability to expectorate and swallow normally that occurs with physical deterioration.

Typically, non-pharmacological measures are considered first line. Anticholinergic agents can be used if pooled oral secretions are refractory to non-pharmacologic measures. Literature frequently emphasises the importance of communication and reassurance to be the most effective intervention for death rattle[4,5,6].

Key points to remember:

- The 'death rattle' is a strong predictor of death. After commencement, the median survival time is 23 hours[3].
- A differential diagnosis for the noisy breathing should be considered; including cardiac failure, respiratory infections or gastro-intestinal obstruction. Use clinical judgement to ascertain if further treatment is required.
- Providing quality care and support to the patient's family is critical, including bereavement care.
- Mouth care and position changes can maximise patient comfort and may help with the secretions.
- Evidence from a multicentre randomised double-blind placebo controlled trial[7] and an open label multicentre randomised prospective trial[8] suggests that when a person is clinically assessed as being close to death (with signs including a reduction in consciousness), regular prophylactic administration of hyoscine butylbromide (Buscopan) prior to the development of noisy respiratory secretions significantly reduces the occurrence of this symptom.
- Risks of anticholinergic use include restlessness, dry mouth and urinary retention[7].
- Literature has not confirmed the superiority of one anticholinergic over another once noisy respiratory secretions begin. Research indicates medication may or may not be useful or required[9,10].
- The intensity of noise from respiratory secretions was reduced when anticholinergic treatments were initiated early after onset of clinically audible (but still low intensity) noises[11].
- Implement the management flow chart (on page 3) when the person enters the terminal phase with reduced level of consciousness.
- Regularly assess the patient's clinical situation and response to any medication administered.

Guidelines for initiating anticholinergic medication for noisy respiratory secretions:

1. Identify that the person is entering the terminal phase with a reduction in their level of consciousness.

2. Discuss the risks and benefits of prophylactic anticholinergic medication for preventing the occurrence of noisy respiratory secretions.

3. If the family's preference is to commence prophylactic anticholinergic medication:

    a) Obtain scripts for hyoscine butylbromide (Buscopan) injections 20mg/mL [scripts can be written for a maximum of 30 ampoules with 3 repeats using streamline authority code 6207 for use in palliative care].

    b) Obtain authorisation for administration of hyoscine butylbromide 20mg subcut QID + 1/24 PRN to a maximum dose of 120mg/24hrs for reduction of respiratory secretions.

    c) Commence as charted, alongside non-pharmacological measures.

4. If the family's preference is to manage with non-pharmacological measures, continue monitoring.

5. Anticholinergic medications can be started at any time once noisy breathing from respiratory secretions develops, but earlier commencement may produce better results.

6. Continue pharmacological treatment for 24 hours. Effectiveness improves with time[3].

7. Assess oral mucosa as medication can exacerbate dryness.

8. Provide education and tools for mouthcare, including swabs, oral gels and sprays, to avoid discomfort from dryness.

Note: Drug selection and prescribing is based on the differing pharmacological profiles, prescriber preference, accessibility and the cost of medication[8].

The patient is dying and reduced consciousness

GENERAL APPROACH

Care for families and carers:

- Explain early to families and carers that noisy breathing and secretions commonly develops after people lose consciousness.
- Some carers describe the sound to be 'awful' (like drowning/choking). Reassure them that these are not distressing for the unconscious person ('like snoring').
- Explain that suctioning often causes more distress and oxygen doesn't add comfort.
- Provide the carer leaflet on this symptom or other appropriate supportive literature.
- Shared decision making on the use of antisecretory medications following discussions around benefits and risks (prophylaxis or treatment).

Non-pharmacological management for the person once noisy breathing develops:

- Nurse the person on their side, reposition to other side every 3-4 hours.
- Elevate the head of the bed slightly, retaining a position of comfort.
- Provide frequent mouth care (every 1-2 hours).
- Use background music or a fan to diffuse the sound.
- If suctioning is needed, only use gentle oral suctioning.

Preference to commence prophylacatic treatment

YES

NO → Continue with the general approach

Are the noisy secretions problematic?

NO → Continue with the general approach

YES → Continue with the general approach and trial medication

Any of the following drugs are suitable for intermittent subcut administration, depending on the preference:

- Hyoscine Butylbromide (Buscopan®) 20mg stat * [7] or
- Glycopyrronium (Glycopyrrolate) 0.2mg stat [7]

If above unavailable can consider

- Hyoscine Hydrobromide (Hyoscine) or Atropine 0.4 – 0.6 mg stat (but note can cross blood brain barrier)[7]. Consult local Specialist Palliative Care Service if considering sublingual *atropine eye drops.

Has it been effective?

YES

- Maintain general non-pharmacological measures
- Give subcutaneous dose every 4-6 hours with ongoing review as appropriate
- Consider commencing or adding to continuous subcutaneous infusion
- Hyoscine Butylbromide (Buscopan®) 60 - 80mg/24 hours (initially) and titrating for effect to a maximum of 120mg/24 hours[7] or Glycopyrronium (Glycopyrrolate) 0.6 - 1.2 mg /24 hours[7]

NO

- Provide ongoing support and reassurance
- Maintain general non-pharmacological measures
- An alternate drug or dose may be used but is unlikely to relieve the noise
- Address the grief and bereavement needs of carers & family

* Atropine eye drops are centrally active and can cause agitation in higher doses; toxicity can occur as a) the plastic eye drop bottles are very easy to empty with a gentle squeeze leading to accidental overdose; and b) sublingual administration bypasses first-pass metabolism hence toxicity is expected to be seen at lower doses.

DISCLAIMER

The information is a guide only and reflects current Victorian palliative care practice and available literature at the time of release. It is the responsibility of the user to ensure information is used correctly in response to the patient/client's clinical situation.

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