Noisy respirations at the end of life: current evidence?

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Scope of the problem?

- Up to 12 and 92% of dying patients will develop noisy breathing between 11 and 28 hours before death
- It is hypothesised that this is due to oscillatory movements of secretions in the oropharynx, hypopharynx, and trachea when patients are too weak to cough
- Overall, this area remains challenged by a lack of large, prospective trials, differences in methodology and definitions, and the challenge of objective measurement of death rattle

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Assessment

- A clinical assessment of noisy secretions commences with consideration of the person's prognosis in the context of their recent and background history
- This is to determine whether investigations or interventions may be appropriate to reverse this?
- The challenge for a clinician is to differentiate the problem of respiratory tract secretions as a sign of impending death from alternative situations

Patients at risk of secretions

- Recently, retrospective review of in-patients treated for noisy secretions failed to identify any risk factors aside from the use of medications with anticholinergic effects
- Other palliative care studies have suggested that secretions are more common in patients with lung cancer, cerebral metastases
- ICU studies have highlighted the problem to be worse in patients intubated for longer periods

Other factors that may result in respiratory secretions

- Pulmonary oedema:
  - cardiac failure, renal failure, over-hydration, thalmic hypoxia
- Reactive changes in the bronchial epithelium Hypersecreting lung tumours
- Impaired swallow
- Excessive saliva production
- Respiratory muscle weakness

Secretions as a source of distress?

- One of the main concerns is that this may be distressing for the dying person

- However, objective measures indicate low levels of respiratory distress in dying patients and no difference in distress between those with and without death rattle

Pharmaceutical interventions

- Numerous clinical guidelines recommend the use of anticholinergic medications

- This recommendation arose from anesthesia where such medications were previously commonly used because of their competitive antagonism of muscarinic receptors in order to:
  - Protect against vagal reflexes
  - Reduce oropharyngeal secretions during surgery

Interventions

- However, at present, there is no evidence for such pharmacological interventions with all medications seemingly equally ineffective
- In this context, offering medication for death rattle may set family and caregivers up for failure, possibly creating a sense of moral distress
- Further, medications with anticholinergic effects are associated with possible adverse effects
- Is the ongoing prescribing and administration of these medications suggesting that we as clinicians have considered the risks and deemed then acceptable?

Interventions

- The other issue to consider is whether seeking to palliate the symptom of noisy breathing is promoting death as a medical event that can be modified?
- Perhaps the greatest issue with this is whether by addressing the symptom of “death rattle” and not its larger meaning, medicine and medications become our response to dying?

Other interventions

- While re-positioning may be helpful, excessive oropharyngeal suctioning can be distressing for both patient and family
- Gentle suctioning may be useful in the secretions have pooled in the mouth
- Decreasing parenteral fluids although one recent study failed to support this oft made recommendation

Family distress

- There is wide consensus in the literature that the sound of death rattle is distressing to families and health care professionals.
- The impact of death rattle on families and caregivers is of central importance given:
  - Treatment is often initiated based on the perceived distress of family members
  - But there is no compelling scientific evidence that our interventions for death rattle are effective

Family distress

- The lack of evidence poses a dilemma in that:
  - using these drugs involves giving potentially ineffective treatment to an individual who is likely unconscious and unable to give consent or report adverse effects
  - treatment may be initiated based on the emotional and psychological distress of the clinician or family member

Family distress

- However, more recent evidence suggests the distress is not universal:
  - Reassuring that death is imminent and suffering will be resolved
  - Predictive of change allowing insight into prognosis

- Further, families who had received support and counselling prior to this developing were less distressed

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What do we need to know?

- There is much we do not know about the aetiology and natural history of noisy respirations
- However, it is increasing clear that anticholinergic medications do not provide effective palliation and their use must be questioned
- Further, little evidence exists that supports this as distressing for the patient with not all families bother
- It is imperative that health professionals communicate well and often with relatives as this probably is the most effective way to address this problem

What do we do in the interim?

- History and physical examination
- Talk sensitively and often with families
- Provide ongoing support for families
- Re-positioning and gentle chin thrust
- Appropriate education and support for health professionals

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