



Scary Noises: Reducing death rattle at the end of life

CLINICAL QUESTION

Can medications reduce the incidence of terminal respiratory secretions (death rattle) at the end of life?

BOTTOM LINE

Best evidence supports prophylactic administration of scopolamine butylbromide (Buscopan™, hyoscine butylbromide) in patients who are close to death but without death rattle, reducing the number who develop death rattle [13% versus 27% (placebo)]. Evidence supporting treatment of death rattle once it has begun is less clear with no evidence that one antimuscarinic is clearly superior to another or perhaps placebo.

EVIDENCE

Prophylaxis:

- One double-blind randomized controlled trial (RCT),¹ 162 hospice patients in the dying phase (as per multidisciplinary team), without death rattle, given scopolamine butylbromide 20mg subcutaneously four times daily or placebo.
 - Development of death rattle (score 2 or 3 on 3-point scale, higher=worse) at any point prior to death: 13% versus 27% (placebo); number needed to treat (NNT)=8.
 - Adverse events (including restlessness, dry mouth, or urinary retention): No difference.

- One non-blinded RCT,² 132 adults close to death but without death rattle examined prophylaxis versus treatment at onset of death rattle with scopolamine butylbromide 20mg subcutaneously, then 60mg/24 hours.
 - 48% of patients suffered death rattle if treatment initiated once symptoms present, versus 6% of patients for whom treatment was initiated prior to symptom onset.

Treatment once death rattle present:

- Four systematic reviews³⁻⁶ of five RCTs (10-333 participants).
 - Three RCTs: No difference between scopolamine hydrobromide and either atropine (1 RCT, 333 patients) or octreotide (1 RCT, 10 patients). Unclear difference between scopolamine hydrobromide and glycopyrronium (1 RCT, 13 patients).
 - Two RCTs: No difference between placebo and either atropine (1 RCT, 160 patients), or scopolamine hydrobromide (1 RCT, 31 patients).

CONTEXT

- Death rattle is defined as noisy breathing caused by the presence of mucus in the upper respiratory tract.
 - Occurs in 12%-80% of patients in last 3 days of life.⁷
 - It may not distress patients, however, may be distressing to family and caregivers.¹
- Non-pharmacologic measures include repositioning although evidence to support this is lacking.⁵
- Scopolamine butylbromide (Buscopan®) is available subcutaneously or orally in Canada.
 - Scopolamine hydrobromide is different and can cause central nervous system effects.⁸

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AUTHORS

Jen Potter, MD CCFP, **Tina Korownyk**, MD CCFP

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