Interventions for noisy breathing in patients near to death
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Authors' objectives
Background: This is an updated version of the original Cochrane review published in Issue 1, 2008. Noisy breathing (death rattle) occurs in 23 to 92% of people who are dying. The cause of noisy breathing remains unproven but is presumed to be due to an accumulation of secretions in the airways. It is therefore managed physically (repositioning and clearing the upper airways of fluid with a mechanical sucker) or pharmacologically (with anticholinergic drugs). Objectives: To describe and assess the evidence for the effectiveness of interventions used to treat noisy breathing in patients close to death.

Search methods: Randomised controlled trials (RCTs), before and after studies and interrupted time series (ITS) studies in adults and children with noisy breathing were sought by MEDLINE, EMBASE, CINAHL, the Cochrane Pain, Palliative and Supportive Care Trials Register and the Cochrane Central Register of Controlled Trials in December 2009. In addition, the reference lists of all relevant trials and reports were checked and investigators who were known to be researching this area were contacted for unpublished data or knowledge of the grey literature.

Selection criteria: RCTs, controlled before and after studies and ITS reporting the outcome of pharmacological and non-pharmacological interventions for treating noisy breathing in patients near to death.

Data collection and analysis: Data was extracted by two independent review authors (BW and RH) and studies were quality scored. There was insufficient data to carry out an analysis.

Main results: Thirty two studies were identified, of which four met the inclusion criteria. One of these had been reported in the original Cochrane review. Since then, three other studies have been reported. One large study, comparing atropine, hyoscine hydrobromide and hyoscine butylbromide, showed no difference between the treatment groups. A smaller cross-over study of octreotide and hyoscine hydrobromide also showed no difference whichever treatment was used first. A third study involving 13 participants showed a significant reduction in the sound of noisy breathing when glycopyrronium was given, in comparison to hyoscine hydrobromide, but there was no placebo control.

Authors' conclusions: In our original Cochrane review, we concluded that there was no evidence to show that any intervention, be it pharmacological or non-pharmacological, was superior to placebo in the treatment of noisy breathing. This conclusion has not changed. We acknowledge that in the face of heightened emotions when death is imminent, it is difficult for staff not to intervene. It is therefore likely that the current therapeutic options will continue to be used. However, patients need to be closely monitored for lack of therapeutic benefit and adverse effects while relatives need time, explanation and reassurance to relieve their fears and concerns. There remains a need for well-designed multi-centre studies with objective outcome measures which demonstrates the efficacy of intervention against placebo for this condition.


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