4. We disagree that parenteral administration of a drug should be considered a discomfort. The last days of life are inevitably managed parenterally, as patients are unable to receive oral medications. We are unaware of a palliative sedation performed by oral route.
5. Although one could consider assuage the distress of people in the patient's environment by "normalizing" the sounds of DR, this is problematic. Regardless of what the patient feels (again, who knows?), it is our duty to make all our efforts, using available knowledge and experience, to provide a peaceful death. Merely observing that an unconscious patient seems not to suffer is not in line with the effort to ensure dignity in dying, which requires taking into consideration many aspects. In our opinion, the way a loved one dies leaves deep marks in the memories of the relatives and the relief of DR may be important for them. It may not be possible to experience the death of a patient with DR and consider this situation normal although palliative care physicians (or nurses) are expert in communication.

Sebastiano Mercadante, MD
Main Regional Center for Pain Relief and Supportive/Palliative Care
La Maddalena Cancer Center
Palermo, Italy
E-mail: 03sebelle@gmail.com

https://doi.org/10.1016/j.jpainsymman.2018.09.012

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Letter to the Editor Re: "Hyoscine Butylbromide for the Management of Death Rattle: Sooner Rather Than Later"

To the Editor

Response to "Hyoscine butylbromide for the management of death rattle: sooner rather than later"

We have read with interest the paper by Mercadante et al.[1] and congratulate the authors on completing this work in a group notoriously hard to study. Although the outcomes of the study at face value support the regular use of anticholinergics to reduce the phenomena of noisy secretions, we believe the routine use of medications is not supported within the available evidence.

One of the most important findings of this paper is that not all the patients in the usual care arm developed noisy respirations. This was noted by the authors, and we raise it again as this means it is highly likely that a proportion of patients in the study's intervention arm received medications unnecessarily and, as a result, were exposed to unwarranted harms. Although it is impossible to understand how dying patients experience the unpleasant side effects of anticholinergic medications, data from the frail elderly suggest that their experiences with these medications may be unpleasant.[2] We do not have any way of understanding for this treated group what the risk-benefit ratio or net effect actually was.

The research must be placed in a broader context. Existing evidence supports that patients themselves are not bothered by the phenomena of sections.[3] In addition, the authors correctly pointed out that there are high-level systemic review data that outline that, to date, the only real evidence to manage secretions lies with education and support to family members.[4]

Our own clinical practice supports the benefits of talking with families and supporting nursing staff. As part of our role in providing consultative palliative care within the inpatient setting in a tertiary referral teaching hospital, we have recently introduced an approach to caring for the dying. Included in this package is support and education to the nursing staff that outlines the fact that not all patients will develop noisy breathing but if they do, this is likely to be more distressing to families and staff. We routinely use the analogy of the snoring where the snorer is not usually bothered but those around them are. In the 12-month that this project has been running, as illustrated in Figure 1 below, the prescription of glycopyrrolate has declined. Although glycopyrrolate is commonly used in the peroperative phase in operating theatres, it is also one of the most commonly recommended

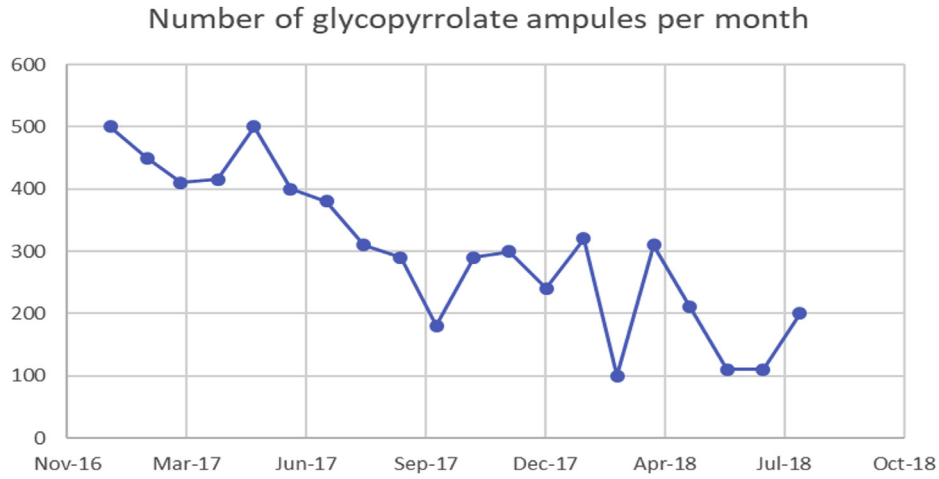

Fig. 1. Number of ampules supplied by hospital pharmacy services per month.

medications to address terminal secretions in Australia.

There is no doubt that noisy secretions at the end of life are sometimes perceived as very distressing to all those involved with the care of dying patients and further work is required. However, this work needs to focus on objectively identifying which patients are most at risk and once this is clearer, identifying evidence-based approaches to minimizing harm for all those involved: patients, their families, and health professionals.

Katherine Clark, MBBS, MMed, PhD, FRACP, FAChPM
Northern Sydney Cancer and Palliative Care Network, St Leonards
Sydney, NSW
Australia
E-mail: katherine.clark@health.nsw.gov.au

Northern Clinical School
The University of Sydney, St Leonards
Sydney, NSW
Australia

Caitlin Sheehan, BMed, FRACP, FAChPM
Department of Palliative Care
St George Hospital, Sydney
New South Wales, Australia
Department of Palliative Care
Calvary Health Care Kogarah
Sydney, New South Wales
Australia

David C. Currow, BMed, MPH, PhD, FRACP
The University of Technology
Sydney, NSW, Australia

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Author's Response

To the Editor:

I'm grateful for the interesting comments by an authoritative group of researchers from Australia. I'm trying to respond point by point.

1. They noticed that a proportion of patients who receive an early medication may not develop death rattle (DR) and consequently are exposed to unnecessary harms. They are right, as 40% of patients in the group receiving hyoscine butylbromide late did not develop DR. These percentages reproduce, more or less and with large differences, what it is reported in literature with a prevalence of DR of 60%. In my opinion, considering the low costs and the minimal harms, this should not preclude an optimal use of anticholinergics. Mass vaccination is essential to prevent very rare events; yet no one questions its usefulness. The study was designed also expecting a certain number of patients who would not develop DR. I have to say that it is surprising to recognize unpleasant effects in a dying patient with a low level of consciousness. The paper quoted by colleagues refers to a review assessing the activity of anticholinergic drugs on cognitive function, delirium, physical function, and