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CORRESPONDENCE

Double data and dubious conclusions, 'Houston do we have a problem?'

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With interest, as well as with some degree of concern, we read the article of Laserna et al. published in Intensive Care Medicine [1].

The subject outlined in this article is very important for adequate end-of-life care in the ICU and the efforts that have been made to write this review are significant. Nevertheless, we think that a methodological mistake has been made in this review and meta-analysis.

The authors include 13 original studies in their dataset; however, 2 of these studies as presented in Table 1 of their manuscript refer to congress abstracts [2, 3]. Abstracts are normally intended to report preliminary data. These abstracts were indeed only "work in progress", submitted to be presented at the ESCIM meetings in Berlin 2011 and Lisbon 2012, respectively. The progress over time can be directly derived from the growing number of patients: 75 in the first abstract, 139 patients in the second abstract, and finally 241 patients in the publication in the Journal of Pain and Symptom Management [2–4]. In other words, 135 (60 + 75) patients are unfortunately duplicate, which makes the analysis potentially unreliable.

Another problem of the article is that it only focusses on pain and its treatment; however, the authors do mention in this context dosages of benzodiazepines and propofol, which are sedatives, definitely not analgesics.

The reason that the studies included do mention sedatives, is that pain is only one of the symptoms we treat as part of end-of-life care in the ICU. Fear, anxiety, distress, and dyspnea are other severe problems to deal with. Especially for these above-mentioned problems, the use of sedatives is essential; however, they should not be mistaken for or categorized with analgesics as the authors seem to do.

The effects of sedatives and analgesics are commonly confused in clinical practice. We, therefore, took the liberty of using this opportunity to present a concise overview of the main effects of some of the most commonly used drugs in these categories in Table 1. When caring for a terminally ill ICU patient, the indication for treatment must be clear; is it pain that requires address or anxiety? Or is sedation required, because pain or anxiety can no longer be effectively controlled? The intensivist should choose the medication based on this important information.

Lastly, the authors suggest that the dosages observed are "too high" in relation to those recommended in end-of-life guidelines.

However, as far as we know, the recommended doses of opioids and sedatives in end-of-life situations in the ICU are not based on clinical studies.

The only studies that provide evidence regarding the doses used for comfort care in the ICU are specifically the studies described in this article.

We, therefore, suggest that the article by Laserna et al. be seen as a first, and welcome, step in the development of an evidence-based guideline for treatment of pain and discomfort relief in end-of-life situations in the ICU and ideally, an additional study should be conducted, focusing on the use of sedatives and anxiolytics in this same context.

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Table 1 Main effects of analgesics and sedatives

	Sedation	Analgesia	Analgosedation	Anxiety reduction	Other effect
Morphine	−	+	−	±	
Fentanyl	−	+	−	±	
Sufentanil	−	+	−	±	
Remifentanil	+	+	+	±	
S-Ketamine	+	+	+		
Clonidine	+	−	±	+	Opioid enhancing
Dexmethomidine	+	−	−	+	
Propofol	+	−	−	±	
Midazolam	+	−	−	+	
Lorazepam	+	−	−	+	

Compliance with ethical standards

Conflicts of interest
They authors do not have any conflict of interest to declare.

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