

EDITORIAL

Promoting sleep in Dutch intensive care Units: are we still using the 'wrong' medication?

M.M.J. van Eijk

Intensive Care Centre, University Medical Center Utrecht, Utrecht University, Utrecht, the Netherlands

Correspondence

M.M.J. van Eijk - M.M.J.vanEijk-7@umcutrecht.nl

Keywords - sleep, benzodiazepines, non-pharmacological interventions

Sleep is an essential aspect of human life, and evidence is growing that deprivation of sleep leads to an increase in adverse outcomes,^[1] for example a higher occurrence of cardiovascular diseases.^[2] In our field, the critically ill patients, there is increasing interest in sleep in general, the quality and quantity of sleep, and promotion of a better (and more natural) sleep pattern.^[3] Studies comparing sleep patterns between healthy individuals and intensive care unit (ICU) patients using polysomnography showed increased sleep fragmentation, the predominance of stage 2 sleep and a significant decrease or absence of stage 3 and rapid eye movement (REM) sleep.^[4,5] Surprisingly, total sleep time is hardly effected but, compared with healthy individuals, ICU patients spent their sleep time predominantly in the 'lighter' sleep stages and during the daytime.^[6] These abnormal sleep patterns may lead to various physiological effects which are detrimental to ICU patients. These effects, although not fully understood, include modulation of the immune response and alterations in haemostatic and neuroendocrine mechanisms.^[3] Furthermore, it has been shown that deprivation of sleep reduces respiratory muscle endurance, possibly hampering weaning from mechanical ventilation.^[7] Lastly, sleep deprivation and/or disturbance may lead to delirium,^[8] further hampering the patient's recovery and psychological wellbeing. Several factors related to the disturbance of sleep in ICU patients have been described,^[3] including use of sedatives/analgesics, pain, organ dysfunction, noise/light and activities for day-to-day patient care. In a recent article, published in this journal, Schinkelshoek et al. describe different methods to promote sleep in the ICU, focusing on pharmacological and - as the authors state - more importantly non-pharmacological measures.^[9] Although much about sleep promotion is still unknown, some recommendations are repeated in several articles and in national and international guidelines, including the use of protocols for the management of pain, delirium and sleep, and minimising the use of benzodiazepines as a way to promote sleep.^[10]

In this edition of the Netherlands Journal of Critical Care,

Koning et al. describe a nationwide survey on the use of sleep-promoting medication in Dutch ICUs.^[11] The authors of this article studied a group of patients in multiple hospitals and report on the use of different medication regimes aimed at promotion of sleep. Although the data collection was prematurely stopped due to logistic reasons (the COVID-19 pandemic), the reported data show us a representation of the day-to-day practice in Dutch ICUs. Alarming, but maybe not surprisingly, a large portion of the 'awake' patients (e.g. patients without an indication for deep sedation) received at least one sleep-promoting drug (predominantly benzodiazepines) with some even receiving propofol with the sole purpose to promote sleep during the night. Although, as the authors report, the use of benzodiazepines is the quick and easy way to treat sleep disturbance, guidelines and expert opinion advise otherwise. The authors tried to investigate several risk factors which could be treated with non-pharmacological measures but unfortunately, due to the relatively small size of the study, this was inconclusive. Based on these data, the authors conclude that, in contrast to the guidelines, many patients in our ICUs still receive medication to promote sleep and that more research is needed to identify the optimal strategy to promote sleep.

This article shows us that there is still a gap between guidelines and reality, with the more 'easy' way out (prescription of medication) being hard to eradicate. Although an ICU without any sleep-promoting medication is unlikely (especially in the COVID-19 era, in which patients are extremely agitated and difficult to titrate to a comfortable level of consciousness without the use of benzodiazepines or other sedatives), further research on benzodiazepine-sparing techniques, preferably with non-pharmacological measures, is needed. On top of this, education and an increase in awareness on the use of sleep medication in the ICU and the ways to use other measures is essential. The article by Koning et al. is another step in the direction of reducing sedatives in critically ill patients and to focus on other ways to promote sleep in the ICU.

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