LETTER TO THE EDITOR

Should We Use DSI or not—What does the PADIS 2018 Guidelines Recommend?

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Sir,

The recently published pain, agitation/sedation, delirium, immobility (rehabilitation/mobilization), and sleep (disruption) (PADIS) guidelines in September 2018 have updated the 2013 pain, agitation, and delirium (PAD) guidelines by adding two inextricably related clinical care topics—rehabilitation/mobilization and sleep.[1,2]

The 2013 guidelines recommended daily sedation interruption (DSI) or daily awakening trials to be routinely used in mechanically ventilated adult ICU patients[3] but the updated 2018 guidelines have not given clear recommendation on DSI in these patients. DSI[3] is defined as a period of time, each day, during which a patient's sedative medication is discontinued and patients can wake up and achieve arousal and/or alertness, defined by objective actions such as opening eyes in response to a voice, following simple commands, and/or having a sedation–agitation Scale (SAS) score of 4–7 or a RASS (Richmond agitatoion sedation score) of –1 to +1.

It has been concluded by Burry et al.[4] in their Cochrane review of 1282 patients published in July 2014 that there is no strong evidence that DSI alters the duration of mechanical ventilation, mortality, length of ICU or hospital stay, adverse event rates, drug consumption, or quality of life for critically ill adults receiving mechanical ventilation compared to sedation strategies that do not include DSI. They further advised that caution should be applied when interpreting and applying the findings as the overall effect of treatment is always <1 and the upper limit of the confidence interval is only marginally higher than the no-effect line. These results should be considered unstable rather than negative for DSI given the statistical and clinical heterogeneity identified in the included trials.

Nassar et al.[5] in their systematic review and meta-analysis found target sedation protocols and DSI, similar in terms of hospital mortality, duration of mechanical ventilation, hospital length of stay, accidental extubation, extubation failure and the occurrence of delirium. However, sedation protocols were associated with an increase in the number of days free of mechanical ventilation (mean difference = 6.70 days; 95% CI 1.09–12.31 days; I2 = 87.2%) and a shorter duration of hospital length of stay (mean difference = –5.05 days, 95% CI –9.98–0.11 days; I2 = 69%).

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It is a high quality of evidence which should have been taken into consideration for these guidelines.

References

1. Devlin JW, Skrobik Y, Gélinas C, Needham DM, Slooter AJC, Pandharipande PP, et al. Executive Summary: Clinical Practice Guidelines for the Prevention and Management of Pain, Agitation/Sedation, Delirium, Immobility, and Sleep Disruption in Adult Patients in the ICU. Crit Care Med. 2018;46:1532–1548.
2. Devlin JW, Skrobik Y, Gélinas C, Needham DM, Slooter AJC, Pandharipande PP, et al. Clinical Practice Guidelines for the Prevention and Management of Pain, Agitation/Sedation, Delirium, Immobility, and Sleep Disruption in Adult Patients in the ICU. Crit Care Med. 2018;46:e825–e873.
3. Barr J, Fraser GL, Puntillo K, Ely EW, Gélinas C, Dasta JF. Clinical practice guidelines for the management of pain, agitation, and delirium in adult patients in the intensive care unit. Crit Care Med. 2013;41:263–306.
4. Burry L, Rose L, Mc Cullagh IJ, Fergusson DA, Ferguson ND, Mehta S. Daily sedation interruption versus no daily sedation interruption for critically ill adult patients requiring invasive mechanical ventilation. Cochrane Database Syst Rev. 2014;9:CD009176.
5. Nassar AP, Park M. Sedation protocols versus daily sedation interruption: a systematic review and meta-analysis. Rev Bras Ter Intensiva. 2016;28(4):444–451.