

Sedative may prevent delirium in the ICU

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Sedative was found to prevent delirium in critically ill patients. Credit: ATS

A low dose of the sedative dexmedetomidine given at night may prevent delirium in critically ill patients, according to new research published online in the American Thoracic Society's *American Journal of Respiratory and Critical Care Medicine*.

In "Low-dose Nocturnal Dexmedetomidine Prevents ICU Delirium: A Randomized, Placebo-controlled Trial," researchers report on what is believed to be the first investigation to identify a drug to prevent adults from developing [delirium](#) in the ICU.

The study was led by Yoanna Skrobik, MD, FRCP(c) MSc, a clinician-scientist at McGill University Health Centre in Canada who conducted the first studies of delirium in the critically ill and whose research has shown that delirium prolongs hospital stay and increases mortality.

"In other studies, [dexmedetomidine](#) has been associated with lower delirium prevalence rates than other sedatives," Dr. Skrobik said. "But whether dexmedetomidine might actually prevent delirium was not clear."

The study enrolled 100 ICU patients at two hospitals, one in Quebec, the other in Boston. The patients did not have delirium at the time of ICU enrollment. Half the patients were randomly assigned to receive intravenous dexmedetomidine; the other half were infused with the placebo. Neither the patients nor the ICU health care team knew which arm of the trial the patients were in.

The study found that compared to the placebo arm, those receiving dexmedetomidine during their ICU stay:

- Were more likely to remain free of delirium throughout their ICU stay: 80 percent vs. 54 percent.
- Spent more days free of delirium in the ICU: 8 vs. 6 days.
- Were less likely, if in pain, to experience severe pain: 44 percent vs. 66 percent

The authors expected that dexmedetomidine would also improve sleep quality. A previous study of a select group of [critically ill patients](#) found that to be the case. In the current study, however, there was no difference in sleep quality between the two groups, as assessed by a self-reported questionnaire.

Dr. Skrobik said that the sleep findings should be interpreted in light of two caveats: sleep in the ICU is almost always abnormal, and no validated instrument exists to identify when an ICU patient is experiencing normal vs. abnormal sleep.

There was also no difference in length of ICU stay or [hospital stay](#), or in ICU mortality. However, a reduction in opiate requirements confirmed other studies describing dexmedetomidine's potential to relieve pain.

"We believe this is a practice-altering study and that dexmedetomidine should be used with patients at high risk for delirium," Dr. Skrobik said.

Provided by American Thoracic Society

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