Managing ICU Pain and Agitation: Maintaining Patient Wakefulness and Reducing Delirium and PICS

John W. Devlin

Division of Pulmonary and Critical Care Medicine, Brigham and Women's Hospital/Harvard University School of Pharmacy, Northeastern University, Boston. MA

Maintaining patient comfort and safety throughout the ICU stay is an important goal for mechanically ventilated adults. During the COVID-19 pandemic, most ICU patients received very deep sedation for prolonged periods. Deep sedation (including coma) related to opioid and/ or sedative use will increase delirium, mortality and post-ICU Post Intensive Care Syndrome (PICS) and is not required for most mechanically ventilated ICU patients. The 2018 SCCM Pain, Agitation/Sedation, Delirium, Immobility and Disrupted Sleep (PADIS) guidelines, recommend mechanically ventilated ICU adults be maintained at a light level of sedation (RASS score = -2 to 0). The ABCDEF bundle, when applied by the interprofessional ICU team on a daily basis, has been rigorously shown to reduce coma and delirium, duration of mechanical ventilation and mortality. Most mechanically ventilated adults in the ICU can be safely managed without the use of continuously infused sedatives and opioids. This approach helps to increase patient wakefulness that will facilitate spontaneous breathing trials, reduce delirium, lower ICU acquired weakness, and improve family engagement. A non-pharmacologic interventions can help reduce the need continuous opioids and sedatives. Both opioids and benzodiazepines are each associated with increased ICU delirium in a dose-related fashion. Non opioid analgesics, including scheduled acetaminophen, can help reduce opioid exposure. If a continuous sedative is required, recent data suggests that dexmedetomidine and propofol, when administered to critically ill adults with sepsis, will lead to identical ICU and post-ICU outcomes. Non-pharmacologic interventions (through use of the ABCDEF bundle) and sleep improvement bundles are the mainstay for delirium reduction in the ICU. The routine use medications to reduce delirium or improve sleep is not warranted. Use of the ABCDEF bundle in every ICU patient every day is an important goal of care improvement in the ICU.