

The implementation of an analgesia-based sedation protocol reduced deep sedation and proved to be safe and feasible in patients on mechanical ventilation

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Abstract

INTRODUCTION:

Deep sedation in critically ill patients is associated with a longer duration of mechanical ventilation and a prolonged length of stay in the intensive care unit. Several protocols have been used to improve these outcomes. We implement and evaluate an analgesia-based, goal-directed, nurse-driven sedation protocol used to treat critically ill patients who receive mechanical ventilation.

METHODS:

We performed a prospective, two-phase (before-after), non-randomized multicenter study that involved 13 intensive care units in Chile. After an observational phase (observational group, n=155), we designed, implemented and evaluated an analgesia-based, goal-directed, nurse-driven sedation protocol (intervention group, n=132) to treat patients who required mechanical ventilation for more than 48 hours. The primary outcome was to achieve ventilator-free days by day 28.

RESULTS:

The proportion of patients in deep sedation or in a coma decreased from 55.2% to 44.0% in the interventional group. Agitation did not change between the periods and remained approximately 7%. Ventilator-free days to day 28, length of stay in the intensive care unit and mortality were similar in both groups. At one year, post-traumatic stress disorder symptoms in survivors were similar in both groups.

CONCLUSIONS:

We designed and implemented an analgesia-based, goal-directed, nurse-driven sedation protocol in Chile. Although there was no improvement in major outcomes, we observed that the present protocol was safe and feasible and that it resulted in decreased periods of deep sedation without increasing agitation.