Assessment of pain in sedated and mechanically ventilated patients: an observational study

ID 4405908
Author(s) Jeitziner, Marie-Madlen; Schwendimann, René; Hamers, Jan P. H.; Rohrer, Ottilia; Hantikainen, Virpi; Jakob, Stephan M.
Author(s) at UniBasel Schwendimann, René ;
Year 2012
Title Assessment of pain in sedated and mechanically ventilated patients: an observational study
Journal Acta Anaesthesiologica Scandinavica
Volume 56
Number 5
Pages / **Article-Number** 645-54
Mesh terms Adult; Aged; Aged, 80 and over; Analgesics, therapeutic use; Analgesics, Opioid, therapeutic use; Analysis of Variance; Behavior, physiology; Conscious Sedation; Diazepam; Facial Expression; Female; Fentanyl, therapeutic use; Hemodynamics, physiology; Humans; Hypnotics and Sedatives; Male; Middle Aged; Pain, psychology; Pain Management; Pain Measurement, methods; Physical Stimulation; Propofol; Psychomotor Agitation, psychology; Pupil, drug effects; Respiration, Artificial; Suction, adverse effects; Young Adult
Critically ill patients often undergo unpleasant procedures. We quantified the effects of an unpleasant stimulus on physiological and behavioral parameters and evaluated how they are modified by sedation and analgesia.; A 6-month study in the 30-bed intensive care unit (ICU) of a university hospital examined 21 sedated patients from various diagnostic groups. Hemodynamic and respiratory parameters, pupil size, facial expression, muscle tone, body movement, and the Richmond Agitation-Sedation Scale (RASS) score were measured before and during intratracheal suctioning, first in sedated patients, after sedation was stopped, and after an opioid bolus.; Before intratracheal suctioning, patients had RASS scores of -1.8 ś 1.2 (mean ś standard deviation; sedation), -0.6 ś 1.7 (sedation stop), and -0.9 ś 1.4 (analgesia) (P = 0.014). Intratracheal suctioning significantly increased RASS during both sedation (to -0.6 ś 1.7) and sedation stop (to 1.0 ś 1.5) (both P <0.01), but not during analgesia. Systolic blood pressure increased during sedation (by 9 ś 10 mmHg), during sedation stop (by 15 ś 17 mmHg) and during analgesia (by 9 ś 4 mmHg; all P <0.01), but diastolic pressure only during sedation and sedation stop (both P <0.01). Facial expression, body movement, and muscle tone changed significantly during the episodes of intratracheal suctioning. Heart rate, tidal volume, and pupil size remained stable under all conditions.; Intratracheal suctioning evoked significant changes in some physiological and behavioral parameters. Some physiological changes were suppressed by analgesia, but at our ICU's standard doses, neither analgesia nor sedation attenuated changes in behavioral parameters at the intensity tested.
Publisher Wiley
ISSN/ISBN 0001-5172 ; 1399-6576
edoc-URL https://edoc.unibas.ch/62337/
Full Text on edoc No;
Digital Object Identifier DOI 10.1111/j.1399-6576.2012.02660.x
PubMed ID http://www.ncbi.nlm.nih.gov/pubmed/22404146
ISI-Number WOS:000302603900017

Document type (ISI) Journal Article