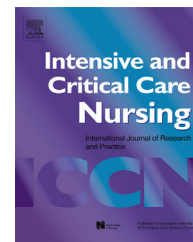




Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.elsevier.com/iccn



REVIEW

Pain assessment in the critically ill adult: Recent evidence and new trends



Céline Gélinas*

Ingram School of Nursing, McGill University, Montreal, QC H3A 2A7, Canada

Accepted 3 March 2016

KEYWORDS

Pain;
Pain assessment;
Behaviours;
Vital signs;
Pupillometry;
Critically ill;
Intensive care

Summary Pain assessment in the critically ill adult remains a daily clinical challenge. Position statements and practice guidelines exist to guide the ICU care team in the pain assessment process. The patient's self-report of pain remains the gold standard measure for pain and should be obtained as often as possible. When self-report is impossible to obtain, observational pain scales including the Behavioural Pain Scale (BPS) and the Critical-Care Pain Observation Tool (CPOT) have been recommended for clinical use in the critically ill adult. However, their adaptation and validation in brain-injured and burn ICU patients is required. Family caregivers may help in the identification of pain-related behaviours and should be more involved in the ICU pain assessment process. Fluctuations in vital signs should only be considered as cues for further assessment of pain with appropriate tools, and may better represent adverse events of severe pain. Other physiologic measures of pain should be explored in the ICU, and pupillometry appears as a promising technique to further study. Implementation of systematic pain assessment approaches using tools adapted to the patient's ability to communicate and condition has shown positive effects on ICU pain practices and patient outcomes, but randomised control trials are needed to confirm these conclusions.

© 2016 Elsevier Ltd. All rights reserved.

Implications for Clinical Practice

- Pain measures must be selected according to the patient's ability to communicate.
- Behavioural pain scales remain alternative measures in the ICU patient unable to self-report.
- Fluctuations in vital signs could be considered as adverse events of severe pain rather than indicators for pain assessment.
- Pain management initiatives must involve the ICU inter-professional team for better practices and patient outcomes.

* Tel.: +514 398 6157; fax: +514 398 8455.
E-mail address: celine.gelinas@mcgill.ca

Introduction

Pain is an enduring concern and a common symptom in critically ill adults. Indeed, pain has been shown to be experienced at rest by more than 30% of patients (Chanques et al., 2007), and this percentage exceeds 50% during common care procedures in the intensive care unit (ICU) (Gélinas, 2007a; Puntillo et al., 2001, 2014). Turning, endotracheal suctioning, tube or drain removal, wound care and arterial line insertion are procedures described as the most painful by ICU patients in large international studies (Puntillo et al., 2001, 2014). Nurses are facing numerous challenges with pain assessment in the ICU as many patients are unable to self-report because of various factors such as altered level of consciousness (LOC), sedation and mechanical ventilation. Under-assessment of pain represents one of the primary barriers to the adequate treatment of pain in critically ill patients (Pasero et al., 2009). The evidence demonstrating absent or incomplete assessment of pain is associated with negative patient outcomes such as longer duration of mechanical ventilation and ICU length of stay, and increased mortality (Kastrup et al., 2009; Payen et al., 2009), is a particular concern for nurses. This paper might help nurses in reversing this situation through the review of steps for proper pain assessment, recent evidence and new trends in measures and indicators for the assessment of pain in the critically ill adult.

Definition of pain and its gold standard measure

As per the universal definition by the International Association for the Study of Pain (IASP, 1979), pain is described as an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage. This definition has remained unchanged in the Kyoto protocol of IASP Basic Pain Terminology (Loeser and Treede, 2008). In other words, pain is recognised as a multidimensional subjective experience which implies that pain has to be reported by the person who is experiencing it. Such a definition of pain highlights that the patient's self-report is the gold standard measure of pain and should be obtained as often as possible. However, the IASP Task Force on Taxonomy (1994) has acknowledged that "The inability to self-report does not negate the possibility that an individual is experiencing pain and is in need of appropriate pain-relieving treatment". Therefore, pain assessment methods must be adapted to the patient's cognitive capacity and condition (Herr et al., 2011).

A stepwise approach for pain assessment and the Communication Model of Pain

Pain should be monitored routinely in all adult ICU patients (Barr et al., 2013). In their position statement, the American Society for Pain Management Nursing (ASPMN) has proposed a 4-step approach for the assessment of pain which can be summarised as follows: (1) always attempt to obtain the patient's self-report of pain; (2) use a validated behavioural pain scale or look for behavioural changes; (3) ask the

family or caregiver about the patient's pain behaviours; and (4) attempt an analgesic trial when pain is suspected, and reassess for pain (Herr et al., 2011).

The 0–10 Numeric Rating Scale (NRS) is commonly used in clinical practice, and an enlarged visual format of the NRS was found to be the most feasible and discriminative self-report scale in comparison to other scales (i.e., visual analogue scale, verbal descriptor scale) and formats (i.e., oral versus visual) for measuring pain intensity in critically ill adult patients (Chanques et al., 2010). The vertical thermometer format has also been found to be easier to use by critically ill adults and older adults (Gélinas, 2007b; Herr, 2011). When a self-report of pain intensity is not possible, a simple "yes or no" indicating the presence versus the absence of pain should be considered as a valid self-report (Herr et al., 2011). When self-report of pain is impossible to obtain, validated behavioural pain scales should be used as alternative measures for pain assessment. The family can also provide the care team with relevant information on the patient's pain behaviours to enhance the detection of pain. However, not much is known about the family members' perception of patients' pain-related behaviours in the ICU context. To our knowledge, only one qualitative study has been conducted with seven family members of ICU patients with a traumatic brain injury (TBI) (Vanderbyl and Gélinas, 2014). Interestingly, family members identified behaviours indicative of pain similar to those included in most scales recommended for clinical use such as facial expressions, body movements and muscle rigidity. More specifically, they described movements of the eyes and the mouth, tears or eye weeping, touching or trying to touch the pain site and visible muscle tension. They also provided meaningful explanations of their perception in relation to their knowledge of the patient. Another study examined the interrater reliability of proxy reporters of pain (Puntillo et al., 2012). Family proxy reporters were found to be closer to ICU patients' self-reports when compared to nurses and physicians. Specifically in regards to pain, moderate intraclass correlation coefficient (ICC) of 0.43 and 0.45 were found between patient-family member reports of pain intensity and pain distress, respectively. Lower ICCs of 0.19–0.40 were obtained between patient-nurse and patient-physician pain reports (Puntillo et al., 2012). Unfortunately, little evidence exists about proxy reporters' reliability in the pain assessment process and further research is necessary.

The Communication Model of Pain (Hadjistavropoulos and Craig, 2002; Hadjistavropoulos et al., 2011) also offers an interesting conceptual foundation for the assessment of pain (Fig. 1). This A B C model conceptualises pain as an internal state (A) that may be encoded in particular features of expressive behaviours (B), allowing observers or raters to draw inferences (C) about the nature of the patient's experience. More specifically, the processing of the pain stimulus is modulated by intrapersonal and/or contextual factors (A) influencing the way pain is experienced in each individual. Gender, age, ethnicity, health condition and the context in which this individual is evolving are examples of these factors. The use of mechanical ventilation and the administration of analgesic and sedative agents are more specific to the critical care context and add challenges to pain assessment. The pain stimulus is encoded in self-report (for patients able to communicate) and behaviours (B) which are decoded by

Download English Version:

<https://daneshyari.com/en/article/2652043>

Download Persian Version:

<https://daneshyari.com/article/2652043>

[Daneshyari.com](https://daneshyari.com)