



Mind over matter? Pain, withdrawal and sedation in paediatric critical care

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Is your paediatric intensive care (PICU) patient free of pain, comfortable and calm? The answer to this seemingly innocuous question may not be straightforward. Recognition and management of pain in intensive care units (ICUs) is challenging because of the many exacerbating and confounding factors that exist in this setting. Adding to this complexity may be misconceptions which relate to patient perception and capacity, the healthcare system and the clinicians themselves [1]. Clinician-associated barriers to adequate pain relief in ICU patients include knowledge deficits, low prioritization, failure to assess, acknowledge or evaluate treatment effects, plus attitudes and biases related to pain relief and communication difficulties.

Nearly 50 % of adult patients report experiencing moderate to severe pain during their ICU stay [1]. In adults, inadequate pain relief with persistent pain has profound short- and long-term consequences, including negative physiological and psychological impacts, which in turn affect socio-economic health. Alarming, children are even less likely to receive appropriate analgesia than adults [2]. This is further complicated by recent concerns regarding the adverse effects of sedation (particularly deep sedation [3]) and analgesia in both adult [4] and paediatric patients. Thus this is a very difficult area of medicine to get right—steering between the Scylla of deep sedation and opiate comas on the one hand, and the Charybdis of pain, agitation and the chronic sequelae of these on the other.

In a recent article in *Intensive Care Medicine*, a multidisciplinary group of experts from the European Society of Paediatric and Neonatal Intensive Care (ESPNIC) have

reviewed the literature relating to the assessment and management of pain, anxiety, withdrawal and delirium in critically ill children and neonates [5]. The authors have provided a comprehensive summary of the relevant literature and recommended scoring tools based on 32 manuscripts (after screening 1151) pertaining to 15 recommended assessment tools. The recommended scoring systems come with the advantages of some standardization and formalization of review processes—these may be particularly helpful for less experienced staff.

The need for standardization has been highlighted in studies in other areas, such as in accident and emergency departments where knowledge, biases (e.g. sex, racial [6], age, opiophobia, etc.) and emergency department culture itself were identified as variables that influenced provision of adequate analgesia [7].

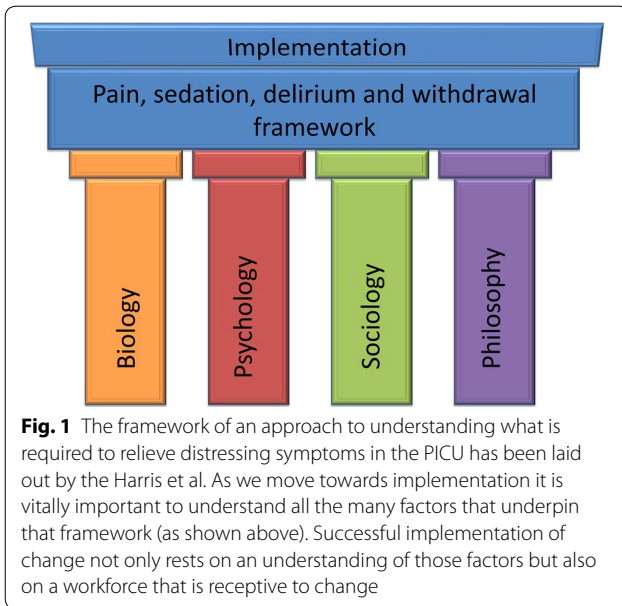
However, the use of assessment scores has not been entirely validated as a means of improving the quality of care of pain, anxiety and distress. Added to this we know that parental attitudes towards pain differ [8] and there is discordance between self reports and behavioural pain measures following surgery in 3- to 7-year-olds [9], raising questions about the applicability of behavioural scales as sole measures of pain intensity in younger children. A recent review on pain management in children in the emergency department proposed that a multitude of sources [10] were required to reliably recognise pain. In addition, children with chronic underlying disease may not manifest the same symptoms as previously healthy children, and children with cognitive impairment or cerebral palsy may require specific attention, especially those children who are admitted to ICUs more than once.

We need to acknowledge that our patients' experiences are more complex than can adequately be expressed using scoring systems. Donnelly and Wiechula outlined four themes using a phenomenological method to describe adult patients' experience of a tracheostomy

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tube change. Four key themes emerged: ‘physical sensation’, ‘psychological preparation’, ‘trust and confidence’ and the ‘essentialness of communication’ [11]. Similarly, a literature review of qualitative studies on delirium revealed that a patient’s lived experience could be grouped according to (1) incomprehension and feelings of discomfort; (2) the need to keep one’s distance and to protect oneself and (3) interventions that diminish suffering [12]. Fundamentally, the challenge to the clinician at the bedside is to recognise firstly that the patient is experiencing symptoms such as pain, discomfort, anxiety, distress or agitation and then focus on what may be responsible for that experience. A simple response of increased medication may profoundly fail to address the underlying problems—thus failing the patient. Scores may not always provide that focus. Skrobik and Chanques [13] remind us that judgment plays a role in the final attribution of scientific value and importance, even where there is rigorous evidence.

We still have a long way to go in terms of understanding the aetiology, recognition and optimal management of these issues. Although physiological, psychological and cultural frameworks are recognized within current health models (see Fig. 1), if we endeavour to alleviate our patients’ suffering we may have to step out of our comfort zone of reductionist Cartesian thought of humans being akin to machines and venture to apply a phenomenological lens that allows an understanding from the perspective of our patients’ experience [14].

How we use these scores requires some pragmatism in units with different staffing norms—most of the cited data comes from Europe and the USA—and even

different cultural approaches to patient distress [15]. The application of these systems may also be related to the profiles of disease seen in different units. For instance, in ventilated patients with acute respiratory distress syndrome (ARDS) the risk of delirium was increased compared to those without ARDS [16].

Widespread adoption of the position statement may prove a challenge. The statement summarizes and interprets the available evidence through the lenses of experts in paediatric critical care nursing and pharmacology. This essential first step then needs to be put into practice. There are several barriers to this actually happening, not least that healthcare staff are resistant to *rules* or *guidelines* which come from outside: “*Standards* are like *toothbrushes*—everyone has one but no one wants to use anyone else’s” [17].

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