



Editorial comment

Pain outside of the hospital: What is the situation in pre-hospital care, and how could it be improved?



Vesa Kontinen*

Division of Anaesthesiology, Jorvi Hospital, Department of Anaesthesiology, Intensive Care and Pain Medicine, University of Helsinki and Helsinki University Hospital, Helsinki, Finland

Acute pain research seems to frequently concentrate on post-operative pain studies. Much too often the focus in research is on the immediate postoperative period, when the patient stays conveniently in the post-anaesthesia care unit (PACU), and pain measurements are relatively easy to perform. But there is a lot of acute pain in other parts of the hospital, and outside of it, too. Indeed, pain is one of the most common reasons for patients to seek acute medical care [1]. In a prospective study of 2279 consecutive patients treated by the mobile intensive care units of the emergency services of a Paris suburb in France [2], 42% of patients had pain, which was intense to severe in 27% of the whole population. Factors associated with acute pain were trauma and age under 75 years. Pain management was inadequate, as only one in two patients experienced pain relief [2].

1. Pain treatment in pre-hospital care is not optimal

Adequate treatment of acute pain outside the hospital is as important as treatment of pain in the hospital. It has even been found in a retrospective review of 2741 patients in North-Carolina that good pre-hospital pain management was associated with increased perception of overall quality of care [3]. In a retrospective review of electronic patient care records of over 300,000 emergency cases in year 2008 in Victoria, Australia approximately one third of the patients experienced pain [4]. Unfortunately, majority of patients did not get clinically significant pain reduction, but however “did achieve some pain relief while in ambulance care” [4]. Luckily, those who had most severe pain obtained clinically significant pain reduction [4]. In a retrospective chart review of almost 3000 patients in Sør-Trøndelag, Norway [5], it was found that trauma patients experienced more pain both at the start and at the end of the pre-hospital treatment than patients with chest pain, but were treated with similar morphine doses as in patients with chest pain. Furthermore, inadequate analgesia was frequently observed for both patient groups [5].

2. Attitudes of pre-hospital personnel towards patients in pain

In an observational study by Castrén and co-workers, published in this issue of the *Scandinavian Journal of Pain* the attitudes of pre-hospital staff in Stockholm, Sweden and Helsinki, Finland were measured using a questionnaire containing 36 items related to pain assessment and management [6]. There are some differences in the pre-hospital care organisations of these two cities, and certain methodological problems in the way the study has been performed, such as a major difference in the response rate, probably related to the manner that the questionnaire was distributed, make interpretations of the results slightly difficult. But nevertheless, there were striking differences in some of the key findings of the study between these two cities that we believe to be fairly similar, at least in the global scale. In contrast to my presumption, pre-hospital personnel from Sweden showed significantly more hesitation to administer pain relief than the Finns. On a more positive tune, there was a significant correlation between the extent of education and the pre-hospital personnel's attitudes to pain management.

3. Barriers for adequate pain treatment

Pre-hospital care in acute situations is a difficult field for pain management for multiple reasons. The overall situation and the medical condition of the patient are often unclear. It can be considered, erroneously [7], that by masking the symptoms effective pain management might make it more difficult to reach a diagnosis. In most of the cases, there is no physician present, and depending on the organisational structure of the pre-hospital care system, even several phone calls may be needed before opioid analgesics can be administered. Opioids are sometimes administered in doses that are too small for providing adequate analgesia [1]. In the most severe or acutely life-threatening situations, the focus is on the survival of the patient, and pain management can be seen as a secondary issue. In a focus interview study of pre-hospital pain relief for children in Ireland, three domains of barriers to provide adequate analgesia were identified: practice guidelines, education and mundane “realities of pre-hospital practice” that include e.g. inter-professional relationships, problems with consent, and lack

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* Corresponding author.

E-mail address: vesa.kontinen@helsinki.fi

of experience with children [8]. In a similar study in adult population in the Netherlands, five key areas were identified: knowledge, attitude, professional communication, organisational aspects and patient input [9].

4. Guidelines and training of personnel need implementation and repetition

To remedy at least some of these problems, pain assessment and treatment protocols have been developed for pre-hospital care [1,10]. After developing a guideline that is based on the systematic use of medical evidence [11–13] and applicable to the local environment, it still needs to be implemented [11]. This phase requires at least as much effort and persistence as assembling the recommendation. Over time, this cultivation has to be repeated, as new personnel enter the service and even the seasoned professionals sometimes begin to neglect protocols for different reasons [1,14]. Previously, an educational intervention on pain management for paramedic caregivers has been shown to increase knowledge of pain management principles, improve utilisation of non-pharmacologic pain therapies, documentation of pain characteristics and intensity, and reassessment after intervention [15]. However, actual use of pain medication was not affected in this study [15].

Pain assessment and treatment protocols in pre-hospital care and in the emergency department should be aligned for safe and pain-free continuum of care along the path of that patient. In the best situation, pre-hospital pain management is an element of an integrated care path that span from the home of the patient over the whole hospital stay back to the home again [16]. Especially in vulnerable patient groups, also non-opioid methods for pain management are needed [17–21]. Within pre-hospital care, continuous quality evaluation and training is needed in pain assessment and treatment, in the same manner as in other domains of care. The first step for improvement is detailed understanding of the present situation.

Conflict of interest

No conflict of interest declared.

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