

Basic Steps to Assess and Manage Pain in Emergency Department

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Abstract

Background: Pain is the third most common healthcare problem. It has been shown to be more debilitating than both the top two problems of heart disease and cancer. With serious pain-related conditions (i.e., ureteral colic, toothache, back pain, abdominal pain, or headache) patients can visit several ED providers and travel to various hospitals, sometimes even using different aliases. Practice in emergency medicine provides a basis for treating acute pain in ED.

Aim: In this review, we will look into the prevalence and management of pain in emergency department.

Methodology: The review is comprehensive research of PUBMED since the year 1947 to 2019.

Conclusion: There are many procedure followed in terms of both safety and feasibility for the early treatment of painful symptomatology in the ED. The degree of pain control was considerable, and the degree of patient satisfaction was extremely high. Especially in terms of the operators' specific training, critical points could be overcome. The use of opioid analgesics is as successful as but more manageable than morphine in the sense of moderate-to-severe pain.

Keywords: Pain; Emergency Department; Management of Pain

Introduction

Pain is the most common reason due to which patients come to the emergency department (ED) [1]. The ability to understand pain is one of the toughest obstacles in medicine history. Pain plays a valuable role in medical practice, as the symptom par excellence and as a powerful and practical tool [2]. Pain an uncomfortable sensory and emotional experience associated with, or defined in terms of, actual or potential harm to tissues [3].

Pain is the third most common concern in healthcare. It has been shown to be more harmful than both the main two cardiac and cancer problems [4]. With serious pain-related conditions (i.e., ureteral colic, toothache, back pain, abdominal pain, or headache) patients may visit multiple ED providers and travel to different hospitals, sometimes even using different aliases [5]. Practice in emergency medicine provides a basis for treating acute pain in ED. It also provides various options for non-opioid pain medicinal products, regional anesthesia and non-pharmacological pain relief techniques, which may help to reduce the use of opioids in the ED [6].

The primary objective of emergency pain management is not zero pain but a reduction in pain to an acceptable level that will require a bridge to hospital care or a safe discharge with return to the daily activities of patients [7]. Correct and timely assessment and management of pain are essential aspects of emergency services [8]. The ultimate analgesic treatment offers a rapid onset, minimal side-effects, and prolonged relief customized to each pain. Analgesic management requires a specific routine of the patient-centered, pain-syndrome. A combined analgesic regimen-collectively known as 'controlled analgesia' can be used to treat pain while reducing the overall profile of side effects [9].

Many studies have shown that in spite of receiving minimal pain relief, patients rate their satisfaction with the care they received in the ED as very good. Many studies have shown, however, that what patients respond to in relation to customer surveys is the way the ED staff respond to their pain report, not the actual reduction in pain levels [10,11].

Epidemiology

ED visits increased over 46 percent from 1996 to 2015, from 90.3 million to 136 million [12,13]. Around 45% of ED visits include mild to severe pain [14]. At least 75% of patients with a significant pain-related referral to the ED [15]. Chang, *et al.* recorded that ~45.4 per cent of ED visits in the United States were associated with a primary symptom or pain diagnosis between 2000 and 2010 [16]. Previous studies showed that many patients with acute pain receive insufficient or no care with ED [17,18].

Management

Pain management in the emergency department is one of the quality-of-care indicators and can be used as a marker for assessing the care in the ED. Factors such as race, age, sex, ability to express pain, underlying illness, physician awareness, and fear of complications can prevent proper pain control in patients [19,20]. A range of non-pharmacological and pharmacological interventions have been shown to be effective for procedural pain management in infants and children and are most effective when used in combination [21]. The type of treatment regime should be chosen and delivered in a way that not only reduces many types of pain in the patient, but also has minimal side effects and does not conflict with other medications [22].

Pharmacological treatment

There is strong evidence to support non-opioid and migraine-specific modalities in the management of some typical ED pain presentations, such as mild headache. Amid well-accepted evidence, progress towards standardizing headache care for US and Canadian ED and giving primacy to proven effectiveness non-opioid treatments (i.e., dopamine agonists, serotonin agonists) has been surprisingly slow [23]. Non-opioid analgesics, such as NSAIDs and acetaminophen, are commonly used in acute pain treatment. However, moderate to severe, acute pain relief usually requires opioid agents [24,25].

The agonists of opioid receptors produce an analgesic and euphoric effect by modulating three major opioid receptors-mu, kappa and delta. Morphine, oxycodone/hydrocodone, morphine, hydromorphone, and tramadol are the most widely used drugs in an emergency environment. There is no indication that one opioid is more effective at equianalgesic doses than the others and it is advisable to titrate one drug to desired effect before multiple agents are used [26,27]. Opioid misuse and abuse resulted in the deaths in the United States of over 42,000 people in 2016, about two-thirds of all known drug overdose deaths. More than 40% of all opioid-related deaths resulted from

prescription opioid abuse, which is equal to about 46 deaths per day [28]. In severe acute pain, in incremental doses titrate parenteral opioids based on response targeting comfort and function, rather than complete pain relief. In general, patients presenting with ED for acute exacerbation of chronic pain should not be prescribed an opioid analgesic or opioid. Coordinate care with the preferred pain management provider of the patient, if possible. Individualized treatment plans and contracts may be used to direct the care effectively. If an opioid is deemed necessary, the emergency care provider will prescribe only the minimum amount required for a fair period of follow-up. Prescription monitoring programs empower emergency providers to recognize and advise patients with aberrant usage patterns, thereby helping to limit the potential for opioid abuse and recognizing those who may benefit from addiction treatment [29].

Non-pharmacological treatment

Given the adverse effects of many analgesics, it is especially important to understand and use non-pharmacological treatments, including patient-centric communication techniques, physical stimuli, ice or heat, topical coolant sprays, activity and exercise guidelines, and relaxation techniques. Good use of these approaches may enhance the treatment and reduce the risk of pharmacological therapy damage [30]. Apart from conventional steps such as splinting, cooling, and reassurance, clinical protocols for paramedics are rare. Links to complementary and alternative therapies such as acupuncture are lacking in paramedic literature and resources to support paramedic education [31]. Nonpharmacological pain relieving treatments rely on pain regulation inhibition [32].

Nonpharmacological approaches to pain relief are more commonly linked to non-acute settings and can be categorized as follows [33]:

1. Psychological interventions (including distraction, stress management, hypnosis, and other cognitive-behavioral interventions),
2. Acupuncture and acupressure,
3. Transcutaneous electrical nerve stimulation,
4. Physical therapies (including massage, heat/cold, physiotherapy, osteopathy, and chiropractic).

Problems of pain management in emergency department

The explanations for under treatment and insufficient pain therapy management in ED include under-evaluation and limited precision during evaluation; in addition, the severity of recorded pain is often considered exaggerated by the doctor at triage.

Despite multiple studies on implementing different pain assessment scales, the pain assessment in the ED is poor. The factors that directly affect ED doctors pain assessment include physician skepticism, patient self-reporting validity of pain, attempts to objectivize pain experience and immediate pain diagnosis instead of immediate treatment [34].

Cultural clashes between patients and providers, and between patients and their families, are common in the ED. Providers unable to interact with patients in their native languages, patient unfamiliarity with the US health care system, lack of insurance and resistance to unnecessarily long waiting times make patients so dissatisfied that even the theoretical possibility of effective, reliable and sufficient pain management seems impossible [35].

Opiophobia is a prejudice against the use of opioid analgesics and their prescription. Possible causes include, but are not limited to: regulatory and licensing issues; suspicion of drug-seeking behavior; fears regarding addiction or dependence; lack of follow-up or continuity of care; and fear of masking acute disease symptoms [27].

Gender-associated analgesia is another important issue which affects adequate pain management in the ED. Although gender physiology and pharmacogenomics are beyond the scope of this paper, a number of studies have assessed the effects of gender bias on proper analgesia in the ED [27].

A question of inadequate reporting of pain among pediatric patients is particularly obvious in infants and infants [36].

The most serious and urgent pain management issue in EDs is under-treatment of pain, known as “oligoanalgesia”. Recommendations for better pain management include enhanced pain awareness, evaluation and recording, tracking of outcome measures, formalized preparation and training, and implementation of pain management protocols [27]. In 1989, the word “oligoanalgesia” was coined by Wilson and Pendleton to describe the lack of adequate pain treatment in terms of dosages and the rapid administration of analgesics for ED patients. To date, there are no accepted standardized tools available to identify pain relief goals and targets [37]. Oligoanalgesia remains a concern in most EDs, despite extensive literature and guidance on pain management. Recommendations for better pain management include enhanced pain awareness, evaluation and recording, tracking of outcome measures, formalized preparation and training and implementation of pain management protocols [38].

Conclusion

There are many procedure followed in terms of both safety and feasibility for the early treatment of painful symptomatology in the ED. The degree of pain control was considerable and the degree of patient satisfaction was extremely high. Especially in terms of the operators ‘specific training, critical points could be overcome. The use of opioid analgesics is as successful as but more manageable than morphine in the sense of moderate-to-severe pain.

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