PEER REVIEWED

Assessing acute pain in the emergency department

SHONA McINTYRE MB ChB, FACEM

The principles of pain assessment in patients in the emergency department are applicable anywhere patients with acute pain are seen, including general practice. Pain should be assessed early and frequently, at rest and on movement, with objective measurements of severity, to guide analgesia.

Key points

- **All patients in the emergency department should be assessed for pain early, beginning at triage, and frequently to ensure early appropriate analgesia.**
- **Pain severity can be assessed with the numerical rating, visual analogue or faces scale or, for infants, the FLACC (face, legs, activity, cry and consolability) scale.**
- **The character, mechanism and history of the pain and presence of chronic pain should also be assessed, and the patient examined for physical signs of pain.**
- **Barriers to pain assessment can include patient communication difficulties, procedures and attitudes of healthcare providers.**

Patients presenting to the emergency department (ED) frequently have acute pain, either as their main problem or as a consequence of their presenting complaint. Early assessment allows early appropriate analgesia, which has been shown to improve patients' experience of their ED visit.[1,2] Although this article focuses on assessment of acute pain in patients in the ED, the principles described are applicable in any setting where patients with acute pain are seen, including general practice.

Who should I assess for pain, when and why?

Ideally, all patients should be assessed for pain early and repeatedly. For patients with severe pain, there should be further assessment of the cause of the pain in parallel with the provision of analgesia. As healthcare workers, our perception of pain in others is subjective and often different to the patient's.[3] Objective measurement and serial assessment as a measure of response to treatment are more important than initial assessment.[1] The assessment of pain can guide the mode and route of analgesia offered to the patient.

It is important that any pain score be tied to function. A patient may have minimal pain at rest but severe pain on movement or cough, so it is important that scores are assessed at rest and function. Anticipation of events within the ED is also important. For example, a patient with a suspected fracture may be comfortable at rest but will require analgesia before having a radiograph or application of plaster of paris, which necessitates moving the injured limb.

How should I assess the patient's pain?

Pain severity

Many scales and scoring systems are available to assess pain severity. In the acute setting, a tool should be quick and easy to use both for the healthcare provider and the patient. Several scoring systems are commonly used in the ED. Most often used is the numerical rating scale, with the visual analogue scale and the faces scale also being popular.

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Dr McIntyre is an Emergency Physician at Sunshine Hospital and Footscray Hospital, Melbourne, Vic.

Numerical rating scale

The numerical rating scale is probably the easiest scale to use for pain severity and has been validated as a reliable and rapid tool.[4,5] Patients are asked to describe their pain on a scale of 0 (no pain) to 10 (maximal pain, e.g. 'worst ever imaginable pain'). No written materials are required and the patient can be asked verbally or with a written scale (Figure 1). The score is easily documented and can be repeatedly assessed as part of the nursing assessment and observations. The score is also useful as a measure of improvement in pain after treatment, with a change of two points or more representing a significant reduction in pain.[1]

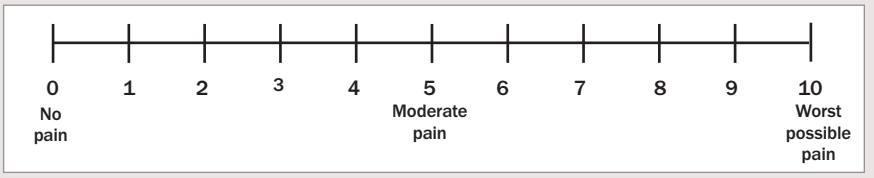

Figure 1. Numerical rating scale for assessing pain severity.

Figure 2. Visual analogue scale for assessing pain severity.

Visual analogue scale

The visual analogue scale uses a line, usually 100 mm in length with verbal descriptors of pain severity at either end, on which the patient is asked to mark their pain (Figure 2). The severity of pain is measured in millimetres, so a measuring device is required. The visual analogue scale has also been validated and is often used in research but requires written materials, in contrast to the numerical rating scale, and may be slightly more difficult for patients to use. Although the visual analogue scale and numerical rating scale are similar, they are not interchangeable during assessment, and so one should be chosen, rather than varying which is used.[6]

The faces scale

The advantage of the faces scale is that it can be used to assess pain in patients with limited vocabulary or numeracy, especially children.[7] There are several variations of this scale. A commonly used version is the Wong–Baker FACES® Pain Rating Scale, which has been validated in both children and adults (Figure 3). The severity of pain for each of the faces is described to the patient, who is asked to identify the description that most closely matches the severity of their pain. The score can then be recorded numerically in the patient's notes. Other variations of the faces scale exist, with different images and the presence or absence of a coexisting numerical scale. Although a faces scale is good for patients with limited literacy, some may confuse the faces' expressions with feelings of fear or distress.

Figure 3. Wong–Baker FACES® Pain Rating Scale, which is particularly useful for assessing patients with limited vocabulary or numeracy (available at http://wongbakerfaces.org).

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Other features of pain

Type, character or mechanism of pain

Although pain scales allow assessment of the severity of pain, a full pain assessment also includes the type and character of the pain or mechanism of the pain. This assessment guides both diagnosis and analgesia choices. For example, pleuritic pain, neuropathic pain and cardiac chest pain respond differently to analgesia. Somatic referred pain and viscerosomatic pain are also important to recognise. Specific causes of pain may benefit from additional specific treatments. For example, severe pain from a fracture will benefit from splinting the injured limb as well as provision of timely analgesia, whereas cardiac chest pain should be treated with nitrates before opiates.

History and signs of pain on examination

Taking a full history of the pain, including onset, character, radiation and relieving and exacerbating features, along with physical examination complete the initial pain assessment. Physical expression of pain depends on individual and cultural variables. Signs of severe pain can include pallor, bradypnoea or tachypnoea, bradycardia or tachycardia, diaphoresis, loud verbalisation and movement or quiet still distress, emphasising the need for an objective pain scale assessment. Psychological factors that can impact on pain should always be considered as these may be present and may modify the pain presentation. They include anxiety, fear, catastrophising and traumatic memories.

Analgesic choice is influenced by factors such as the patient's age, comorbidities, current medications and drug allergies, intolerances and interactions. A lower starting dose of opiates would be appropriate in

Table. The FLACC (face, legs, activity, cry and consolability) scale

Behaviour	0	1	2
Face	No particular expression or smile	Occasional grimace or frown, withdrawn, disinterested	Frequent-to-constant quivering chin, clenched jowl
Legs	Normal position or relaxed	Uneasy, restless, tense	Kicking or legs drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, shifting, back and forth, tense	Arched, rigid or jerking
Cry	No cry (awake or asleep)	Moans or whimpers; occasional complaint	Crying steadily, screams, sobs, frequent complaints
Consolability	Content, relaxed	Reassured by touching, hugging or being talked to, distractible	Difficult to console or comfort

a frail elderly patient, whereas a larger initial dose may be required in a young patient.

Presence of chronic pain

Many patients have chronic pain. In these patients, the acute pain may be incidental to the chronic pain, an acute flare of the chronic pain or acute on chronic pain. The presence of chronic pain as a comorbidity is an indicator for a longer hospital stay and more complex care. Patients who are already using opioids will have some degree of opioid tolerance and may be difficult to treat when in acute pain. These patients may benefit from higher initial opiate dosing and consideration of early multimodal analgesia.

Barriers to assessment

Communication difficulties

Some patient groups often receive inadequate analgesia in the ED, and many of these have communication difficulties. Young children and infants require alternative methods of assessment, such as the FLACC (face, legs, activity, cry and consolability) scale (Table). The FLACC scale was introduced initially for young children but has been validated as a rapid, easy-to-use tool in both children and critically ill adults.[8,9]

Elderly patients, particularly those with dementia, can be difficult to assess. There are specific behavioural assessment scales that can be used for these patients if they are unable to use a self-reporting scale. They include the Abbey Pain Scale and the Algoplus Behavioural Scale.[10,11]

Patients from minority cultures or ethnic origins have been shown to receive less analgesia.[12,13] There are many different cultural beliefs regarding pain, and some patients may express pain in ways that appear excessive whereas others may display quiet sufferance and reluctance to admit its existence. Both of these forms of expression of pain may result in underdosing of analgesia.

Language is often another important barrier, and pain severity scales may need to be simplified, for example with the terms 'a little', 'medium' and ' a lot' of pain rather than formal scales. Copies of pain scales in multiple languages can be helpful. All the scales described above can be used with minimal language, although they still need to be adequately explained to the patient.

Procedures and attitudes of healthcare providers

At times the barriers to pain assessment can be from us as healthcare providers. The culture within the ED may need to be addressed, and some dogmas discarded. Assessment of pain should commence with the first encounter at triage. Many EDs have established nurse-initiated analgesia, which allows earlier delivery of analgesia to the patient. The old dogma that opiates disguise a 'surgical abdomen' has been proven incorrect.[14] Patients with a history of drug and alcohol misuse may be seen as 'drug seeking' and are likely to have opioid tolerance.

Changes in ED policy and standardisation of pain assessment scales, in addition to staff education, can improve analgesia delivery to patients. Many EDs include pain assessment scores as a vital sign, highlighting their importance. Time to analgesia or time to reduction in pain score are frequently used as key performance indicators in the ED.

Assessment of pain needs to go hand-in-hand with the management of pain. Therefore, pain assessment needs to be frequent, and if reduction in pain is not adequate then further analgesia and alternative agents or modalities need to be considered.

Summary

Early and repeated assessment of acute pain in emergency patients will result in early, appropriate analgesia. Several scales have been validated in the emergency environment, with the numerical rating scale a frequent preferred option because of its ease of use and independence of printed materials. Awareness is needed of special patient groups who may be more difficult to assess (children, elderly patients and non-English speaking patients), and the assessment adjusted appropriately. Your patient is more likely to have appropriate analgesia and thank you if their pain is assessed and treated well. **PMT**

References

A list of references is included in the website version (www.medicinetoday.com.au) of this article.

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