Acute pain assessment

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The International Association for the Study of Pain defines pain as “an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage” (IASP, 1997). This definition of pain emphasises that it is neither a sensory nor an emotional experience, but a combination of both. It is a subjective experience influenced by physical, psychological and environmental factors that is assessed from a biopsychosocial perspective. The gold standard in assessing pain however is always what the patient says it is.

Why is pain assessment important?
Effective assessment of pain is the cornerstone of pain management. It is important to diagnose the cause, identify the site of pain and to select appropriate analgesia. Reassessment of the patient is vital to determine the effectiveness of the treatment. Evidence exists that effective acute pain management can minimise the risk of chronic pain (ANZCA, 2005).

When do we assess pain?
Pain assessment should always begin with a thorough general medical history and physical examination followed by a detailed pain history. The concept of pain as the fifth vital sign has resulted in recording pain along with the patient’s temperature, BP, pulse, and respiratory rate. Assessment and reassessment of pain following administration of analgesia is an on-going process until the patient is comfortable.
How do we assess pain?
In establishing the patient’s pain history the mnemonic OLD CARTS is a useful tool to guide acute pain assessment.

Onset: When did the pain begin – is it a primary complaint or is it associated with an underlying complaint? Was the onset acute, the result of an accident or insidious? This often has implications for diagnosis and treatment.

Location: Where does it hurt – does it radiate? A body map may help identify the exact location, or locations if there is more than one site.

Duration: How long has the patient had this pain? If it has been there longer than three months, it is technically classified as chronic pain. If, however, it is described as a transitory increase in pain on a background of controlled chronic pain then it is likely to be descriptive of breakthrough pain.

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Characteristics: The description of pain will often aid diagnosis. Words such as a ‘crushing’ pain across the chest may be indicative of a myocardial infarction. Similarly, words such as ‘sharp, burning or electrical’ sensations are associated with neuropathic type pain. This is important when it comes to choosing the correct analgesia.

Aggravating factors such as body positions, certain activities or events can worsen the pain. Factors such as bending forward or backwards can help determine the differential diagnosis and treatment.

Relieving factors such as non-pharmaceutical methods such as hot or cold packs, rest, or even avoidance of the above factors help minimise the patient’s pain. These are not only useful diagnostic pointers, but also a valuable guide to possible therapies for pain management. Previous therapies and their success or failure should be noted and used as a guide in formulating a treatment plan.

Temporal factors: Is the pain worse in the mornings or at night? Patients with consistent patterns of pain in the mornings for example could have their medication regimen adjusted to enable them to function better. Is the pain constant or intermittent? Does it come on suddenly or gradually? How long does it last? How frequently does it occur?

Severity of pain: The intensity of the pain can be measured using a pain rating scale where 0 = no pain and 10 = worst pain. This is a tool that can be used to help determine how intense the pain is for the patient. It helps put some objectivity on a subjective theme. Pain should always be assessed at rest and on movement, while breathing, coughing, or during a movement relevant to the area of pain. If there is more than one site, each one is assessed separately.

Neuropathic pain
Neuropathic pain is a pain caused by a lesion or a disease affecting the peripheral and/or the central nervous systems. It is characterised by negative signs such as numbness and positive signs such as paresthesias (pins and needles sensations) and dysesthesias (abnormal sensations such as a burning or shooting type pain). Other sensations such as ‘hyperalgesia’ (an excessive response to pain), ‘allodynia’ (pain due to a non-noxious stimulus) may also occur. Unlike nociceptive pain, which results from physiological activation of nociceptors (pain nerves) by potential or actual tissue injury, chronic neuropathic pain has no beneficial purpose. Neuropathic pain is caused by damage or inflammation to the nerve pathways at any point from the periphery to the cerebral cortex in the brain. Hence, neuropathic pain is termed either central (including the brain and spinal cord) or peripheral (from the spinal nerves to the finger/toe tips).

While there is no single diagnostic test for neuropathic pain, ancillary studies can confirm underlying diseases such as diabetes mellitus in patients with painful neuropathies. Nerve conduction studies and electromyography can test the larger nerves, but not the smaller pain and temperature nerves. Magnetic resonance imaging (MRI) can assess for any anatomical abnormalities of the pain centres in the brain such as the brainstem, thalamus, sensory cortex and the anterior cingulated and a functional MRI can assess the functioning of these nerves but its role in clinical practice is limited.

Diagnosis of neuropathic pain is based on careful clinical examination and its location is typically neuroanatomically logical. When performing a clinical examination in cases with unilateral pain (pain affecting one limb, for example), the results are compared to the contralateral area (opposite side). Alternatively if the pain is located bilaterally, in both feet for instance, the sensory examination is tested proximally/distally instead. In addition to the sensory examination, a motor assessment (muscle strength, tone and coordination), reflexes and cranial nerves are performed. Neuropathic pain is treated mainly with antidepressants and antiepileptic medications as simple analgesics have been shown to be ineffective for neuropathic pain.

The use of acute pain scales
As self-report is the gold standard when assessing a patient’s pain, these scales can be used to elicit a score that helps express their pain to the nurse/doctor. The standard 0–10 scale is a simple one that is valid and reliable. Reliability means that the scale consistently measures pain intensity from one time to the next and validity refers to accuracy of the scale in measuring pain each time.
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How are patients with chronic pain assessed?
Chronic pain can have a very negative impact on a person's physical, social, family, emotional and cognitive functioning. It can interfere with their ability to work and provide financial security for self and family. The chronic pain experience is shaped by a myriad of factors including biomedical, psychosocial (patients’ beliefs, mood and expectations) and behavioural (positive and negative responses to pain). Pain is very subjective; there is no direct linear relationship between the amount of detectable physical pathology and the reported pain intensity. From the initial visit, there should be a comprehensive assessment performed including the patient's history, a medical evaluation and a brief screening interview where the patient’s behaviour is observed. If any issues are identified in the assessment process, these will guide decisions towards developing a treatment plan. Standardised assessment tools are available to uncover the potential social, emotional, cognitive, environmental and behavioural factors that shape the chronic pain experience. Successful treatment of patients with chronic pain can only be accomplished if assessment efforts focus on the entire person, not just the organic pathology.

How are patients with cognitive impairment assessed for pain?
Assessing patients with cognitive impairment or dementia can be challenging as many of the behaviours overlap with anxiety, depression or delirium. To overcome this problem, observational tools have been developed to assess pain among these patients. These tools focus on non-verbal behaviours such as facial expressions, vocalising (moaning), breathing patterns, body movement and consolability. The more commonly used tools are PAIN in advanced dementia (PAINAD), the Abbey Pain Scale and the observational pain behaviours. The golden rule is firstly, always attempt a self-report. Failing this, there are several steps that can help provide a clear description of these patients’ pain. These include:

- An observational tool to assess pain
- Identify any underlying conditions that cause pain such as osteoarthritis
- Painful procedures such as turning in bed
- Ask a family member if they believe the patient has pain
- Administer analgesia and observe the patient’s behaviour and assess if they appear calmer

Presence of anxiety with pain
Pain accompanied by anxiety, fear and sleeplessness can all form a vicious cycle and lead to a sense of helplessness and a loss of control. It is estimated that about 50 per cent of patients with persistent pain also have depression or an anxiety related disorder (Weisberg, Boatwright 2007). Depression can often adversely affect coping as the patient lacks the motivation needed to engage in rehabilitation.

While anxiety and depression are normal responses to pain, the relationship between pain, anxiety and depression can often be complicated. Sometimes it is unclear whether the anxiety is the cause or the effect. Does anxiety cause or worsen the pain or is it the result of it? The priority should always be to treat the pain first. If anxiety or depression continues despite pain relief, then other interventions such as reassurance and/or pharmacologic treatments such as short term benzodiazepines may be indicated.

Drug seeking behaviour: physical dependence /tolerance/ addiction
Opioid tolerance, physical dependence and addiction are three different conditions. They can occur together, separately or with just two of them together.

Physical dependence takes place when an opioid is administered over a period of time as the patient’s body adapts to the opioid. If it were to stop suddenly, the patient would experience withdrawal symptoms hence the need for a gradual, systemic reduction as the pain improves. This tapering of the opioid does not equate with detoxification that occurs following withdrawal of opioids in the case of addiction.

Tolerance is similar to physical dependence except it refers to a reduction in response to the medication, in this case opioids. Over time, there is a need to increase the dose to have the same analgesic effect. Neither dependence nor tolerance implies addiction.

Addiction is defined as a chronic neurologic and biologic disease. It is characterised by behaviours that include compulsive use and continued use despite harm and craving. Patients with undertreated pain may exhibit behaviours similar to those of

1. The Numerical Rating Scale where the patient chooses a number from 0 to 10 that best describes their pain. 0 = No Pain and 10 = Worst Possible Pain
2. The Visual Analogue Scale (VAS)
3. Facial Pain Scale (IASP)
4. Body Diagrams

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an addict such as repeated requests for opioids, an escalating demand for more medications or repeated requests for opioids before the prescribed interval between doses has elapsed, but in these cases once pain is relieved, the drug seeking behaviour is stopped.

Assessing patients with cognitive impairment or dementia can be challenging as many of the behaviours overlap with anxiety, depression or delirium.

References


