Different Types of Pain

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Introduction

It is important to be aware of pain classifications and definitions as this will guide clinical diagnosis and management. For example, the treatment of acute pain may warrant a brief course of opioids, in comparison this substance should be used very judiciously in chronic pain. Accurate diagnosis of the source of pain can be a critical factor in overall management. It is important to differentiate between nonmalignant and malignant pain, and the presence of pain may lead to a clarification of the generator that can be life saving. The initial presentation of pain can be cancer related and the physician must be vigilant in making the diagnosis. It is crucial to understand that pain has an origin and can be a symptom of a serious ongoing condition.

Classification of Pain

Pain can be classified in different ways, most common classifications are [1]:

1. Based on the pathophysiological mechanism (nociceptive or neuropathic pain).
2. Based on the duration (acute, chronic or sub-classifications).
3. Based on etiology (malignant or non-malignant).
4. Based on the anatomic location of pain.

1. **Based on pathophysiological mechanism:**
   (a) Nociceptive pain:
   This kind of pain develops due to tissue injury that stimulates pain receptors called nociceptors. It is further classified into somatic or visceral pain:
   - Somatic pain: caused by stimulation of nociceptors in superficial tissues (e.g. skin and mucosa), usually well-localized, sharp or burning in nature and not referred. Also deep tissues (e.g. bone, joints and muscles), usually well localized and dull or aching in nature and can be referred to skin.
   - Visceral pain: caused by stimulation of nociceptors in the viscera (e.g. internal abdominal organs). Usually poorly localized, diffuse and dull, aching or cramping in nature. This pain

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A. Abd-Elsayed (ed.), *Pain*, https://doi.org/10.1007/978-3-319-99124-5_3

can be referred to skin parts supplied by same sensory roots as the diseased organ.

(b) Neuropathic pain: caused by injury to nerve cells in the peripheral or central nervous system [2]. Some common sensory features associated with neuropathic pain include allodynia, hyperalgesia, hypoalgesia, paresthesia and dysesthesia. Pain is usually poorly localized and diffuse. It is describes as needles, tingling, burning, sharp or shooting in nature.

(c) Mixed pain: when patient experiences both nociceptive and neuropathic pain (e.g. burns that damages skin and nerve endings).

2. **Based on duration:**
   (a) Acute pain: Pain of sudden onset, occurs immediately after an injury and is usually severe in nature.
   (b) Chronic pain: this is a pain that continues beyond the normal healing process. It can start as an acute pain but lasts for more than 3 months [1].
   (c) Episodic or recurrent pain: Occurs intermittently over a long period of time and the patient can be pain free in-between episodes (e.g. sickle cell disease).
   (d) Breakthrough pain: it is an exacerbation of pain (e.g. acute on top of chronic pain or variations in the level of severity of chronic pain).
   (e) End of dose pain: pain that occurs when medications levels fall in blood to subtherapeutic levels.
3. **Based on etiology:**
   (a) Malignant pain: pain associated with cancer. Pain can be caused by the malignancy itself or related treatment (chemotherapy, radiotherapy and surgery). For example, chemotherapy induced peripheral neuropathy. Patients may also develop post-surgical pain or post radiation that can continue to be chronic.
   (b) Non-malignant pain: simply refers to pain not associated with malignancy.
4. **The anatomic location:**
   Pain classified by location (e.g. head, neck or back pain) [3].

High Yield Points

- Pain may be classified based on the pathophysiological mechanism into nociceptive and neuropathic pain.
- Pain may be classified as acute or chronic, malignant or non-malignant or according to the anatomical site.

Questions

1. Which of the following is an example of somatic pain:
   A. Pain over the distribution of the ulnar nerve
   B. Knee joint pain
   C. Complex regional pain syndrome
   D. Pain related to pancreatitis
   Answer: B
2. Visceral pain is usually:
   A. Poorly localized
   B. Well localized
   C. Sharp
   D. Tingling
   Answer: A
3. A 27 years old man started feeling pain on touching his left hand 3 weeks after surgery on the same hand, the patient is most likely to have:
   A. Somatic pain
   B. Neuropathic pain
   C. Chronic pain
   D. Conversion disorder
   Answer: B

References

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