Understanding Different Types of Pain

Introduction

Pain is an uncomfortable signal that something hurts. Pain intensity may vary between mild to unbearable and can significantly impact an individual's psychosocial, emotional, and physical functioning (National Institute of Health, 2023).

Types of Pain (Hinkle, 2021; Bickley et al., 2021; Dydyk and Givler, 2023; Freynhagen et al., 2019)

Pain can be categorized by duration, pathology, or cause.

Duration

- **Acute pain**: the typical physiologic response to an adverse chemical, thermal, or mechanical stimulus that usually lasts less than 6 months. It is caused by an injury, disease, or inflammation and commonly involves tissue damage (e.g., surgery, trauma, burn, or venipuncture). Acute pain symptoms may last hours, days, or weeks but typically resolve when the tissue heals. However, acute pain can become chronic.
- **Chronic pain**: persists longer than 3 months after the injury heals or condition resolves; can be intermittent or continuous; and may be aggravated by environmental and psychological factors. Chronic pain is subcategorized by the International Association for the Study of Pain (IASP) into the following:
    - Chronic Primary pain
    - Chronic cancer-associated pain
    - Chronic post-traumatic and postsurgical pain
    - Chronic neuropathic pain (see below)
    - Chronic viscera pain
    - Chronic musculoskeletal pain

Pathology

- **Nociceptive pain** is the typical physiologic perception of tissue injury.
    - **Somatic: can be acute or chronic and is** linked to injury of the skin, bone, joint, muscle, or connective tissue. This pain is often described by patients as dull, pressing, throbbing, or spasmodic and is well localized. Examples include surgical, trauma; wound and burn pain; cancer pain (tumor growth); labor pain; osteoarthritis and rheumatoid arthritis pain; osteoporosis pain; and ankylosing spondylitis.
    - **Visceral:** linked to visceral organs such as the gastrointestinal tract and pancreas. It may arise from a tumor in the organ that causes aching and well-localized pain or by obstruction in a hollow organ which causes intermittent cramping and poorly localized pain. Examples include organ-involved cancer pain; ulcerative colitis; irritable bowel syndrome; Crohn's disease; and pancreatitis.

  - **Radicular:** occurs when the nerve roots are irritated and causes numbness, weakness, and tingling.

- **Neuropathic (pathophysiologic) pain** is often a consequence of damage to nerve fibers that causes an abnormal processing of sensory input by the somatosensory nervous system that leads to spontaneous firing. This pain may persist long after the initial injury has healed. Patients may describe this pain as an "electric shock," stabbing, burning, or "pins and needles."
  - **Central pain syndrome** occurs when the nervous system is persistently in a high activity state, which decreases sensitivity to fire action potentials and patient becomes hyersensitive to pain. When acute pain becomes chronic, it can become a centralized pain syndeome. Examples: fibromyalgia pain, lupus pain, rheumatoid arthritis pain, and pain after stroke or spinal cord injury.
  - **Peripherally generated pain**
    - **Painful polyneuropathies:** pain experienced along the peripheral nerves. Examples include diabetic neuropathy; postherpetic neuralgia; alcohol-nutritional neuropathy; some types of neck, shoulder, and back pain; and pain associated with Guillain-Barré syndrome.
    - **Painful mononeuropathies:** associated with peripheral nerve injury, the pain is felt along the damaged nerve. Examples include nerve root compression, nerve entrapment; trigeminal neuralgia; and some forms of neck, shoulder, and back pain.

- **Referred Pain:** the pain perception is at a location other than the site of the painful stimulus. There is no consensus on the true mechanism of referred pain. An example includes pain in the back or neck caused by a myocardial infarcation.

- **Mixed Pain:** includes components of both nociceptive and neuropathic pain and/or pain when there are no signs or symptoms of actual or threatened tissue damage or evidence of a lesion or disease.
  - Examples include fibromyalgia; some types of neck, shoulder, and back pain; some forms of headache; pain associated with HIV; myofascial pain; and pain associated with Lyme disease.

For information on how to assess pain, see NursingCenter's Pain Assessment Pocket Card.

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