

Pain Descriptors

NOCICEPTIVE PAIN

Nociceptive pain starts with the activation and ongoing response of **somatic** or **visceral** pain-sensitive nerve fibres.

Somatic Pain results from activation of pain sensitive structures or nociceptors in the cutaneous and deep musculoskeletal tissues. Somatic pain is typically well localized and may be felt in superficial cutaneous or deeper musculoskeletal structures.

Examples of somatic pain include:

- post surgical incision pain
- skin ulceration
- bone fractures
- bone metastases
- osteo-arthritis
- pain that accompanies myofascial or musculoskeletal inflammation or spasm

Somatic pain is typically felt as aching, gnawing or pressure, and is usually well localized. It may worsen with movement or weight bearing if in the pelvis, hips, femur, joints or spine are involved.

Medical management of somatic pain includes use of opioids, NSAIDs such as ibuprofen or naproxen, corticosteroids such as dexamethasone, calcitonin and bisphosphonates (Pamidronate, Clodronate) for pain due to bone metastasis or pathological fractures. Radiation and chemotherapy may also be used as palliative treatments to manage pain.

Visceral Pain results from infiltration, compression, distension or stretching of thoracic or abdominal viscera. It is poorly localized and is often described as deep, squeezing or pressure and may be associated with nausea, vomiting, and diaphoresis, especially when acute. Visceral pain can be referred to a cutaneous site remote from the site of the lesion (i.e. shoulder pain associated with diaphragmatic irritation) (Coyle & Layman-Goldstein in Matzo & Witt-Sherman, 2001).

Examples of visceral pain include:

- solid viscera e.g. liver, pancreatic pain can be intensely sharp, penetrating
- hollow viscera e.g. bowel, bladder pain is described as a diffuse, colicky pain often accompanied by a feeling of pressure or fullness

Medical management of visceral pain includes use of opioids, NSAIDs and corticosteroids.

NEUROPATHIC PAIN

Neuropathic pain results from injury to the peripheral or central nervous system. In cancer, it commonly occurs as a consequence of tumour compressing or infiltrating peripheral nerves, nerve roots or the spinal cord. It can be a result of surgical trauma, chemotherapy or radiation induced injury to peripheral nerves or the spinal cord.

Examples of neuropathic pain include (Coyle & Layman-Goldstein in Matzo & Witt-Sherman, 2001):

- brachial or lumbosacral plexopathies
- epidural or spinal cord compression
- cauda-equina compression
- post herpetic neuralgia and other neuropathies

Neuropathic pain is sustained by processes in the peripheral nervous system, the central nervous system or both. Pain may be related to:

- the efferent function of the sympathetic nervous system (a complex, rare, and often untreatable syndrome)
- identifiable peripheral pathology (e.g., nerve compression, neuroma formation)
- CNS pathology (e.g., stroke, spinal cord compression or injury, post amputation phantom limb pain, diabetic neuropathy, and post herpetic neuralgia) resulting in deafferentation pain.

Neuropathic pain is described as:

- constant dull ache, sometimes with pressure or vice-like quality accompanied by episodic paroxysms of burning and or sharp, lancinating, shock-like sensations deep aching
- dysaesthesias (burning or spontaneous pain)
- lancinating
- sharp, shooting like an electric shock
- hyperaesthesia, allodynia (unusual sensitivity/pain caused by light touch)
- pins and needles or numbness
- numbness or tingling
- strange descriptors (feet feel wet)

Neuropathic pain is often severe, very distressing, and is sometimes difficult to manage. In addition to opioids and NSAIDs, medical management of neuropathic pain includes the use of tricyclic antidepressants (e.g. amitriptyline, desipramine), anticonvulsants (e.g., carbamazepine, valproic acid, gabapentin), corticosteroids, and local anaesthetics. Palliative radiation and chemotherapy may also prove beneficial.

MIXED PAIN

People may have more than one type of pain. The term mixed pain suggests that some pain syndromes have a multi-factorial pathophysiology. For example, most cancer pain syndromes have a prominent nociceptive component but may also include neuropathic pain due to nerve damage caused by the tumour or the treatment as well as an element of suffering related to loss of function and fear of disease progression.