ACUTE POST THORACOTOMY
NEUROPATHIC PAIN, MECHANISMS,
MANAGEMENT AND OUTCOME

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Definition of Neuropathic Pain;
Pain arising as a direct consequence of a lesion or disease affecting the somato-sensory system Neuropathic pain tends to be burning, lancinating, paroxysmal, sharp, shooting, Tingling and numbness are common, does not respond well to opioids,

Characters of Neuropathic Pain
Hyperesthesia;
Increased appreciation of any stimulus

Hyperalgesia;
More intense appreciation of painful stimulus

Allodynia;
Sensation of pain by non-painful stimuli

Neuropathic pain in thoracotomy incision occurs by;
Direct nerve surgical trauma by cutting.
Partial trauma by retractors

Which nerves:
Intercostals, phrenic, Parasympathetic (vagus), sympathetic nerves, and the brachial plexus

Pathophysiology of Neuropathic Pain
Chemical excitation of non-nociceptors-
-Recruitment of nerves outside of site of injury
-Excitotoxicity
-Sodium channels
-Ectopic discharge
-Deafferentation
-Central sensitization
-maintained by peripheral input
-Sympathetic involvement
Antidromic neurogenic inflammation

Management of Post-thoracotomy Pain
Regional Blocks
Pharmacological Management

New Trends in The pharmacological Management of Post-thoracotomy Pain
Ketamine
COX-2 inhibitors
Gabapentine Pregabalin

Outcome of Neuropathic pain;
50-70% of patients will end up with a variable degree of chronic post thoractomy pain.

References;
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3-Matthews PJ: Govenden V; Comparison of continuous paravertebral and extradural infusions of bupivacaine for pain relief after thoracotomy. British Journal of Anaesthesia 1989; 62: 204-205