Key Messages

• Pregabalin in combination with opioids could decrease pain scores and reduce opioid requirements; it may therefore be considered as part of a multimodal approach to pain management in a post-operative setting.
• Evidence for pregabalin use for acute pain is scarce and is limited to pain that is secondary to acute burns.
• There is no evidence for the use of pregabalin in combination with opioids when compared to opioid use alone in acute non-surgical pain.
• Pregabalin use does not appear to result in a significant increase in adverse events.

Context

Acute pain usually lasts less than a month and resolves once the underlying cause has been addressed. It is important to treat acute pain effectively, as improper management could lead to the development of chronic pain. The American Academy of Family Physicians currently recommends a stepwise approach to the management of acute pain based on the cause and severity of the pain. Acetaminophen and nonsteroidal anti-inflammatory drugs (NSAIDs) are considered first-line treatment for mild to moderate pain, and opioid drugs are the mainstay of treatment for severe pain. There are some concerns with adverse events associated with these drugs. Apart from kidney toxicities that both NSAIDs and acetaminophen can cause, acetaminophen can cause liver damage, and NSAIDs are associated with gastric and intestinal ulcers and an increased bleeding risk. There is also significant concern surrounding the abuse and diversion of opioid drugs. Opioids are associated with side effects like nausea, vomiting, constipation, and respiratory depression in cases of overdose. One subset of acute pain is post-operative pain, and treatment of it consists of a regularly scheduled acetaminophen or NSAID, pregabalin or gabapentin, and a local anesthetic.

Technology

Pregabalin is an anti-seizure medication that is structurally similar to gabapentin, and its effectiveness is well established in several neuropathic pain syndromes such as fibromyalgia and diabetic neuropathy. A recent systematic review concluded that pregabalin, in comparison with placebo, decreased post-operative pain. In the central nervous system and peripheral nervous system, it works by reducing the release of excitatory transmitters; however, its full mechanism of action has yet to be clarified. Pregabalin dosing begins at 75 mg daily and is increased gradually based on a patient's pain response to a maximum dose of 600 mg daily. As it is mainly excreted by the kidneys, the dosage of pregabalin is adjusted based on patient's renal function. Common adverse effects of pregabalin drug therapy are dose related and include dizziness and sleepiness.

Issue

Because current pharmaceutical treatments for acute pain, specifically opioids, are associated with potential harms, new therapeutic options are needed. A review of the clinical effectiveness of pregabalin alone for acute pain and pregabalin in combination with opioids for acute or post-operative pain will help to guide decisions regarding pain management.

Methods

A limited literature search was conducted of key resources, and titles and abstracts of the retrieved publications were reviewed. Full-text publications were evaluated for final article selection according to predetermined selection criteria (population, intervention, comparator, outcomes, and study designs).

Results

The literature search identified 404 citations from electronic literature searches and two potentially relevant reports from grey literature. Of these, 47 potentially relevant reports were selected for full-text review and three reports met the criteria for inclusion in this review.
Read more about CADTH and its review of pregabalin for acute pain at:
cadth.ca/pregabalin-acute-pain-review-clinical-effectiveness-0

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