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Position statement on the use of slow-release opioid preparations in the treatment of acute pain

Mounting evidence highlights the inappropriate use of slow-release opioids for the treatment of acute pain. The recommendations in this statement are in line with the approved indications for slow-release opioids listed by regulatory authorities including the Therapeutic Goods Administration in Australia, Medsafe in New Zealand, and the US Food and Drug Administration.

Recommendation

Slow-release opioids are not recommended for use in the management of patients with acute pain.

The inappropriate use of slow-release opioids for the treatment of acute pain has been associated with a significant risk of respiratory depression, resulting in severe adverse events and deaths.

This recommendation is in line with other international guidelines, and statements by regulatory authorities and government agencies[1, 2, 3, 4, 5]. The recommendations are also in line with the approved indications for slow-release opioids listed by regulatory authorities including the TGA in Australia, Medsafe in New Zealand, and the Food and Drug Administration (FDA) in the US.

Background

The Therapeutics Goods Administration (TGA) in Australia and the New Zealand Medicines and Medical Devices Safety Authority (Medsafe) in New Zealand are responsible for the regulation of medicines.

TGA and Medsafe approved indications for the use of different slow-release opioids and patches are listed in the Product Information sheets for each. Indications include "the management of moderate to severe chronic pain unresponsive to non-narcotic analgesia", "the relief of chronic pain unresponsive to non-narcotic analgesia", "treatment of opioid-responsive, chronic severe pain", the "treatment of moderate to severe chronic pain" or "prolonged relief of opioid responsive severe and intractable pain in adults". Use in the management of acute pain is not an approved indication. Recommendation is also usually made that SR opioids not be used preoperatively or for the first 24 hours postoperatively.

The listed indication for a transdermal fentanyl patch is for "the management of chronic pain requiring opioid analgesia", but note is made that these patches are specifically contraindicated in opioid-naïve patients and in the "management of acute or post-operative pain" because serious or life-threatening hypoventilation may occur which can be fatal.

Concerns about the use of slow-release opioids in the management of acute pain

Addition of a background infusion to opioid administration by IV PCA is known to markedly increase the risk of respiratory depression[1,6,7]. Administration of a new slow-release opioid in addition to IV PCA or PRN oral opioids is essentially the same as adding such a background infusion.

If sedation/respiratory depression occurs as a result of a combination of "background" slow-release opioids in addition to PCA bolus doses, then excessive sedation/respiratory depression is likely to be more sustained than if an opioid PCA background was ceased when excessive sedation was first noted.

Interpersonal variation in pharmacokinetics and response to opioids make predicting a dose of sustained-release opioid in an opioid naive person impossible[1], and if side effects are encountered, they may be of sustained duration.

In most patients, pain intensity will decrease reasonably rapidly over a few days. In order to minimise the risk of opioid-related adverse effects, the patient's opioid doses must also decrease over this time.

Long-term opioid use often begins with treatment of acute pain[2]. It is known that a proportion of patients prescribed an opioid for management of their acute pain will still be taking an opioid one or two years after discharge[8]. Prescription of slow-release opioids in the initial treatment of pain is associated with an increased risk of long-term opioid use[9]. When opioids are used for acute pain, especially for discharge or in the community, the quantity prescribed should be based on the expected duration of pain which is severe enough to require an opioid[2].

Practice Point

The most appropriate initial treatment of acute pain using oral opioids is by titration of immediate-release opioids on a PRN basis. Most immediate-release opioids will reach peak effect within one hour[1]. The peak effect of slow-release opioids will not be seen for some hours.

For opioid naive individuals, the initial PRN dose of the immediate-release opioid should be age-based; for patients transitioning from PCA, PRN dosing can be guided by their previous PCA opioid requirements[6]. Such PRN dosing permits treating acute pain in a targeted way, which is variable, often changes with activity, and is likely to improve with time. There is no safe maximum dose of opioid, therefore the importance of titration of the dose according to effect and adverse effects (especially using sedation scores) should be stressed[1,6,10].

In postoperative or post-traumatic patients with prolonged pain states, it may sometimes be useful to introduce a slow-release opioid in a previously opioid-naive individual on a temporary basis after careful reassessment. Consideration should then be given to opioids with the least sedative (and therefore respiratory depressant) effect. In establishing an appropriate dose, time to steady state should also be considered. As daily opioid requirements may vary considerably in the acute pain setting, the dose should be frequently assessed and reduced appropriately. Communication with the primary service (including rehabilitation services) or general practitioner about the temporary basis of this prescription is essential.

Patients, who are already taking a slow-release opioid prior to admission, including those in opioid-substitution programs, are tolerant to and physically dependant on that opioid. After independent confirmation of the drug and dose, their slow-release opioid should be continued[1]. The patient's acute pain should be treated using multimodal analgesia including titration with PRN immediate-release opioids.

Not all pain is opioid responsive. If excessive sedation develops (as a warning sign of impending respiratory depression), but pain is still present, then reassessment should occur, and consideration be given to non-opioid analgesia. Slow-release opioids in this scenario add further complexity and risk.

Accidental deaths from pharmaceutical opioids in Australia exceeds those from heroin[11] and the rate appears to be increasing[12]. Therefore prescription of opioid analgesia for patients discharged from hospital needs to be undertaken with caution due to the risks of abuse, misuse and diversion, adverse effects, and interactions with other medication (in particular benzodiazepines and alcohol), impairment of driving and increased risk of falls[8].

The planning of weaning and ceasing the opioid remains the responsibility of the person who initiated it. The need for discharge opioids should be assessed. Appropriate instructions should be conveyed to the patient about opioid weaning as well as timely formal communication to junior medical staff and/or the patient's general practitioner about discontinuation of these medications in a planned timeframe.

Psychological and social aspects of a patient in pain need to be addressed in parallel to medical approaches such as analgesics, even in an acute pain setting. Preoperative anxiety, catastrophising and depression or other mental health issues can amplify a patient's expression of pain, and are associated with increased risk of developing persistent pain. Addressing these may be an important factor in treating acute pain adequately[1].

Note: The term "slow-release" is used by the Australian Commission on Safety and Quality in Health Care in its National Inpatient Medication Chart[10] and covers all medications that may be referred to as slow-release, sustained-release, extended-release, modified-release and long-acting. For the purposes of this statement, 'slow-release' will also refer to transdermal opioid patches and methadone.

References

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