

How should postoperative pain in patients on long-term opioids be managed?

Management of patients on long-term opioids (LTOs) with acute or postoperative pain presents a number of problems. Such patients will need higher doses of opioids postoperatively than the general population; they are also more likely to need surgery. Managing the challenge of acute pain control in this group requires being able to identify which patients are at risk, and understanding the physiological basis for the problems that may arise from LTO dependence.

Prevalence of LTO patients

This group of patients includes those on opioids for treatment of malignant and non-malignant pain and those patients dependent on opioids as a result of recreational habits.

The number of chronic pain patients with a dependence on opioids is difficult to identify. One study of 125 patients attending a pain clinic revealed that 69.6% were taking an opioid (Kouyanou et al, 1997).

Substance abuse is widespread. The European Monitoring Centre for Drugs and Drug Addiction (Jeffery et al, 2002) estimates that 34% of people aged 15–59 years had abused drugs and solvents. If the age range is narrowed to 16–29 years this figure rises to 50%. However, there is a lower incidence of opioid abuse, with a lifetime risk of 1.1% (Mehta and Langford, 2006).

Neuropharmacological basis for problems in LTO patients

1. LTO patients may have developed a physical dependence on opioid medication. This is a state of adaptation which will result in a withdrawal syndrome on abrupt cessation of the drug or if insufficient opioid is given to treat acute pain

2. LTO patients may, after only 2 weeks on opioids, have developed tolerance to the effects of further opioid administration, meaning that larger doses of analgesics may need to be given
3. LTO patients may be addicted to opioids. Addiction is a primary, chronic neurobiological disease resulting from a combination of genetic, psychosocial and environmental factors. Lack of control over drug use and continued use despite perceived or actual harm is indicative of addictive behaviour. Such patients require multidisciplinary team management of their acute pain.

Acute pain management

Goals for effective acute pain management should be identified proactively. The principal aim is effective pain management without risk of over- or under-dosing.

- The baseline opioid requirement should be calculated for each patient. In patients who use recreational opioids it can be difficult to determine the baseline dose. Postoperatively this requirement may increase or decrease depending on the effect of surgery. Patients will require a proportion of the baseline opioid requirement (usually at least 50%) postoperatively, and will need additional opioids individually titrated according to their pain requirement (Lewis and Williams, 2005). As larger than normal doses of opioids may be required, compared to opioid-naïve patients, it is necessary to manage these patients in a recovery or high dependency setting
- A multidisciplinary team approach is required. This should involve preoperative consultation with the patient's physician, surgeon, anaesthetist, ward nurse and other team members as appropriate
- A balanced multimodal approach to analgesia should be used. Local anaesthetic techniques such as regional or neuraxial blocks may reduce the need for extra opioids and thereby facilitate postoperative pain management
- Patient-controlled analgesia devices may be used postoperatively. Larger bolus

doses with shorter lockout periods may be needed. However, repeated use may be interpreted as drug-seeking behaviour by some health-care professionals and may contribute to difficulties in pain assessment and management

- Transdermal patches result in a small reservoir of drug in the skin. Clinically relevant doses can still be absorbed for up to 12 hours after removal. It may be reasonable to leave the patch in place and use short-acting opioids for breakthrough pain. However, the patch manufacturers recommend removal before surgery
- The opioid dose from implanted neuraxial pumps has often been finely adjusted so it is usually appropriate to leave the pump running and to use short-acting opioids given by another route, titrated to effect.

Conclusions

The number of patients on LTOs is increasing. These patients present a number of challenges to the acute pain physician, in particular physical dependence and tolerance. A multidisciplinary approach is required to proactively recognize these patients, ensure that sufficient opioid is given to meet their baseline opioid requirement and appreciate their requirement for larger than normal doses for breakthrough pain. Management should take place in a supervised area that quickly recognizes either under- or over-dosing. **BJHM**

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