



# Managing acute pain in patients with an opioid abuse or dependence disorder

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## Summary

Assessing and managing patients with acute pain who are addicted to opioids is often challenging. Treatment may be complicated by pharmacological therapies, including methadone, buprenorphine and naltrexone. There is limited evidence to guide the management of acute pain in these patients as they are usually excluded from analgesic studies. Principles of management include thorough assessment of both the pain and the addictive disorder, consultation and referral as appropriate, maximisation of non-opioid analgesics and non-pharmacological therapies, and use of opioids when indicated.

Key words: opioids, substance-related disorders.

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## Introduction

In Australia, the lifetime prevalence of heroin use is 1.6%. Within the previous 12 months, 0.2% of the population will have used heroin and 15.3% will have illicitly used any drug (including cannabis and prescription drugs).<sup>1</sup> Those with a substance abuse disorder commonly use more than one drug, usually both legal and illicit substances. Other psychiatric diagnoses, such as personality disorders of the antisocial or borderline type, frequently coexist. There may be significant concomitant psychological, behavioural and social dysfunction.

People with a drug dependence, particularly those with high-risk behaviours such as intravenous drug use, are predisposed to certain types of acutely painful conditions such as infections, traumatic injury and pancreatitis. Acute pain is often undertreated.<sup>2</sup> This is more likely in those with a history of addiction where the knowledge, attitudes and behaviours of both patient and staff may create barriers to effective management.

## Assessment

Due to the subjective nature of pain, with self-reporting as the gold standard, assessment of the patient with substance abuse disorder and pain may be challenging (see Box 1). For a variety of reasons including stigma and past experiences of

pain management, the patient may not disclose drug use, either current or historical.

It is important to take a thorough drug history including details of all drugs used, how often they are taken and when they were last used. Patients in remission may be concerned that treatment with opioids will result in relapse.<sup>3</sup> This is a complex area and undertreatment of pain may increase the risk of relapse.

## Drug-seeking behaviour

The treating doctor may be faced with the dilemma of potential drug-seeking behaviour in a patient who presents with a painful condition such as 'renal colic'. Clearly, careful clinical judgement is required. It may be preferable to err on the side of treating

### Box 1

#### Assessing acute pain in opioid addiction

- Remain open and non-judgemental, promote realistic expectations and set clear limits
- Take a history of the pain, identify aetiology of pain with relevant examination and investigation
- Exclude serious pathology such as epidural abscess or discitis presenting as back pain
- Identify the addictive disorder where possible, maintain high index of suspicion, consider drug use screening
- Look for signs of drug use (intoxication, withdrawal, 'track marks', conduct a urine drug screen)
- If drug use is identified, take a thorough drug history (record substances and doses, treatment providers, comorbid pathologies such as blood-borne viruses, persistent pain, other psychiatric diagnoses)
- Assess degree of distress and contribution of psychological and social factors to the presentation
- Gather additional information from:
  - family and friends
  - usual prescriber or dispenser (to confirm current drugs and doses, among other things)
  - regulatory authorities such as state-based drug and alcohol advisory services, the Medicare Prescription Shopping Program ([www.medicareaustralia.gov.au/provider/pbs/prescription-shopping/index.shtml](http://www.medicareaustralia.gov.au/provider/pbs/prescription-shopping/index.shtml), telephone 1800 631 181)

the occasional drug-seeker rather than undertreating those with legitimate acute pain. Developing practice or departmental policies for situations where drug seeking is suspected may help.<sup>4,5,6</sup>

## Management

After assessing the patient, consultation, referral and treatment may be required (Box 2). Patients with a previous addiction who are in remission should be treated as any other patient presenting with pain. However, they may need to be reassured that relapse to opioid addiction is unlikely after taking analgesia.

### *Patients currently using illicit opioids*

One goal of managing acute pain in these patients is to optimise non-opioid analgesia, noting that complete relief may not be realistic. For moderate pain unresponsive to non-opioid analgesia and other measures, adding tramadol may be appropriate since it has a lower potential for abuse than other opioids. However, it may not be sufficiently potent for severe pain, particularly in those who are opioid-tolerant. If using another opioid, select a drug and an administration route with lower reinforcing properties, for example morphine in preference to pethidine, oral rather than parenteral. In some circumstances intravenous administration will be required for initial or ongoing management.

#### Box 2

##### Managing acute pain in opioid addiction

- Consult and collaborate with registered methadone or buprenorphine prescriber or dispenser, drug and alcohol service, pain specialist or psychiatrist
- Communicate with the patient's usual general practitioner or drug and alcohol service
- Consider early referral for interdisciplinary assessment and management
- Treat the painful condition (e.g. immobilise fracture, give antibiotics for infection, drain abscess)
- Use best practice guidelines where available (e.g. for migraine, acute low back pain). These emphasise non-opioid therapy and pain prevention strategies.<sup>2</sup>
- Maximise non-opioid analgesia (regular paracetamol, non-steroidal anti-inflammatory drugs)
- Use non-pharmacological therapies such as physiotherapy, gentle-paced exercise program, hot or cold packs and transcutaneous electrical nerve stimulation
- Tramadol
- Opioids
- Consider adjuvants such as ketamine, clonidine, anxiolytics, antidepressants and anticonvulsants

Adjuvant drugs, including ketamine, clonidine (also useful for opioid withdrawal), anxiolytics, antidepressants and anticonvulsants, may also be useful, particularly if the pain has a neuropathic element.<sup>2</sup>

Another goal in the management of these patients is to prevent withdrawal syndromes, particularly in an inpatient setting. Psychiatric and behavioural disorders may also need to be treated.<sup>2</sup>

### *Patients in drug treatment programs*

Many patients with an opioid addiction are given drugs to treat the dependence, which can further complicate the management of pain.

#### *Methadone*

Taking methadone will invariably result in opioid tolerance. Additionally, those receiving methadone have lower pain thresholds on experimental pain testing than do those with substance dependence not being treated with methadone.<sup>2</sup> In patients receiving methadone, ensure that the usual dose is continued or replaced parenterally to prevent withdrawal, especially if the patient is vomiting. Contact the prescriber or dispensing pharmacist to check the correct dose. If indicated, give additional opioid to treat the acute pain.<sup>7</sup> As a general guide, opioid-tolerant patients with acute postoperative pain require on average two to three times more opioid than opioid-naïve patients. Commence with a dose 50–100% greater than usual (e.g. 1.5–2 mg morphine intravenously every 10–15 minutes instead of 1 mg, 15–20 mg intramuscularly instead of 10 mg) and titrate to effect.

#### *Buprenorphine*

Buprenorphine binds avidly to the mu-opioid receptor but has only partial activity compared with morphine, and dissociates from the receptor very slowly. This reduces access of drugs like morphine to the receptor, and may oppose analgesia for up to 72 hours after the last dose. This does not appear to occur with the low doses of buprenorphine administered by transdermal 'patch' for persistent pain.

When treating patients who are taking buprenorphine, seek advice from their usual prescriber, a drug and alcohol service or a pain specialist. Maximise the use of non-opioid analgesia including paracetamol and non-steroidal anti-inflammatory drugs. Tramadol, local anaesthesia infiltration/block and non-pharmacological therapies may also be used. Mild to moderate pain can be managed by an increased dose of buprenorphine, although this must be supervised by a registered prescriber.<sup>8</sup> For moderate to severe pain, hospital admission for specialist management may be required.

#### *Naltrexone*

The long-acting opioid-receptor antagonist naltrexone is administered as a once-daily tablet or as a subcutaneous

implant for opioid or alcohol abuse, although it is only licensed for the latter. An oral dose will block the activity of morphine-like drugs for 24–72 hours, whereas the implant is usually active for between three and six months. Receptor blockade may be overcome by giving high doses of opioids, but this is most safely done in a monitored environment.

Non-opioid analgesia and non-pharmacological strategies should be maximised and may be sufficient for mild pain. Those with more severe pain may require hospital admission. Analgesic approaches include titration of opioid to effect (very high doses are often required), use of regional blocks where feasible, use of systemic adjuvant drugs such as ketamine, and possibly stopping naltrexone treatment to restore opioid efficacy.

There are particular concerns when naltrexone is ceased. Up-regulation of opioid receptors initially results in increased opioid sensitivity. This may cause an exaggerated response, in particular life-threatening respiratory depression. In this situation, opioid administration must be undertaken with extreme caution, starting with low doses, monitoring closely and titrating to effect.

### **Patients abusing other drugs**

As there is no cross-tolerance between opioids and most other drugs of abuse (such as alcohol, benzodiazepines, cannabis, cocaine, amphetamines<sup>2</sup>), patients using these drugs will usually only require conventional opioid doses. A thorough drug history is required to identify all substances used, in particular to prevent withdrawal syndromes. Withdrawal protocols are of great value in this situation providing staff have been trained in their use.

### **Acute exacerbations of persistent pain**

There is a significant overlap between persistent non-cancer pain and substance abuse disorder. Up to one-third of patients prescribed opioids for non-malignant pain will exhibit aberrant drug-taking behaviour. Of those attending drug treatment programs, a significant proportion report a history of persistent non-cancer pain, sometimes with pain identified as the precipitating cause for the addictive disorder.

Ideally, such patients will be managed by a single general practitioner in consultation with relevant specialist services including a pain centre. When pain is relatively stable, it is helpful to develop a plan for management of exacerbations. This should focus on prevention and non-pharmacological and non-opioid therapies. If opioids are to be used, avoid parenteral administration and instead prescribe slow-release formulations for a limited period, perhaps with controls such as daily pharmacy pick-up.

### **Surgery**

It is important that patients with opioid dependency present for preoperative assessment at least a week before elective surgery.

Management should be planned in consultation with the patient, the usual prescriber or general practitioner, the hospital drug and alcohol service, and the anaesthetist or acute pain service managing the patient perioperatively.

Continue methadone up to the time of surgery and postoperatively if feasible, or replace the dose parenterally. Planned naltrexone cessation may be required. There is currently no consensus as to whether buprenorphine should be ceased (in which case conversion to another opioid would be required) or continued, although there is an emerging trend to continue it.<sup>8</sup> Patient-controlled analgesia is the technique of choice in the early postoperative period.

### **Conclusion**

Patients who are addicted to opioids provide substantial challenges for acute pain management. It is important to ensure they are thoroughly assessed, incorporating interdisciplinary communication and collaboration. Treatment with non-pharmacological therapy and non-opioid analgesia as well as carefully titrated opioid analgesia may be required to relieve pain.

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For a glossary of terms used in this article, see the online article at [www.australianprescriber.com](http://www.australianprescriber.com) in Vol. 31 No. 5.

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