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Acute Pain in Patients on Maintenance for Opioid Addiction

What Helps?

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Question

How can acute pain be managed in patients receiving maintenance treatment for opioid addiction?

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Patients in recovery from opioid dependence or addiction present a conundrum when needing management of acute, severe pain. Not only is there a fear of addiction relapse among the patients and clinicians, but routine analgesic regimens also may not be sufficient to properly manage pain, especially in those receiving buprenorphine (or buprenorphine/naloxone combination), methadone, or naltrexone. Inadequate pain management has serious ramifications, including prolonged hospital stays, increased medical costs, unnecessary suffering, impaired quality of life, and progression to chronic pain.[1,2] Therefore, it is imperative that clinicians become knowledgeable in the management of pain in patients taking buprenorphine, methadone, or naltrexone.

In order to effectively treat patients on maintenance addiction treatment, it may be helpful to dispel common misconceptions that result in undertreatment of these patients. Alford and colleagues[3] describe four such misconceptions associated with opioid agonist therapy:

• Maintenance opioid therapy provides analgesia;

• Addiction relapse may occur from use of opioids for analgesia;

• Opioid analgesics may cause respiratory and central nervous system (CNS) depression in patients receiving opioid agonist therapy; and

• Reporting pain may be a manipulation to obtain opioid medications ("drug seeking").

The first misconception is disproved, as the analgesic action of methadone and buprenorphine is only 4-8 hours, yet they are given every 24-48 hours. Also, these patients typically are tolerant to the effects of opioids, so they may not derive significant analgesia from their maintenance regimen. Additionally, patients may have opioid-induced hyperalgesia, an increased sensitivity to pain, making their maintenance regimen insufficient to treat severe pain.

In regard to the second misconception, use of opioids for acute pain has not been proven to induce relapse, whereas inadequate pain management has been associated with relapse.[2,3]

Tolerance in this population makes the third fear, the possibility of additive respiratory or CNS depression when adding an opioid analgesic to maintenance treatment, uncommon.

Finally, uncontrolled pain causes significant anxiety, and despite a legitimate need for pain relief, these patients' demands for pain relief are misconstrued as being manipulative efforts to achieve euphoric effect.[3]

Clinicians must have a thorough understanding of the mechanisms of action of agents used to treat pain, as well as those used for addiction management, in order to effectively design a pain management strategy in these patients. Recommendations for managing pain in patients receiving opioid agonist therapy are available from the World Health Organization,[4] the US Department of Health and Human Services Substance Abuse and Mental Health Services Administration (SAMHSA) Center for Substance Abuse Treatment,[5] and in the reviews by Savage and colleagues[2] and Alford and colleagues.[3]

If pain is anticipated, as with elective surgery or recurrent painful syndromes such as sickle cell anemia, it is best to develop a pain management plan in advance in conjunction with addiction professionals.[2,3] The maintenance buprenorphine or methadone regimen should be verified with the program and the program should be notified of any medication changes made.[3]

Some general principles advocated for treating acute pain in patients receiving treatment of opioid addiction include:

• Use nonopioid analgesics such as nonsteroidal anti-inflammatory drugs and acetaminophen when appropriate.[2,5] Where appropriate, add nondrug modalities such as application of ice, transcutaneous electrical nerve stimulation (TENS), massage or stretching, and/or bracing to help alleviate pain.[2]

• Higher doses and more frequent intervals of opioids may be needed for those taking buprenorphine or methadone compared with nondependent patients due to tolerance.[2,3]

For Patients Taking Methadone Who Require Opioid Analgesia

• Continue maintenance dose and add a different short-acting opioid.[3]

• Consider injectable opioid agents or patient-controlled analgesia (PCA) on top of baseline methadone.[4]

• Do not switch to buprenorphine abruptly, as this may precipitate withdrawal.[4]

For Patients Taking Buprenorphine Who Require Opioid Analgesia

• Buprenorphine is a partial agonist that binds tightly to opioid receptors, blocking the effect of other opioids given for pain. Fentanyl may be more effective than other opioids in this situation.[2,4]

• If pain is expected to be brief, buprenorphine maintenance can be continued, and add a short-acting opioid analgesic titrated for pain.[3]

• Buprenorphine daily dose can be divided every 6-8 hours.[3] Patients on a low daily dose (2-8 mg/day) could have the total daily dose increased and given in divided doses.[2]

• Buprenorphine can be discontinued and an opioid analgesic could be used, then switched back to buprenorphine when the pain has resolved.[3,4]

• If the patient is hospitalized, buprenorphine can be discontinued and methadone 20-40 mg can be used to treat the opioid addiction. Short-acting opioid analgesics can be used for pain. Naloxone must be available at the bedside. Switch back to buprenorphine before hospital discharge.[3]

For Patients Taking Naltrexone

• Because naltrexone is an opioid antagonist, patients receiving naltrexone will not respond normally to opioids.

• In an emergency, possible approaches include regional analgesia, conscious sedation with a benzodiazepine or ketamine, and nonopioid techniques of general anesthesia.[4] A SAMHSA Advisory for extended-release injectable naltrexone points out that high doses of rapidly acting opioids could reverse the opioid receptor blockade to achieve pain relief, but these higher doses increase the risk for respiratory depression.[6] Patients require close monitoring by professionals trained in use of anesthetics, management of respiratory depression, and performance of cardiopulmonary resuscitation.[6]

• For patients receiving monthly extended-release naltrexone injection, it is recommended to delay the procedure until naltrexone blood levels are diminished enough to restore opioid receptor availability.[6]

• For patients taking oral naltrexone, it should be discontinued at least 72 hours before elective surgery.[4]

• Wait 3-7 days after discontinuation of opioid analgesic before resuming naltrexone, depending on duration of use and the half-life of the opioid.[4]

• Patients receiving extended-release injectable naltrexone should wear a medical alert bracelet or necklace, or carry a

disclosure card in the event that they are unable to communicate in an emergency.[4]

With an individualized approach using clinical recommendations, along with patient reassurance, pain can be managed effectively in these patients.

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Cite this article: Acute Pain in Patients on Maintenance for Opioid Addiction. *Medscape*. Feb 06, 2015.