Perioperative Management of A Patient with Opioid Use Disorder and Subacute Lower Extremity Limb Ischemia

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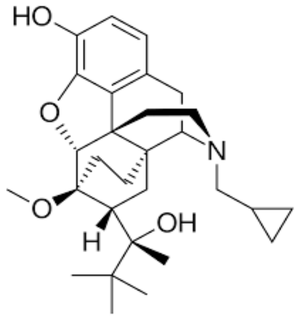
Introduction

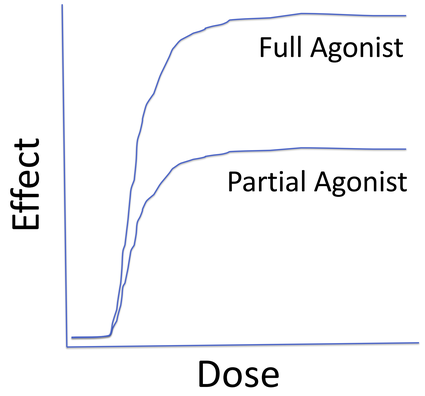
The perioperative management of pain in patients taking partial opioid agonists, such as buprenorphine, is particularly challenging for care teams. When possible, careful planning permits preoperative tapering of the partial agonist, coordination between inpatient and outpatient settings, and optimization of acute pain needs with minimal risk of accidental opioid overdose. In urgent or emergent settings, other approaches are necessary to ensure safe care while addressing acute pain needs. This poster describes the multimodal pain management of a patient on chronic buprenorphine therapy who underwent emergent surgery for lower limb ischemia.

Case Report

36-year-old male who presented to the ED with lower extremity pain. His past medical history includes cigarette smoking (3-4 per day), hepatitis C, and IV drug use (IVDU) complicated by septic emboli to the kidney/spleen and endocarditis of the aortic valve, which was replaced in 2019. Since the AVR, the patient stopped IVDU and has been on maintenance sublingual buprenorphine 8mg BID. In the ED, he was afebrile with a normal WBC. Admitted to persistent dental problems but denied recent changes. Ultrasound in the ED revealed an occlusive thrombus in the distal popliteal artery as well as possible mitral and aortic vegetations on TTE. D-Dimer was elevated at 0.92 mg/L. The patient was started on a loading dose of heparin 5600 units in the ED and promptly taken operating room on a heparin infusion. Induction of general endotracheal anesthesia included ketamine, dexmedetomidine, lidocaine and propofol. Following successful establishment of a reverse saphenous vein graft, he was taken intubated to the ICU for hourly pulse checks and continued anticoagulation. Initial pain management included a fentanyl infusion, which was transitioned to morphine PCA the next day upon extubation. A pain consult was obtained, and he was transitioned from the PCA to oxycontin ER with oxycontin IR for breakthrough pain. Finally, he was started on buprenorphine - Naloxone (suboxone) 8mg / 2mg BID prior to opioid taper and discharged home.



Buprenorphine



Preoperative

- Continue partial agonist or plan taper
- Anticipate postoperative needs
- Preoperative pain consult
- Begin discharge planning

Day of Surgery

- Communicate pain management plan
- Use multimodal techniques and/or regional anesthesia
- Coordinate acute pain needs with pain team

Posteroperative

- Continue multimodal therapy
- Restart / continue partial agonist
- Taper additional pain medication
- Discharge planning, including dispensing, social support, rescue meds

Discussion

Perioperative management of patients on partial opioid agonists such as buprenorphine is complex and depends greatly on the urgency of the surgery (1). For elective surgery, buprenorphine should be tapered to prevent withdrawal and facilitate ideal postoperative pain management. For urgent surgery, however, buprenorphine cannot be tapered and may produce withdrawal if stopped abruptly. In this situation, multimodal pain agents (such as ketamine, lidocaine, dexmedetomidine) and nerve blocks should be considered to reduce acute pain needs. This case illustrates the use of several approaches for pain management, including the use of multimodal analgesia to reduce acute pain, a fentanyl infusion while in the ICU, the use of PCA to determine acute pain needs, and the prompt resumption of buprenorphine. The use of regional anesthesia was challenging in this patient due to perioperative anticoagulation needs. Providers should anticipate increased need for opioid medications in these patients and consult a pain management specialist to assist with transitions of care, safe resumption of the partial agonist, and discharge planning. In instances where pain specialists are unavailable, it is advantageous to define policy as well as to educate nursing staff in order to maximize patient recovery through standardized coordination of care.

References

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