

Teachable Moment

Initiating Opioid Agonist Treatment for Opioid Use Disorder in the Inpatient Setting

A Teachable Moment

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Story From the Front Lines

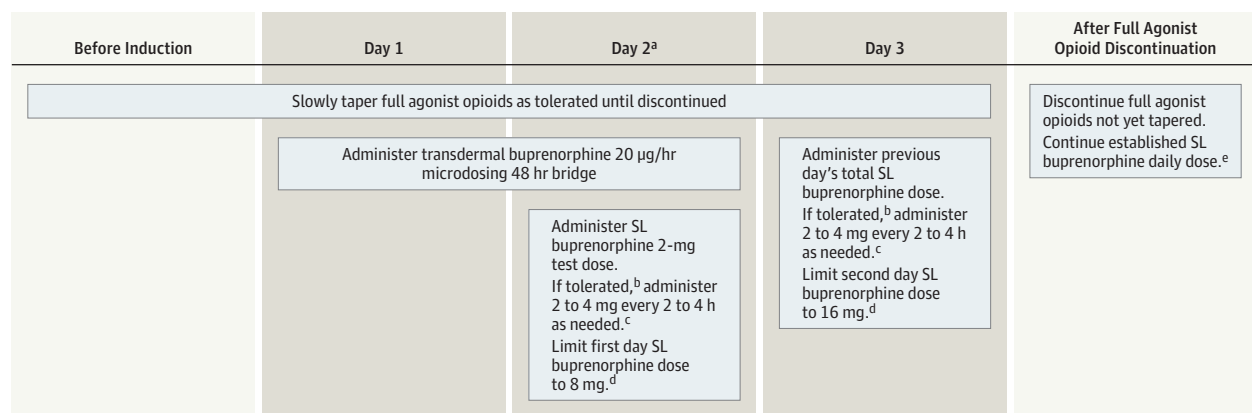
A 21-year-old woman with a history of multiple hospital admissions for sepsis secondary to injection heroin use presented to the hospital with a right thigh abscess and dyspnea. Her diagnostic workup revealed pulmonic valve endocarditis, with both abscess and blood cultures growing methicillin-sensitive *Staphylococcus aureus*. The patient developed sepsis with respiratory failure and was intubated. Despite 11 days of treatment with antibiotics, her condition worsened and necessitated pulmonic valve replacement. She improved after surgery and received intravenous antibiotics for 6 weeks. She also received 220 morphine milligram equivalents for postoperative pain. Based on concerns that she would be at high risk to use her peripherally inserted central catheter to inject heroin as an outpatient, the decision was made to keep her hospitalized while completing the course of antibiotics.

The inpatient addiction medicine service was consulted, and the patient was diagnosed with opioid use disorder. After surgery, she received bedside psychoeducation; motivational interviewing; and was referred to peer support groups (she participated online). With regular bedside visits, she gained insight into the connection between frequent hospitalizations and opioid use disorder. She agreed

to a trial of buprenorphine, and treatment began in the hospital using a novel induction protocol that obviates the need for opioid withdrawal.¹

The full agonist opioids were continued but were tapered slowly as tolerated, and a transdermal buprenorphine patch with a dose of 20 µg/h was added on day 1 of the protocol (Figure). Opioid withdrawal was assessed using the Clinical Opiate Withdrawal Scale, which includes 11 signs and symptoms of opioid withdrawal (eg, pulse, pupil size, and restlessness) to produce a numerical value that corresponds with mild to severe withdrawal.² On day 2 of the protocol after 24 hours of treatment with the patch, a 2-mg dose of sublingual buprenorphine-naloxone was administered. The patient tolerated it well, with no evidence of precipitated withdrawal. After 6 hours, she requested a second 2-mg dose, for a total dose of 4 mg of buprenorphine-naloxone on the first day of sublingual administration. The patch was discontinued after a total of 48 hours. The dose of sublingual buprenorphine-naloxone was then titrated up as the other opioids were tapered down. Twenty-four hours after the patch was discontinued, the patient discontinued all opioids except the 10-mg dose of sublingual buprenorphine-naloxone daily, which adequately controlled her pain. She reported mild pain and

Figure. Buprenorphine Induction With Transdermal Buprenorphine Microdosing



^a Algorithm would require adjustment for longer-acting opioids such as methadone.

^b Delay extra doses of buprenorphine for adverse effects such as oversedation. Minor withdrawal symptoms can be treated with nonopioid medications such as alpha-2 adrenergic agonists, loperamide for diarrhea, and ondansetron for nausea.

^c Titrate to an effective dose that relieves opioid withdrawal, suppresses cravings, avoids adverse effects such as sedation, and has stable treatment effects for 24 hours.

^d On average, buprenorphine doses after induction and titration should be at least 8 mg/d. The US Food and Drug Administration approves up to 24 mg/d, and there is limited evidence regarding the relative efficacy of higher doses. Sublingual (SL) buprenorphine-naloxone can be used in place of SL buprenorphine.

^e The daily dose can be divided and administered every 6 to 8 hours to take advantage of its analgesic properties. The ratio of buprenorphine to morphine is 10 mg to 1 mg.

mild withdrawal symptoms (the Clinical Opiate Withdrawal Scale score never exceeded 8) throughout the induction period.

On hospital discharge, the patient was referred to an outpatient treatment program and buprenorphine prescriber. At a 6-month follow-up visit, she was still receiving buprenorphine, attending an outpatient program, free from infection, and involved in grassroots advocacy to expand access to addiction treatment, including buprenorphine.

Teachable Moment

This case builds on a similar Teachable Moment case published in July 2017, wherein a patient who did not receive inpatient addiction treatment continued to inject heroin and was shortly thereafter readmitted with endocarditis.³ Patients with injection drug use-associated endocarditis have long hospitalizations, which provide an opportunity to start opioid use disorder treatment as an inpatient.⁴ However, fewer than 25% of patients receive addiction medicine consultations, and fewer than 8% are discharged with any plan to start medication for opioid use disorder (ie, buprenorphine, methadone, or naltrexone).⁴ Inpatient treatment for opioid use disorder was achieved in this case through a combination of a specialized addiction medicine consultation service, bedside motivational interviewing, peer support, and induction of buprenorphine therapy with addiction treatment follow-up after hospital discharge.

Traditional guidelines for starting buprenorphine treatment recommend an opioid-free withdrawal period of 12 to 48 hours.² For patients who have just undergone surgery, discontinuing opioids in the acute postoperative period is seldom a tenable or humane op-

tion. On the other hand, starting sublingual buprenorphine-naloxone while the patient is receiving full agonist opioids precipitates withdrawal. A novel method of using microdoses of buprenorphine, delivered transdermally, bridges the interval between treatment with full agonist opioids and sublingual buprenorphine and eliminates the need for an opioid-free period (Figure).¹ The evidence for this strategy is promising, yet limited, and is ripe for exploration. It enables treatment of the patient's opioid use disorder, while respecting the need for postoperative pain palliation. In the inpatient setting, clinicians can order buprenorphine for the treatment of opioid use disorder without a special waiver from the US Drug Enforcement Administration. However, it is essential to identify a waived clinician to continue buprenorphine treatment immediately after hospital discharge. Buprenorphine treatment practitioner locators are available online.⁵

Methadone and naltrexone treatment for opioid use disorder can also be initiated in the inpatient setting. Each treatment has its own risk-benefit profile, pharmacologic properties, legal considerations, and established guidelines.² Psychosocial interventions, such as bedside motivational interviewing, 12-step facilitation, and case management for referral to outpatient programs, should be administered in conjunction with medication to treat opioid use disorder and can be started in the hospital.²

Hospitalization is a critical opportunity to move beyond treating the sequelae of opioid use disorder to treating the primary illness. Patients receiving full agonist opioids for postoperative pain are potential candidates for buprenorphine-naloxone induction by using transdermal buprenorphine microdosing as a bridging strategy.

ARTICLE INFORMATION

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