



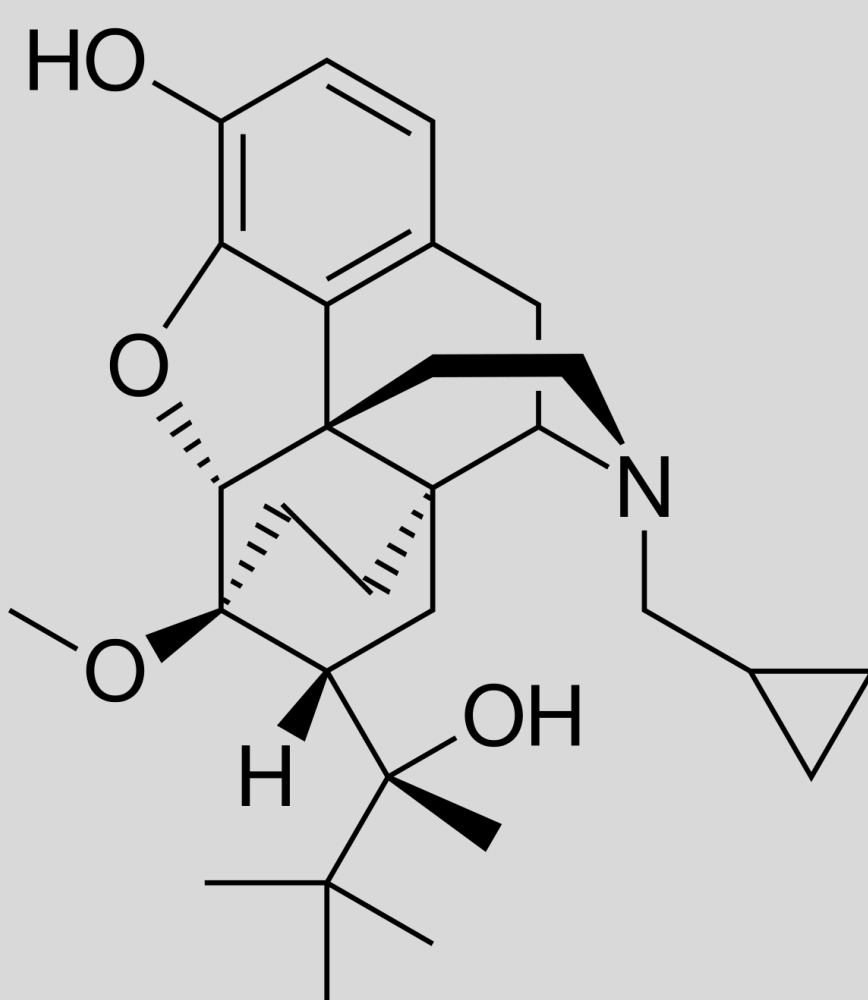
Acute Pain Service Improves Perioperative Pain Management and Helps Prevent Relapses in Patients with Opioid Use Disorder

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Background

- The perioperative period is a vulnerable time for patients with opioid use disorder (OUD)
 - Risk of relapse vs achieving adequate pain control
- FDA approved medications for opioid use disorder (MOUD) ⁽¹⁻³⁾
 - Buprenorphine, Methadone, Naltrexone
 - ↓ relapse rate, ↓ mortality
 - ↑ retention in cognitive & behavioral therapy, ↑ quality of life
- Buprenorphine ^(4,5)
 - High affinity, slow kinetic dissociation opioid analgesic



Case Description

- 49 y/o F longstanding history OUD and methamphetamine use disorder
 - Multiple hospitalizations for endocarditis, epidural abscesses, septic joints
 - On buprenorphine-naloxone as (prior) inpatient → lost to follow up after discharge
- Transitional Pain Service (TPS) was consulted on patient’s 2023 admission for a repeat total knee arthroplasty (TKA)
 - Pre-operatively:***
 - Re-established care with an addiction specialist
 - Continued buprenorphine-naloxone 4mg BID
 - Patient expressed desired avoidance of full opioid agonists due to concern for relapse



Discussion

- Evidence-based approaches to buprenorphine management in the perioperative setting can improve outcomes in patients with OUD
- Expertise of acute pain physicians in complex pain management and regional techniques can achieve adequate perioperative analgesia without the use of full opioids agonists



Go to now	2/6/2023		Monday 0700 - Today 1859						24 Hrs	12 Hrs	8 Hrs	4 Hrs	1 Hr	All
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12 Hrs: ◀	02/06 0700 - 02/07 0659	02/07 0700 - 02/08 0659	02/08 0700 - 02/09 0659	02/09 0700 - 02/10 0659	02/10 0659	02/11 0659	02/12 0659	02/13 0659						
	07-19	19-07	07-19	19-07	07-19	19-07	07-19	19-07	07-19					
Vital Signs														
Pain Meds														
Acetaminophen (mg)			975	1,950+	975	1,950+	975	1,950+		Acetaminophen (mg)				
Acetaminophen IV (mg)			1,000							Acetaminophen IV (mg)				
Aspirin (mg)				81	81	81	81	81	81	Aspirin (mg)				
Bupivacaine-EPINEPHrine 0.25%-1:200000 IJ (...)			30							Bupivacaine-EPINEPHrine 0.25%-1:200000 IJ (...)				
Buprenorphine HCl-Naloxone HCl 2-0.5 mg SL (...)			4	4	8+	4	8+	4	4	Buprenorphine HCl-Naloxone HCl 2-0.5 mg SL (...)				
clonidine HCl (Analgesia) EP (mcg)			80							clonidine HCl (Analgesia) EP (mcg)				
Gabapentin (mg)				600	1,200+	600	1,200+	600	600	Gabapentin (mg)				
Ketorolac IJ (mg)			30							Ketorolac IJ (mg)				
Lidocaine HCl IJ (mg)			60							Lidocaine HCl IJ (mg)				
Meloxicam (mg)				15	15		15		15	Meloxicam (mg)				
Midazolam HCl IJ (mg)			2							Midazolam HCl IJ (mg)				
Ropivacaine IJ (mL)			36							Ropivacaine IJ (mL)				
Infusions														
Dose (mg/hr) Ketamine			7+	7 mg/hr+	7 mg/hr+	7 mg/hr	0 mg/hr+			Dose (mg/hr) Ketamine				
Dose (mcg/kg/hr) Dexmedetomidine			7+							Dose (mcg/kg/hr) Dexmedetomidine				
Bolus Dose (mg) Propofol			150 mg+							Bolus Dose (mg) Propofol				
Epidurals														
clonidine HCl (Analgesia) EP (mcg)			80							clonidine HCl (Analgesia) EP (mcg)				
Pain														
Is Patient Currently in Pain?			No+	Unable to ...+	Patient in ...	Patient in ...	Patient in ...	Patient in ...	Patient in ...	Is Patient Currently in Pain?				
Patient Appears Comfortable as Evidenced by			No overt ...+	Appears to ...	No overt d ...		No overt d ...		No overt d ...	Patient Appears Comfortable as Evidenced by				

Intraoperative analgesia:

- Periarticular injection (Ortho) : ropivacaine 0.5%, ketorolac, epinephrine, clonidine
- IV acetaminophen, ketorolac, dexmedetomidine, ketamine

Post-operative analgesia:

- Continuous femoral nerve blockade w/ indwelling perineural catheter x 4 days post-op: bupivacaine 0.25% + epi
- Non-opioid multimodal analgesia: acetaminophen, aspirin, gabapentin, ketamine, meloxicam
- ↑ buprenorphine-naloxone: 4mg BID + 4mg daily as needed

☆ **7-month follow up:** remained on buprenorphine-naloxone w/no use of full opioid agonists→ *Maintained recovery!*

“My pain control on Suboxone only and all the other things you did was so much better than any of the other times being treated with Methadone and Dilaudid... I did not want to be in pain and go back to using [drugs] again. Thank you for giving me the opportunity to live.”

References: 1. Kakko J, Svanborg KD, Kreek MJ, Heilig M. 1-year retention and social function after buprenorphine-assisted relapse prevention treatment for heroin dependence in Sweden: a randomised, placebo-controlled trial. *Lancet*. 2003 Feb 22;361(9358):662-8. doi: 10.1016/S0140-6736(03)12600-1. PMID: 12606177. 2. Mattick RP, Breen C, Kimber J, Davoli M. Buprenorphine maintenance versus placebo or methadone maintenance for opioid dependence. *Cochrane Database Syst Rev*. 2014 Feb 6;2014(2):CD002207. doi: 10.1002/14651858.CD002207.pub4. PMID: 24500948; PMCID: PMC10617756. 3. Watts BV, Gottlieb DJ, Riblet NB, Gui J, Shiner B. Association of Medication Treatment for Opioid Use Disorder With Suicide Mortality. *Am J Psychiatry*. 2022 Apr;179(4):298-304. doi: 10.1176/appi.ajp.2021.21070700. PMID: 35360916. 4. American Society of Addiction Medicine (ASAM). The ASAM national practice guideline for the treatment of opioid use disorder: 2020 focused update. *J Addict Med*. 2020;14(2S)[suppl 1]:1-91. doi:10.1097/ADM.0000000000000633 [PubMed 32511106]. 5. De Aquino JP, Parida S, Sofuoglu M. The pharmacology of buprenorphine microinduction for opioid use disorder. *Clin Drug Investig*. 2021;41(5):425-436. doi:10.1007/s40261-021-01032-7 [PubMed 33818748]