Extended-Release Injectable Buprenorphine For Same-Day Induction – A Case Series

Ellen Mooney, DO[1A]; Bradley Buchheit, MD[2A]; Madden Rowell, MD[1A]; Amanda Risser, MD[1A]; Kelsie Kolb, BA[1A]; Mike Winer, MD[1A,2A]

1. Central City Concern, 2. Oregon Health and Science University, A. Nothing to disclose

Background & Introduction

- Fentanyl and Fentanyl Analogues (FFA) are a cause of increasing overdose deaths in the United States [1]
- Medications for opioid use disorder (MOUD) including extended-release buprenorphine (XRB) are part of an evidence-based strategy to decrease morbidity and mortality in patients with opioid use disorder (OUD)
- Outpatient induction using sublingual (SL) buprenorphine often leads to multiple cycles of aborted induction attempts
- Novel induction strategies are needed to assist patients in completing buprenorphine induction in the setting of FFA use
- The current manufacturer's prescribing information recommends XRB administration only after initiating treatment with a buprenorphine-containing product. Case reports and initial trials have demonstrated protocols with shorter SL lead-in [2] or medically supervised induction [3] but to our knowledge none have examined the use of XRB without SL lead-in in the outpatient setting
- We present the experience of two patients who underwent buprenorphine induction on the same day as last FFA use utilizing XRB, demonstrating safety and efficacy of XRB for initiation within the low barrier outpatient setting

XRB Induction Protocols

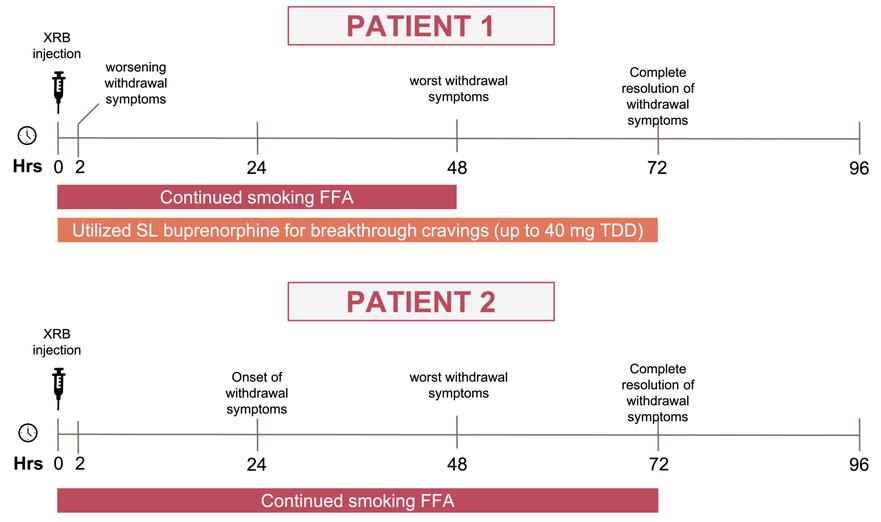
STANDARD XRB INDUCTION	SAME DAY XRB INDUCTION
Abstinence from FFA x 24-72 hours, and/or moderate to moderately severe symptoms by COWS (e.g., 14-36)	
Start sublingual (SL) buprenorphine (e.g., buprenorphine 4mg SL)	Demonstrate tolerability to buprenorphine (prior SL use vs. Test dose on day of induction)
Wait 1-2 hours	
Repeat dosing of buprenorphine 4-8 mg SL Q 1-2 hours to max total daily dose (TDD) of 24 mg on Day 1	Extensive counseling regarding precipitated withdrawal
Take total dose from Day 1 all at once on AM of Day 2, then may take up to additional 8mg SL for max TDD of 32 mg	Administer XRB subcutaneously
After 5-7 days taking at least buprenorphine 8mg SL daily, may administer XRB subcutaneously	

Full induction protocols can be found by scanning the QR code

Case Series

PARAMETER	PATIENT 1	PATIENT 2
AGE	46	37
GENDER	Female	Male
PREVIOUS INDUCTION ATTEMPTS	**Outpatient:** SL buprenorphine induction x 2 (very low dose induction, high dose induction)	**Outpatient:** SL buprenorphine induction x 2 (very low dose induction) **Inpatient:** Left before starting buprenorphine
DAILY FFA USE	4 – 25 pressed tablets (smoking)	10 – 25 pressed tablets (smoking)
DOCUMENTED TOLERANCE OF BUPRENORPHINE	Yes	Yes
LAST FFA USE	3-4 hours prior to XRB visit	1 hour prior to XRB visit
BASELINE URINE DRUG SCREEN (UDS)	BUP NEG	BUP NEG
TREATMENT RETENTION	Received 9/12 Subsequent doses	Received 12/12 Subsequent doses

Patient Experience Post-XRB Injection



Discussion

- Both patients had prior experience with SL buprenorphine induction and expressed frustration with return to fentanyl use within the first 24 – 48 hours following current evidence-based induction methods
- Both patients desired a pathway to buprenorphine induction that was protective against early return to use
- As the peak effect of XRB occurs within the first 24 – 48 hours of injection [4] and a clinically significant serum concentration of buprenorphine is anticipated through at least the first two weeks following XRB injection, induction with XRB on same day as last FFA use offered unique protection against early return to FFA use
- Patients expressed satisfaction with the novel induction method both because it allowed them to meet their goals of abstinence from FFA, and because it was a method they had chosen after extensive discussion with provider and shared decision making
- Patients reported experience following XRB for induction included a period of worsened withdrawal symptoms which occurred approximately 2 hours after injection and continued through the first 24-48 hours after induction, with resolution of symptoms at 72-96 hours
- Limitations include small sample size, unknown potency of FFA, lack of standardized tool for reporting subjective symptoms

Diversity, Health Equity, & Inclusivity

This novel method of starting buprenorphine expands induction options for individuals who have not been able to successfully complete outpatient induction protocols who cannot go to an inpatient withdrawal management setting to complete induction for reasons including employment, childcare needs, insurance or financial limitations, fear of inpatient withdrawal management setting, among other reasons. It is also helpful for patients who do not have access to devices to complete telehealth appointments. Expanding options for buprenorphine induction provides more equitable and inclusive options for patients with OUD who are seeking the safety and support of MOUD to aid in their recovery.

References

1 Mattson CL, Tanz LJ, Quinn K, Kariisa M, Patel P, Davis NL. Trends and Geographic Patterns in Drug and Synthetic Opioid Overdose Deaths — United States, 2013–2019. MMWR Morb Mortal Wkly Rep 2021;70:202–207. DOI: http://dx.doi.org/10.15585/mmwr.mm7006a4 2 Mariani JJ, Mahony AL, Podell SC, Brooks DJ, Brezing C, Luo SX, Naqvi NH, Levin FR. Open-label trial of a single-day induction onto buprenorphine extended-release injection for users of heroin and fentanyl. Am J Addict. 2021 Sep;30(5):470-476. doi: 10.1111/ajad.13193. Epub 2021 Jul 5. PMID: 34223681; PMCID: PMC8459386. 3 Howard Hassman, Stephanie Strafford, Sunita N. Shinde, Amy Heath, Brent Boyett & Robert L. Dobbins (2022): Open-label, rapid initiation pilot study for extended-release buprenorphine subcutaneous injection, The American Journal of Drug and Alcohol Abuse, DOI: 10.1080/00952990.2022.210657

4 Sublocade full prescribing information. Revised 9/2023. Accessed on 10/4/2023 https://www.sublocade.com/Content/pdf/prescribing-information.pdf