

Rapid Opioid Taper and Conversion to Buprenorphine to Minimize Opioid Adverse Events

Yoga Dasari DO†, Deepthi Penta MD†, Jaime Baratta MD‡, Eugene Viscusi MD‡,

† Thomas Jefferson University Hospitals, Department of Anesthesiology & Perioperative Medicine

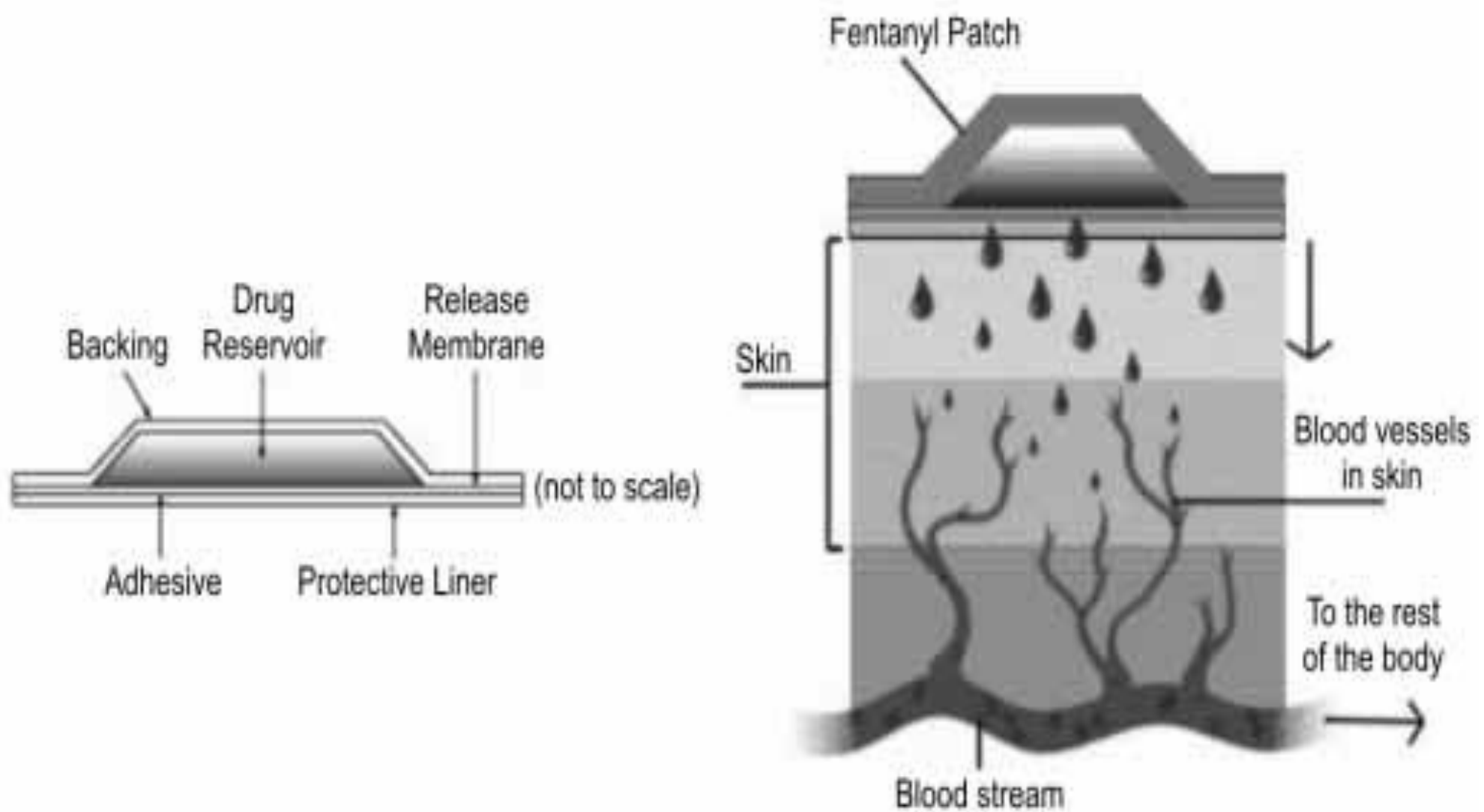
‡ Sidney Kimmel Medical College at Thomas Jefferson University, Department of Anesthesiology & Perioperative Medicine



INTRODUCTION

- CDC guidelines for prescribing opioids for pain state that nonopioid therapies are preferred for both subacute and chronic pain [1,2]
- Fentanyl is a mu-opioid agonist that binds to receptors in the central nervous system (CNS) and mimics the effects of endogenous opiates to provide analgesia and euphoria. [3]
- Adverse events related to toxicity include sedation and respiratory depression. [4]
- Patients with pre-existing fentanyl patches are admitted to the hospital with no clear guidelines on management of the fentanyl patch in an inpatient setting [5]
- The patch is often continued during admission to avoid acute withdrawals.

Purpose: We present a case of a complex chronic pain patient admitted for small bowel obstruction with a pre-existing fentanyl patch who was rapidly titrated and transitioned to a more appropriate pain regimen.



PATIENT INFORMATION

58 year-old female with a history of retroperitoneal fibrosis presenting from outside hospital for small bowel obstruction, surgical team recommended conservative management

Surgical History

- multiple exploratory laparotomies for complications of small bowel obstruction (SBO)
- colostomy status post reversal
- PEG complicated by gastrocutaneous fistula formation

Pain Medications – For chronic abdominal pain

- 4 mg oral hydromorphone Q4H

-250 mcg fentanyl transdermal patch Q72H

CASE DESCRIPTION

-Primary team initially continued her home transdermal fentanyl as prescribed with breakthrough 1.5 mg intravenous hydromorphone q3h

-Acute pain management team was consulted to assist with refractory pain

-The patient endorsed diffuse pain in her abdomen rated at 9 out of 10 in intensity and described as sharp, intense, and burning in quality.

-Our pain management team recommended tapering off the transdermal fentanyl using the following multimodal approach

Opioid Taper Protocol	
Pre-Taper	Fentanyl Patch 250 mcg transdermal, 1.5 mg PO hydromorphone Q3H PRN
Opioid Taper	Decrease Fentanyl Patch by 50 mcg everyday until OFF + Ketamine Infusion* starting at 10 mg/hour titrated to patient's pain scores + Lidocaine Infusion starting at 1 mg/kg/hour + Hydromorphone PCA 0.2 mg/6/2 mg with 0.4mg q2 PRN Nursing Boluses + Acetaminophen 1000 mg q6 hours PO + IV Ketorolac 15 mg q6h x 5 days + Gabapentin 400 mg q8 h _{PRN} PO *Adjuncts to ketamine were also initiated in order to decrease side effects
Post-Taper	buprenorphine film 20 mcg daily + Buprenorphine/naloxone SL 4mg BID with max dose of 8 mg/24 hours + Ketamine Infusion* starting at 10 mg/hour titrated to patient's pain scores + Lidocaine Infusion starting at 1 mg/kg/hour + Hydromorphone PCA 0.2 mg/6/2 mg with 0.4mg q2 PRN Nursing Boluses + Acetaminophen 1000 mg q6 hours PO + Ibuprofen 600mg q6 hours + Gabapentin 400 mg q8 h _{PRN} PO + Establishing Chronic Pain Outpatient follow up while still inpatient *Adjuncts to ketamine were also initiated in order to decrease side effects
Discharge	Buprenorphine/naloxone SL 4mg BID with max dose of 8 mg/24 hours + Acetaminophen 1000 mg q6 hours PO + Ibuprofen 600mg q6 hours + Gabapentin 400 mg q8 h _{PRN} PO + Scheduling Chronic Pain Outpatient follow up appointment soon after discharge

DISCUSSION

- In recent studies, there has been growing evidence of increased harms from long-term and high-dose use of opioids
- Opioid dosage beyond 50 MME/day have diminishing returns for pain control and function relative to risks, in setting of chronic abdominal pain. [5]
- Our patient was on 600 MME/day, well above the CDC suggested limit.
- This has no recommendations on how to approach an opioid taper, which can be aggressively accomplished in an inpatient setting.
- Benefits of tapering for some patients may include relief of withdrawal symptoms (e.g., pain, sweating, or anxiety close to the end of the dosing interval), reduction in opioid adverse effects, and improvements in overall function and quality of life.
- Based on our experience, we suggest actively engaging patients in discussions about tapering and preparing them by optimizing nonopioid therapy as appropriate for their pain and comorbidities
- We also created a discharge plan early on with the patient consisting of buprenorphine continued at discharge and follow-up with a chronic pain specialist to eliminate confusion, set goals ahead of time, and set the patient up for success during the transition from inpatient to outpatient pain management.

- A multimodal, interprofessional approach to pain control allows for safer, more efficacious pain relief in the inpatient setting as opposed to reliance on continuing the opioid monotherapy.
- The availability of a dynamic pain management service helped create and seamlessly implement a rapid opioid titration plan that was tailored to our patient's specific needs during her inpatient stay.

Daily Pain Intensity Ratings and COWS Scores		
Day	Pain Score	COWS Score
1 (before taper)	9/10	0
2 (first day of taper)	7/10	0
3 (second day of taper)	7/10	0
4 (third day of taper)	7/10	3
5 (post taper day 1)	7/10	5
6 (post taper day 2)	10/10	6
7 (post taper day 3)	9/10	5
8 (post taper day 4)	10/10	6
9 (post taper day 5)	10/10	7
10 (post taper day 6)	10/10	6
11 (post taper day 7)	10/10	4
12 (post taper day 8)	7/10	3
13 (post taper day 9)	7/10	1
14 (post taper day 10)	7/10	2

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