Long-term Buprenorphine Treatment for Loperamide Use Disorder
- Case Series -

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Background

The opioid epidemic continues to be an on-going issue in the United States.

As of 2018:
- 5% net decrease in overall overdose deaths.
- 7% increase in nonprescription opioid related deaths.

Increase use in non-prescription substances including: heroin, fentanyl, fentanyl analogs.

Loperamide, a peripheral mu-opioid agonist used for diarrhea, has had an increased in nonmedical use. Large, nontherapeutic doses of loperamide can result in a euphoric state.

Loperamide Use Disorder

For therapeutic effects, a loading dose of 4-mg is suggested. Additional 2-mg for each diarrheal episode, up to 8-mg for over-the-counter use.

When taken at high doses +/- P-glycoprotein inhibitors, loperamide crosses the blood-brain-barrier.
- Centrally, loperamide causes opioid-like effects, including central nervous system depression and euphoria.

- ✓ Loperamide is available over-the-counter
- ✓ Increased report of loperamide exposure in media
- ✓ Loperamide has a variable half-life: 9-41 hours

Purpose: This case series presents three patients with loperamide-associated opioid use disorder who were treated with on-going buprenorphine (BUP) treatment.

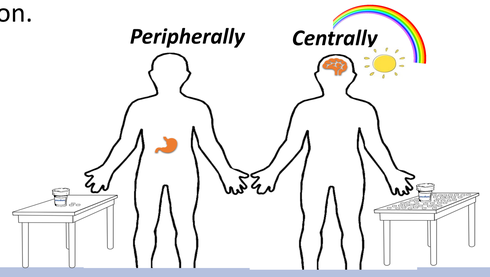
Table 1: Case Series Summary

	Patient #1 38yo M	Patient #2 37yo F	Patient #3 39yo F
Duration of loperamide use	1 year	2 years	3 years
Past loperamide use history	200 mg/day (100 pills)	400 mg/day (200 pills)	200-400 mg/day (100-200 pills)
Duration of ongoing treatment	13 months	7 months	4 months before lost to follow-up
Initial stabilized BUP dose	12 mg	12 mg	16 mg
Current daily BUP dose	6 mg	12 mg	24 mg
Current outpatient appt frequency	Monthly	Weekly	Lost to follow-up
Number of definitive urine drug tests	13	10	9

Patient 1: Started using loperamide after watching a YouTube video.
- Depicted how loperamide provides euphoric effects similar to opioids.

Patient 2: Started using loperamide after seeing a news report.
- Stating that some people were using loperamide to help with withdrawal and cessation of heroin.

Patient 3: Lost to follow-up due to moving out of town and lack of transportation.



Discussion

- All patients had therapeutic levels of buprenorphine and norbuprenorphine, with no other opioids/illicit substances in all definitive drug tests.
- Existing literature suggests patients with Opioid Use Disorder should start BUP treatment 24 hours after last opioid use to prevent precipitated withdrawals.
- Patients #1 and #3 went into precipitated withdrawal after taking BUP 24 hours following their last loperamide dose.
- Patients #1 and #2 are still in ongoing treatment. Patient #3 was lost to follow-up.

Conclusion

- ✓ BUP may be an effective long-term treatment option for individuals with LUD.
- ✓ First known case-series to explore long-term BUP treatment for loperamide use disorder.
- To avoid precipitated withdrawal:
  - A period longer than 24 hours after the last dose of loperamide might be necessary to avoid precipitated withdrawal.
  - Individuals with opioid dependency must be in mild-to-moderate withdrawals.

Resources

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