

# "Gas Station Heroin": Tianeptine, a unique tricyclic antidepressant.

## CASE SERIES

- CASE 1:
  - 32-year-old Caucasian male presented to the clinic after being discharged from the emergency room (ER) due to Tianeptine use disorder and withdrawal. Patient started use with 150 mg/day, escalating to 18000 mg/day [picture one] within a few weeks.
  - In the ER he received buprenorphine 8 mg off-label to manage withdrawals.
  - Upon ER discharge, patient received a three-day prescription for buprenorphine 8 mg twice a day and gabapentin 300 mg three times a day until clinic follow-up
  - In clinic patient was found to have continued withdrawal symptoms and buprenorphine dose was increased to 2.5/day, and fluoxetine 20 mg daily was initiated, along with the continued use of gabapentin. Follow-up at two weeks revealed resolution of withdrawal symptoms, and the patient reported stability on the prescribed medications with no cravings for Tianeptine and opioids.
- CASE 2:
  - 68-year-old male visited the clinic after a Tianeptine overdose on top of Kratom use. He had been abstinent for five years but relapsed using Kratom for management of body aches and pain.
  - Following the overdose, he was admitted to the ICU, intubated, given naloxone, and subsequently started on buprenorphine-naloxone.
  - Discharged with a two-week supply, the patient followed up in the clinic with increased nervousness and anxiety.
  - Buprenorphine-naloxone dose was increased from 2/0.5mg twice a day to 4/1 mg twice a day. Four weeks later, the patient reported resolution of all symptoms and cravings for opioids.

## INTRODUCTION

- Tianeptine is an atypical tricyclic antidepressant that has been approved for the treatment of major depressive disorder in countries other than the USA [2].
- Tianeptine has gained popularity as a “gas station drug,” being sold by various gas stations, bodegas, corner stores, smoke shops, and on the internet.
- Tianeptine has a wide array of mechanisms of action, including serotonergic modulation, glutamatergic effects, and opioid agonism [1].
- Because of the opioid receptor agonism, Tianeptine has gained the alternative name of “gas station heroin” and has substantial misuse potential [1].

## ILLUSTRATION



Picture 1



Picture 2

## CONCLUSION

Tianeptine is an atypical TCA with a novel mechanism of action by increasing the uptake of serotonin 5-HT in the brain, rather than serotonin reuptake inhibition like many antidepressants [3]. The standard dosage of treatment for patients with major depression, depressed bipolar disorder and dysthymia is typically in the range of 25 to 50 mg/day [3]. Patients who seek the psychoactive effects of Tianeptine will take supratherapeutic doses, such as the patient mentioned above, who consumed 18,000 mg a day. In a series of 18 case studies of Tianeptine toxicity, the highest dose that was taken per day was 4125 mg. [4]. Tianeptine is becoming more and more popular as a gas station drug as it is labeled as a dietary supplement to enhance mood and cognition. However, some of the effects are through opioid receptors which makes it a drug to be misused significantly. In conclusion, these cases underscore the complexities of managing Tianeptine-related issues, emphasizing the importance of comprehensive care, including medication adjustments and psychological support, to achieve successful outcomes in individuals with substance use disorders.

## AUTHORS & DISCLOSURES

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