



A Case of Tianeptine Overdose Requiring ICU Admission



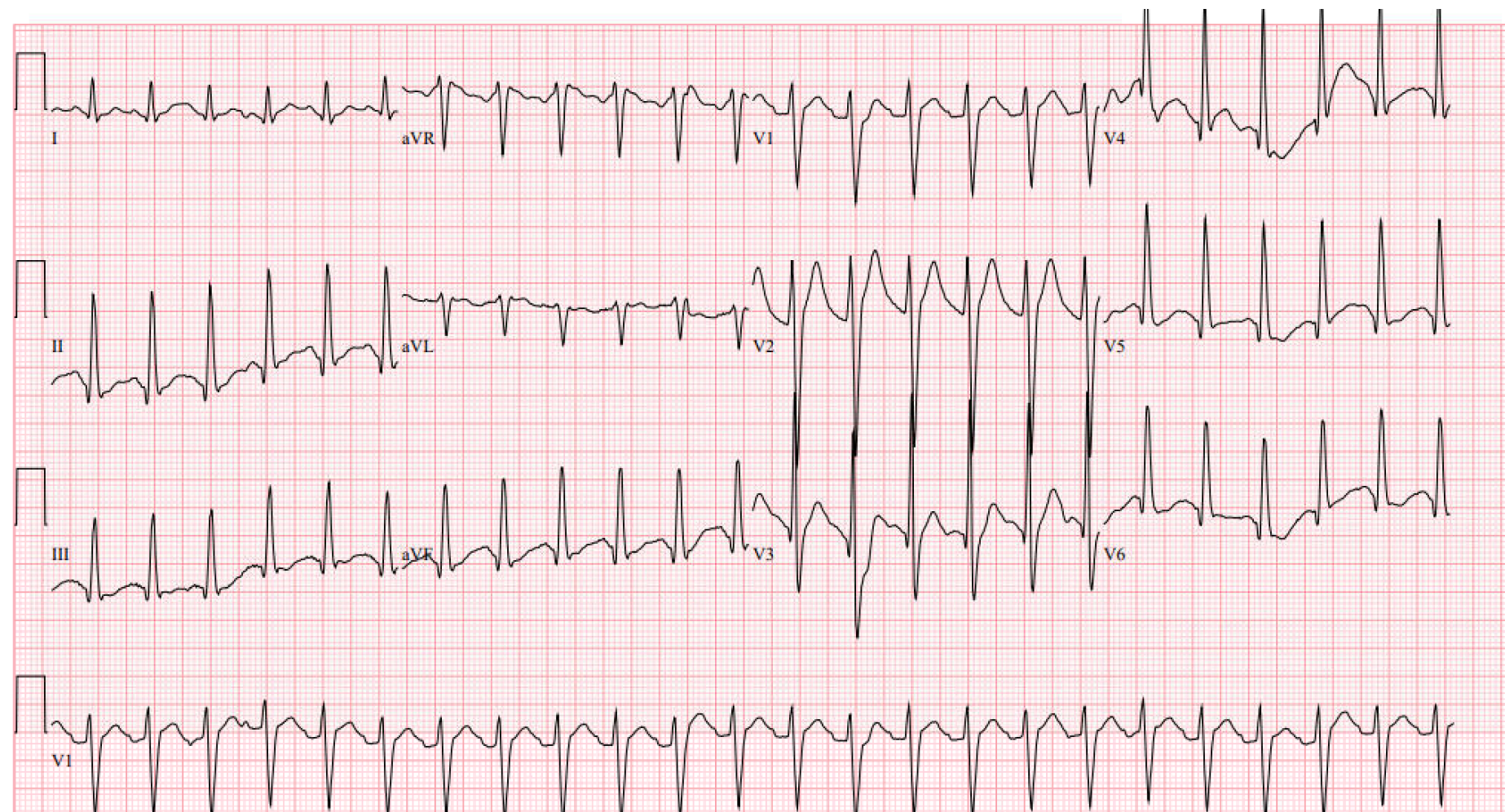
Jack Buyske MD, Katherine Panettiere-Kennedy MD, Dustin Kee MD, Jordan Nahas-Vigon MD
Department of Medicine, Johns Hopkins University, Baltimore, Maryland, USA

INTRODUCTION

- Tianeptine is an atypical tricyclic antidepressant. It also acts as a full agonist at the mu opioid receptor.
- It has risen in popularity as a street drug over the past few years
- There is not robust literature on overdose, dependence, and withdrawal

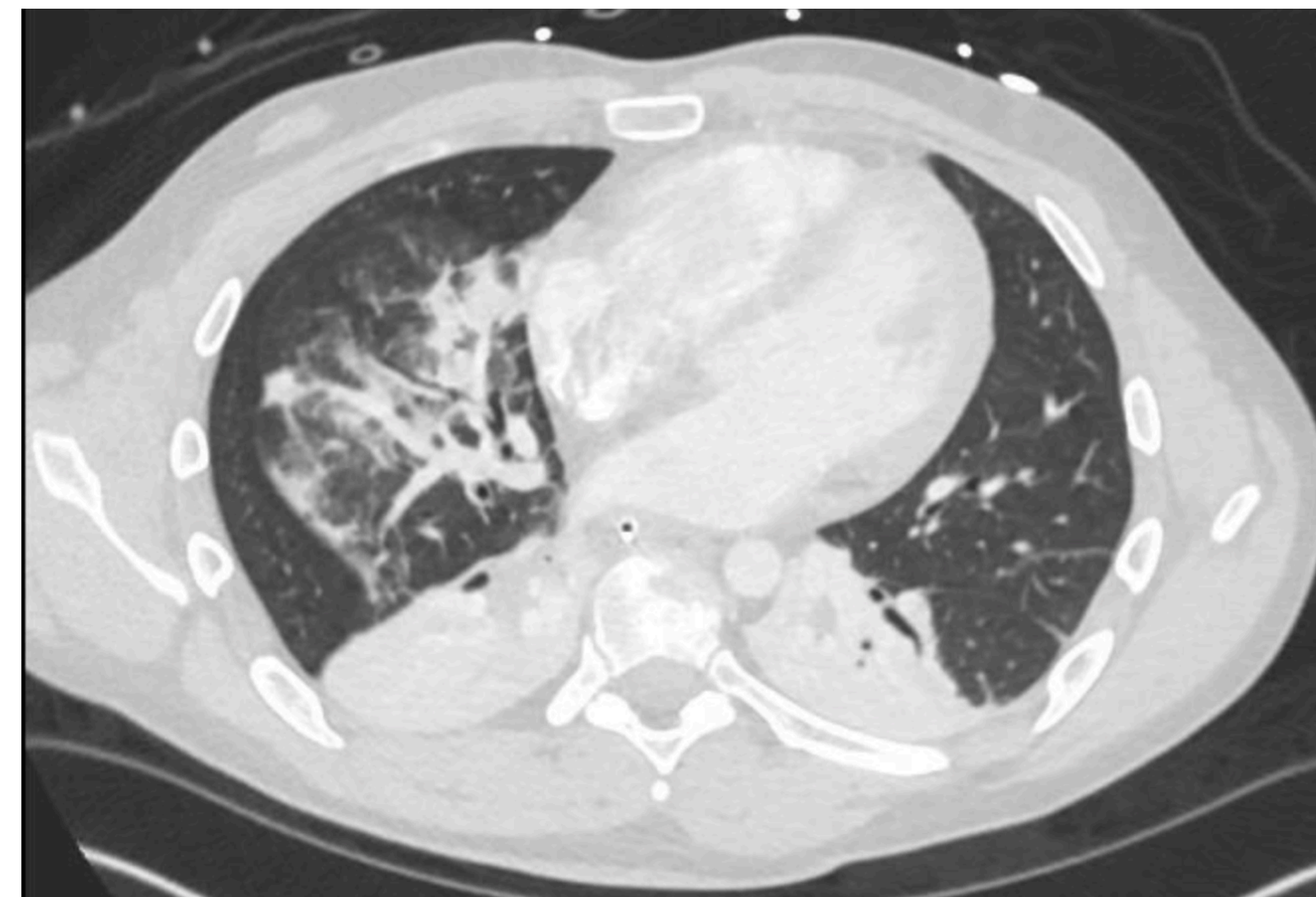
CASE PRESENTATION

- The patient is a 33-year-old man with a past medical history of depression, anxiety, and opioid use disorder with prior unintentional overdose.
- His partner noted he used tianeptine to cope with anxiety and avoid use of opioids. He was using kratom and tianeptine every day.
- On the day of admission he purchased a different brand of tianeptine from a new smoke shop. The product was labeled with his typical dose.
- Immediately after consuming the substance, he began to have difficulty breathing and then became unresponsive.



CLINICAL COURSE

- While with EMS, he became bradycardic to 10 BPM and had a PEA arrest. ROSC was achieved
- He was intubated and brought to the hospital.
- On presentation to the hospital, heart rate was 142 beats per minute, blood pressure was 195/104 mmHg, with oxygen saturation 98% in the setting of mechanical ventilation
- He had an episode of shaking and gaze deviation, which was treated with lorazepam.
- EKG with QTc 591 msec, QRS 167 msec, for which he was given sodium bicarbonate.
- CT chest suggestive of aspiration. Urine toxicology screen was negative. He was admitted to the ICU
- In the ICU he became tremulous. EEG was negative. Neurology consultation assessed this to be from neuromuscular agitation in the setting of his toxidrome.
- On day two of admission, he self-extubated
- On hospital day three he was discharged home.



TEACHING POINTS

- We describe a case of tianeptine overdose leading to cardiac arrest and respiratory failure requiring intubation.
- This presentation was similar to a tricyclic antidepressant toxidrome, as well as features of opioid overdose
- This case was notable in that the patient experienced toxicity with a product labeled with his typical daily dose. Many previous cases in the literature describe toxicity with escalating doses or significant co-ingestion. As with other drugs, there may be benefit to harm reduction counseling re: uncertainty of the drug supply
- Further research is needed to determine the best evidence-based care for tianeptine use and overdose. In this case, even Poison Control expressed uncertainty due to the lack of data

REFERENCES

1. Edinoff, A. N., Sall, S., Beckman, S. P., Koepnick, A. D., Gold, L. C., Jackson, E. D., Wenger, D. M., Cornett, E. M., Murnane, K. S., Kaye, A. M., & Kaye, A. D. (2023). Tianeptine, an Antidepressant with Opioid Agonist Effects: Pharmacology and Abuse Potential, a Narrative Review. *Pain and therapy*, 12(5), 1121–1134. <https://doi.org/10.1007/s40122-023-00539-5>
2. Springer, J., & Cubala, W. J. (2018). Tianeptine Abuse and Dependence in Psychiatric Patients: A Review of 18 Case Reports in the Literature. *Journal of psychoactive drugs*, 50(3), 275–280. <https://doi.org/10.1080/02791072.2018.1438687>
3. Rushton, W., Whitworth, B., Brown, J., Kurz, M., & Rivera, J. (2021). Characteristics of tianeptine effects reported to a poison control center: a growing threat to public health. *Clinical toxicology (Philadelphia, Pa.)*, 59(2), 152–157. <https://doi.org/10.1080/15563650.2020.1781151>
4. Biancarelli, D. L., Biello, K. B., Childs, E., Drainoni, M., Salhaney, P., Edeza, A., Mimiaga, M. J., Saitz, R., & Bazzi, A. R. (2019). Strategies used by people who inject drugs to avoid stigma in healthcare settings. *Drug and alcohol dependence*, 198, 80–86. <https://doi.org/10.1016/j.drugalcdep.2019.01.037>
5. Wagner, M. L., Pergolizzi, J., Jr, LeQuang, J. A. K., Breve, F., & Varrassi, G. (2023). From Antidepressant Tianeptine to Street Drug ZaZa: A Narrative Review. *Cureus*, 15(6), e40688. <https://doi.org/10.7759/cureus.40688>

DISCLOSURES AND CONTACT INFO

- We have no disclosures. For further information, please contact Jack Buyske at jbuyske1@jh.edu.