Opioid-like Withdrawal in Heavy Tianeptine Misuse: A Case Report and Implications for Long-term Wellbeing

Maxwell MR, Creighton EG, Shirazi MR

University of Colorado School of Medicine in partnership with UC Health

Background

- First introduced as a Tricyclic Antidepressant (TCA) in Europe during the late nineteen eighties.[1,2]
- Unique pharmacodynamics, initially thought to alter serotonin uptake, now known to agonize mu-opioid receptors, leading to euphoria at high doses.[1,3,4]
- Easily Available at convenience stores and smoke shops as “ZaZa”, “Tianna Red” among other street names.[5,6]
- Recent surge in misuse and tianeptine-related hospitalizations in the US.[5,6]
- Causes psychostimulant and opioid-like effects at high doses.[3,5]
- Current research is limited regarding management of tianeptine misuse, particularly at doses over 4 g/day.
- Understanding the pharmacodynamics and clinical effects of Tianeptine is critical in the management of acute intoxication and withdrawal.

Methods

- We performed a literature review using PubMed.
- Search Terms included “tianeptine” “Tianeptine misuse” “Tianeptine overdose” “Tianeptine Mechanism” and “Tianeptine Depression”.
- A total of 646 publications were available regarding Tianeptine, and these were screened for relevance, inclusion of primary data, case studies, and pharmacodynamics leading to the thorough review of 47 publications from 21 countries.

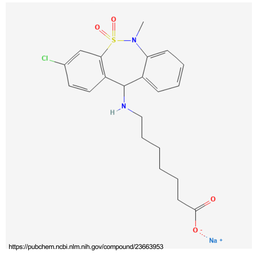
Case Presentation

- 57-year-old man with a history of alcohol use disorder, polysubstance use, and multiple previous hospitalizations for intoxication by an unknown substance, presented from home, brought in by his spouse after sudden onset altered mental status with confusion, imbalance, agitation, and slurred speech.
- On Hospital day 2, the patient became agitated, irritable, restless, hypertensive, and aggressive towards staff.
- Disclosed to C-L psychiatry team that he’d been suffering from depression and “self-medicating” with Tianeptine for roughly 4 years which he obtained through online vendors.
- Initially using ~200 mg/day, gradually increasing to ~10 g or more daily at the time of admission, due to loss of effect.
- Additionally reported intermittent use of ~50 mg/day Cyclazodone, also not available in the US, and obtained online.
- Attributed the loss of his job to his Tianeptine use, and reported previous withdrawal symptoms of diarrhea, tachycardia, diaphoresis, and agitation when attempting to decrease his use in the past.
- COWS was instituted on hospital day 2 using Clonidine which improved his anxiety, diaphoresis, tachycardia, and hypertension.
- His agitation continued to worsen, and Olanzapine was started on day four with significant benefit.
- Withdrawal symptoms peaked on day 5 with significant improvement by day 7 as reported on COWS.
- Hospitalized for 7 days total. Discharged on Duloxetine 30 mg daily and Mirtazapine 15 mg nightly for depression and insomnia, and as safer replacements for Tianeptine.

Media

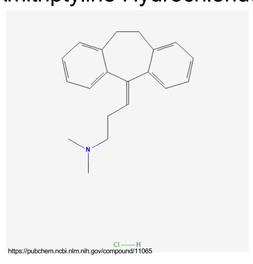
Reprinted from FDA Website: https://www.fda.gov/consumers/health-fraud-scams/tianeptine

Tianeptine Sodium



https://pubchem.ncbi.nlm.nih.gov/compound/23663953

Amitriptyline Hydrochloride



https://pubchem.ncbi.nlm.nih.gov/compound/11065

Discussion

- One previous study has demonstrated the safe and effective use of Naloxone and Buprenorphine for Tianeptine withdrawal.[7]
- Our case illustrates that tianeptine withdrawal can be managed effectively using sliding scale clonidine in alignment with the COWS protocol, along with second-generation antipsychotics for acute agitation and aggression as needed.
- It is important to engage in shared decision making with the patient regarding antidepressant replacement in the context of self-medication for depression.

Implications

- As tianeptine misuse continues to rise in the US, it is imperative that physicians consider Tianeptine use in their differential for opioid-like intoxication and withdrawal syndromes, particularly in the absence of a positive drug screening.
- Proper identification allows the use of standardized management strategies along with the crucial addition of an approved antidepressant medication to ensure long-term patient wellbeing and safety.

Disclosures

- I, Martin Maxwell, and all other contributors have no disclosures to report.

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