

Case Report: A Novel Presentation of Diplopia in Tianeptine and Phenibut Abuse.

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Introduction

- Tianeptine, also known as "gas station heroin", is an atypical and highly addictive antidepressant that binds to mu and delta-opioid receptors and stimulating the release of dopamine by glutaminergic signaling[1, 2].
- Tianeptine has withdrawal effects of nausea, tachycardia, hypertension, tremor, diarrhea, diaphoresis[2].
- Phenibut is an anxiolytic supplement that works on GABA receptors, claims to enhance cognition and has been associated with physical dependency, and can be confused with other types of withdrawals [3].
- The purpose of this case report is to reveal diplopia and visual changes as unique findings likely as an adverse event of Phenibut and Tianeptine withdrawal.

Case Presentation

Admission day:

- A 31-year-old male with a known history of polysubstance abuse, presented to the emergency department complaining of symptoms of headache, restlessness, diarrhea, abdominal pain, cramping and visual changes. A day prior to this admission the patient mentioned that he took 45 capsules of Tianeptine. There was no history of any psychiatric condition.

At the physical exam: vital signs were unremarkable.

-Pupils were equal, round, and reactive to light bilaterally. Medial deviated right eye: deconjugate gaze, extraocular movements were intact.

-Binocular diplopia was present with central gaze and improved with lateral gaze bilaterally. No evidence of ptosis

-Neurologic workup was unremarkable other than slow saccades and end gaze nystagmus.

Abnormal Labs:

CK 252 U/L

Diagnosis: Patient was admitted in the context of mixture of phenibut and tianeptine withdrawal syndrome

Medical Management:

Buprenorphine was initially prescribed to patient, but the patient denied. Therefore, Lorazepam was prescribed for the management of symptoms.

Day 3

Patient displayed increased restlessness, agitation, active hallucinations, anxiety, and confusion on the third day in the hospital. The family refused Buprenorphine as an aid; therefore, patient received Lorazepam to help manage some of his symptoms. Patient reported improving diplopia without complete resolution, and disconjugate gaze was still present on exam.

After 72 hours, acute symptoms resolved, however, diplopia and restlessness did not.

Day 4

Patient had clinically improved on his fourth day and was alert, oriented, cooperative, and coherent. Patient improved in diplopia without resolution, and the deconjugate gaze was less apparent.

Hospital Course

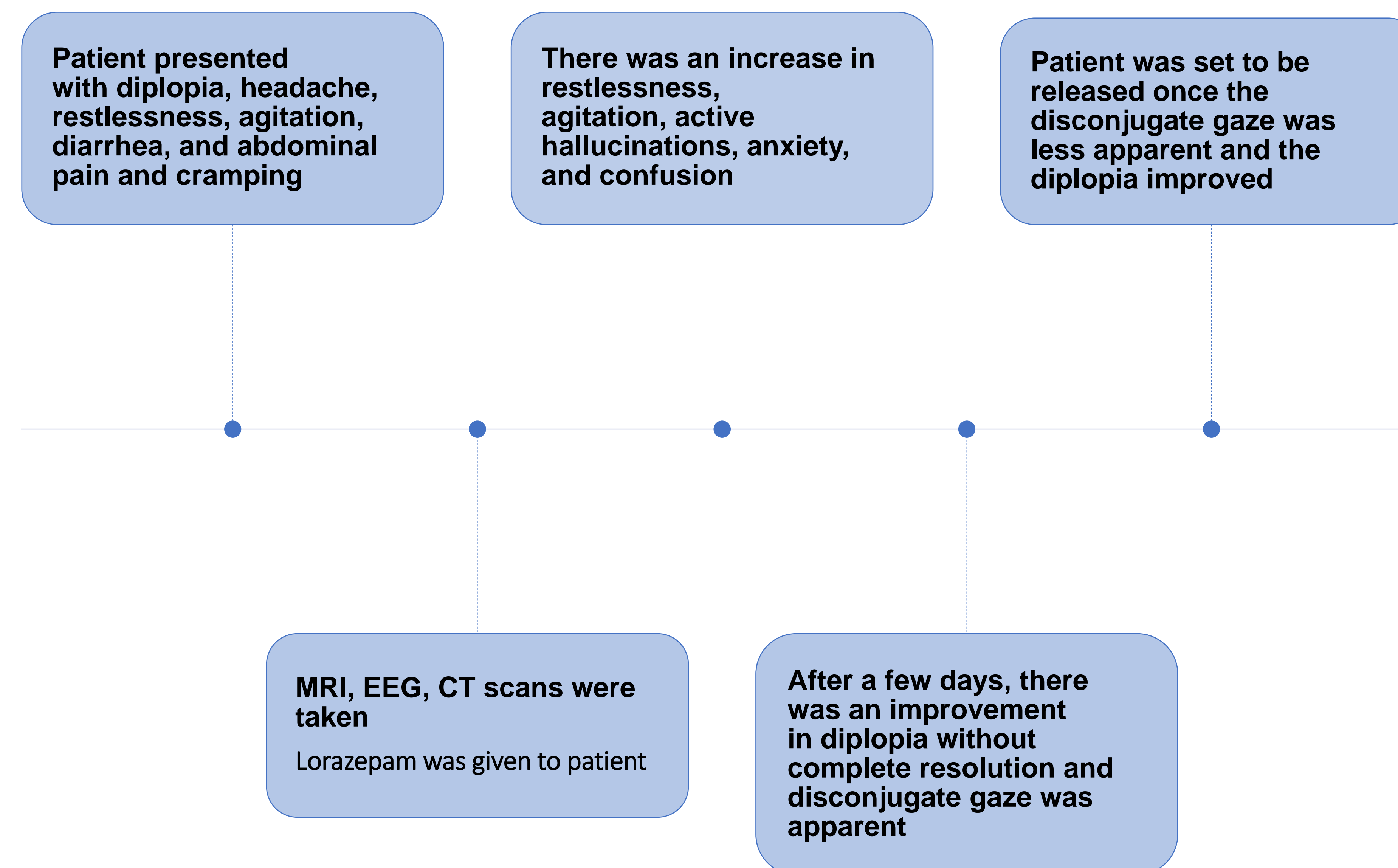


Figure 1: Hospital Course Timeline. This timeline displays patient presentation throughout the hospital visit

Diagnostics and Imaging



Figure 2. Brain MRI CTA Head/Neck and MRI Brain and Orbits were unremarkable

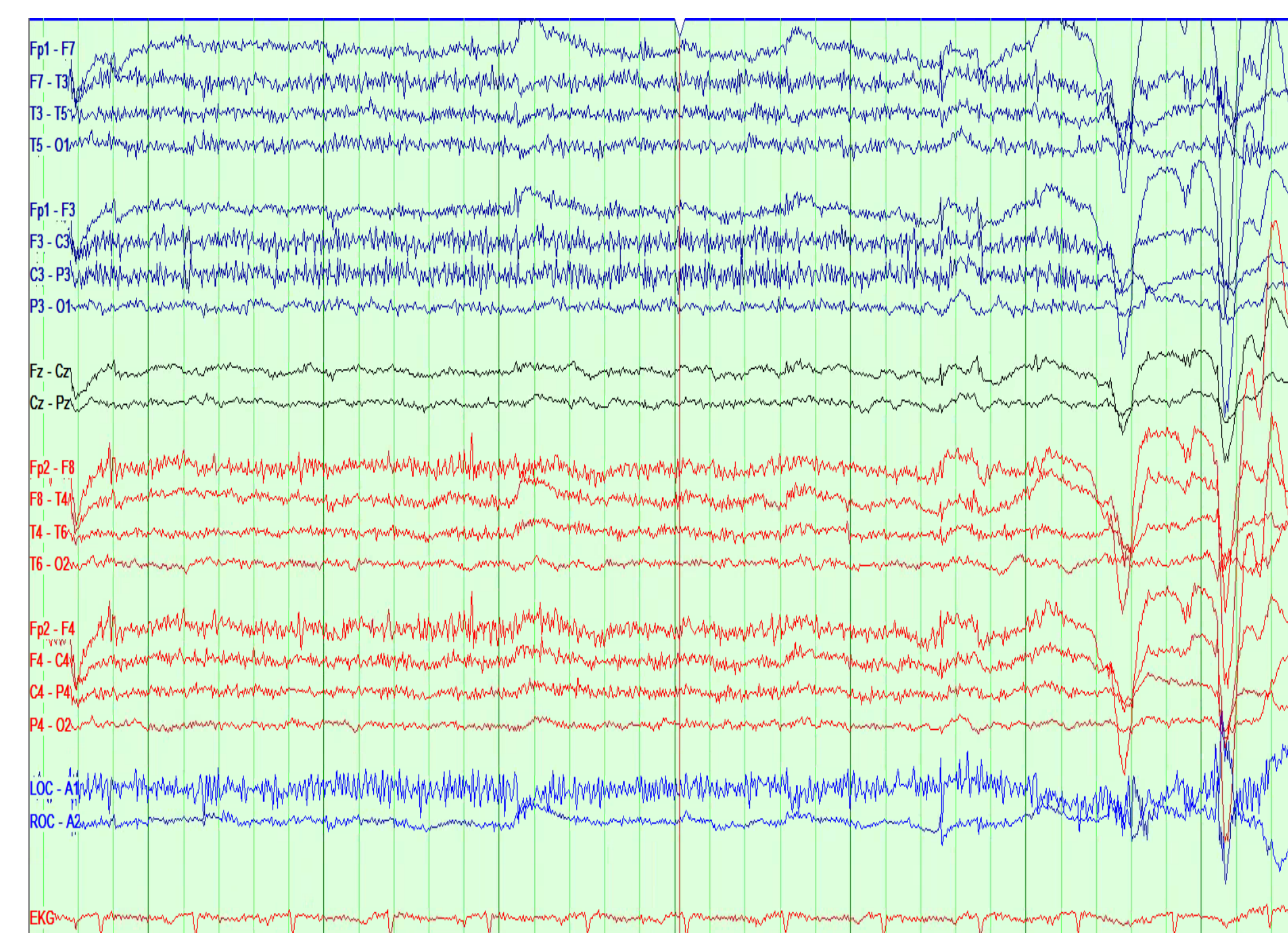


Figure 4. EEG. EEG revealed diffuse theta and beta activity indicative of moderate dysfunction most likely secondary to medication/drug use.

Discussion

Incidence:

- Unique point- ocular symptoms, diplopia and disconjugate gaze, reported in Tianeptine withdrawal.
- This patient was most likely taking "Zaza Silver" and not pure Tianeptine[4]. This is a combination of Tianeptine and Phenibut.
- Presentation and Diagnosis:**
- Phenibut withdrawal is associated with psychomotor agitation, restlessness, irritability, insomnia, and both auditory and visual hallucinations [3].
- One of the patient's main complaints aside from the diplopia was the subjective restlessness bordering almost on akathisia that he felt.
- This restlessness is most likely attributable to the Phenibut component of Zaza Silver[3].
- There are no reports of Phenibut withdrawal or toxicity causing diplopia or disconjugate gaze.
- However, gamma hydroxybutyrate (GHB), which acts on GABA B receptors just like Phenibut, has reported withdrawal symptoms of 6th nerve palsy, nystagmus and blurred vision [3].

Conclusions

Phenibut and Tianeptine overdose might be responsible for diplopia and visual changes as unique findings.

- Zaza Silver is a mixture of Tianeptine and Phenibut and the abuse effects can be mistaken for Tianeptine only.
- A Novel neurologic/optic symptom of tianeptine/Phenibut and an extensive neurologic workup may not be necessary if these optic symptoms present in the setting of tianeptine withdrawal, given that they will resolve as withdrawal resolved.

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