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Case Report

The "Smart Pill" High: A Case of Phenibut Intoxication and Withdrawal

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Abstract

Phenibut is an anxiolytic and nootropic drug, discovered in the Soviet Union used to treat several psychiatric disorders. Currently it is available online as supplement. The case report highlights the abuse potential of phenibut, with the associated clinical presentation of intoxication, withdrawal, and relapse, as well as the use of baclofen as a potential treatment of phenibut withdrawal.

Keywords: phenibut, anxiolytics, nootropic drug.

BACKGROUND

Phenibut (beta-phenyl-gamma-aminobutyric acid HCl) is an anxiolytic and nootropic drug, discovered in the 1960s. Phenibut was initially developed in the Soviet Union to treat conditions like insomnia, anxiety, depression, asthenia, post-traumatic stress disorder, stuttering, and vestibular disorders.

Acts as a GABA-mimetic (primarily acts as GABA-B), dopamine agonist, and beta-phenethylamine (PEA) antagonist. It is currently available for purchase online as a non-FDA-approved supplement without a prescription. Historical timeline of phenibut discovery and uses. We present the following case report which highlights the abuse potential of phenibut, with the associated clinical presentation of intoxication, withdrawal, and relapse, as well as the use of baclofen as a potential treatment for phenibut withdrawal.

CASE PRESENTATION

This is the case of Mr. B, a 35-year-old, single, unemployed, homeless, Caucasian man with no past medical history and self-reported history of "social anxiety", who was initially evaluated by our CL Psychiatry service after presenting to the medical emergency room* with altered mental status. Initially, he was afebrile, his blood pressure was 125/60 mmHg, respiratory rate was 16 breaths per minute and heart rate was 58 bpm. He was talking incoherently, with impaired sleep, anxiety, agitation, and psychotic behavior (i.e. eating rocks and dirt stating that he was "eating peanuts"). He was able to answer most questions, but when he was asked to write his name, he took the paper, started writing in the air, and began picking at his clothes inappropriately.

Laboratory workup was significant for a leukocytosis of 13.7 103/µL, hemoglobin 8.5 g/dL, hematocrit 28.9%, low creatinine (0.61mg/dL) and low albumin (3.6g/dL). Complete blood count, comprehensive metabolic panel, B12, folate, TSH, and urinalysis were all otherwise within normal limits. Ethanol, salicylate, acetaminophen, and ammonia levels were below detection. HIV, Syphilis IgG, Hep C, and Urine drug toxicology screens were negative. Additionally, ECG showed premature atrial contractions; QTc 443 msec and a computed tomography (CT) scan of the head was obtained, which was negative for acute intracranial lesions and hemorrhages.

Mr. B required admission to the intensive care unit due to the severity of toxic encephalopathy presumed to be secondary to phenibut intoxication, see. Once the patient was able to confirm that he abused phenibut, an initial trial of Baclofen 5 mg by mouth three times per day was initiated for detoxification. The patient was unable to quantify the amount of phenibut powder used, therefore it was quite challenging to accurately estimate the required Baclofen dose. His symptoms began to resolve with the administration of baclofen 10 mg by mouth three times per day.

After discharge, Mr. B relapsed into phenibut use and was readmitted (See Figure 2). Once medically stabilized, the patient was transferred to an inpatient psychiatry acute detoxification unit for further stabilization with baclofen taper, and a petition was filed to obtain a court-ordered substance rehabilitation treatment.

During patient visits to our facility, several treatment trials were utilized but with no good response. Those failed treatment trials included: Haloperidol, Olanzapine, Valproic Acid, Lorazepam, Gabapentin, Sertraline, and Buspirone.

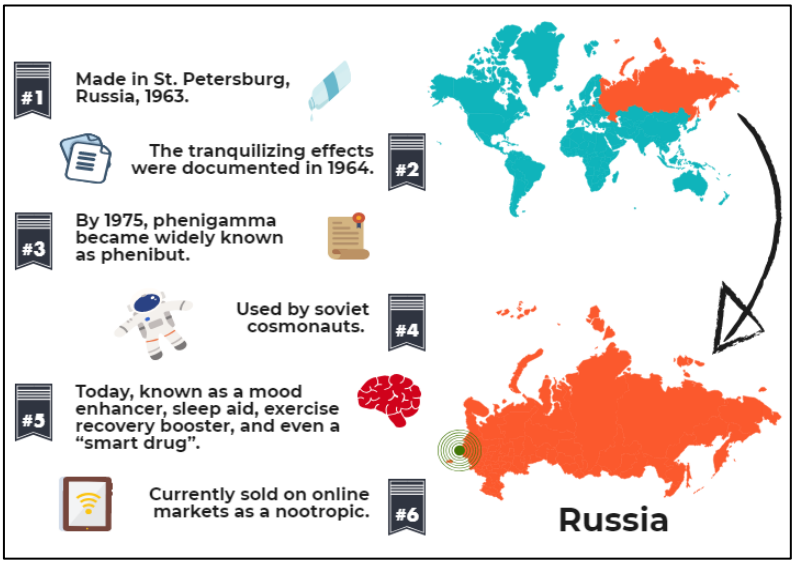

Figure 1: Historical timeline of Phenibut discovery and uses

Table 1: Phenibut intoxication and withdrawal symptoms

INTOXICATION SYMPTOMS	WITHDRAWAL SYMPTOMS
Euphoria	Anxiety / Agitation
Dizziness	Nausea and vomiting
Irritability	Reduced appetite
Sedation/sleepiness	Palpitations
Palpitations	Depression
Hypotension	Cognitive deficits
Lethargy	Fatigue / Dizziness
Loss of coordination	Depersonalization
Slurred speech	Psychosis
Nausea	Insomnia
Vomiting	Tremor
	Fear

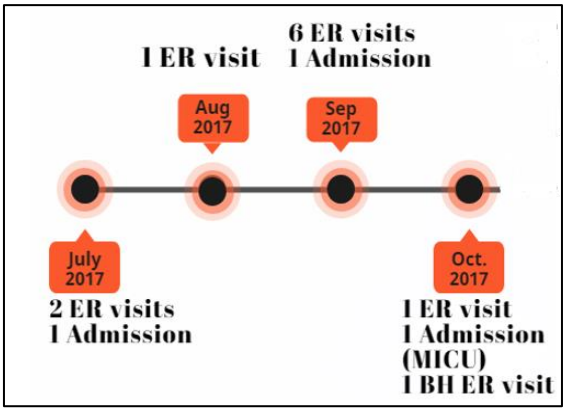

Figure 2: Over the course of four months, the patient presented to the medical emergency room a total of 10 times. His presentation was similar during all visits, leading to three inpatient medical admissions (one of which required intensive care)

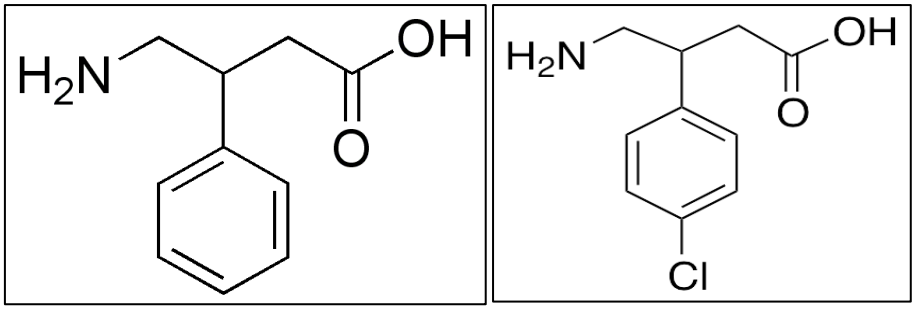

Figure 3: Chemical Structures of Phenibut (Left) vs. Baclofen (Right)

DISCUSSION & CONCLUSIONS

Phenibut (Anvifen, Fenibut, or Noofen) is commonly sold as a powder, which makes its accurate dose estimation challenging. This may complicate the ability to study baclofen dose equivalency when baclofen is used to treat those with addiction to phenibut. Phenibut is also available in tablets of 250mg. Similar to benzodiazepines and alcohol, phenibut use builds tolerance. Relapse is common if not tapered over extended periods of time for chronic users.

In this case, many psychotropics including lorazepam, haloperidol, and olanzapine did not provide complete resolution of acute withdrawal and agitation. We identified that treatment with baclofen to detoxify our patient from phenibut was helpful. The maximum dose used in this case was baclofen 10mg oral three times a day.

In our case, the patient had multiple risk factors that increased his risk for relapse, including limited access to outpatient mental health care, the absence of social support, homelessness, legal issues, and an underlying comorbid anxiety disorder. Despite our efforts to connect him with inpatient and outpatient services as well as initiating a petition for involuntary drug rehabilitation, our patient continued to relapse.

The use of phenibut needs to be regulated by the FDA due to its deleterious risks associated with its abuse, intoxication, and withdrawal potential. Further studies are necessary to guide clinicians in the management of phenibut use.

Current literature on phenibut use remains limited. Larger longitudinal studies would be pivotal in assessing individual outcomes for individuals presenting with phenibut misuse.

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