First-time Seizure in a Young Adult: It's All in the History

SCHOOL OF MEDICINE
DEPARTMENT OF EMERGENCY MEDICINE

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Introduction

A twenty-eight-year-old male with a history of substance abuse and no known history of neurologic disorders presented to the emergency department for evaluation and treatment after experiencing a first-time witnessed seizure.

Case

The patient was riding in the back of a car when his family noted that his eyes suddenly deviated, and the patient started to experience generalized shaking and foaming at the mouth. They pulled over and the patient was taken out of the car and laid on the side of the road, at which time EMS was called. The seizure had stopped when EMS arrived, and after evaluation the patient refused transport. EMS left, at which time the family insisted he go to the hospital.

While gathering history from the patient and his family, he noted that he had struggled with substance abuse including meth, cocaine, and narcotics. Given his history of abuse, the patient was asked if he had ever taken "bars" (street name for alprazolam), at which time the patient's cousin pressed him to tell the truth. The patient revealed that he was under a contract with an addiction clinic for a prescribed taper from Xanax, but during this time he had relapsed taken all of his prescribed alprazolam at once and had been out for an about two weeks.

<u>Vitals</u>
HR 88 | BP 142/86 | RR 18 | O2 98% on RA | T 36.6 C

<u>Physical Examination</u>
Remarkable for bite mark on the right lateral aspect of the tongue. No trauma was otherwise noted, and a complete neurologic exam was found to be within normal limits.

<u>Labs</u>
POC Glucose – 98
EKG – NSR with no ST changes noted

Discussion

Benzodiazepine withdrawal is a clinical syndrome that can manifest with a variety of non-specific symptoms. The timeline in which this occurs is as variable as the symptoms themselves given myriad of different benzodiazepines on the market, all with varying affinity for GABA receptors in conjunction with varying half-lives. Therefore, it is of great importance to conduct a thorough history on these patients to assess for their risk of withdrawal. There is currently no consensus on treatment for benzodiazepine withdrawal, therefore most clinicians restart the agent that is being withdrawn from or switch to longer acting benzodiazepines. Arranging close follow-up paramount if the patient is otherwise stable and safe for discharge. External prescription monitoring is a useful adjunct in these cases, and ultimately was useful in this case in finding the correct dose for the patient to be put on in the interim while he arranged follow-up with his outpatient provider.

Differential Diagnosis
Alcohol withdrawal
Opioid withdrawal
Epilepsy
Acute hypoglycemia
Hepatic encephalopathy
Infection
Depression
Anxiety/Panic Attacks

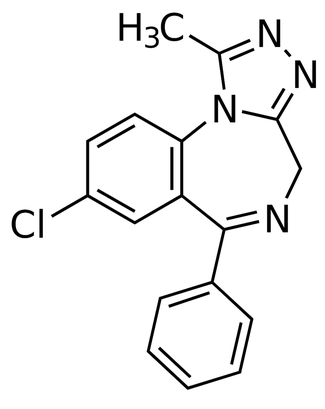
DDx for Benzodiazepine Withdrawal[3]

"Bars" of Alprazolam

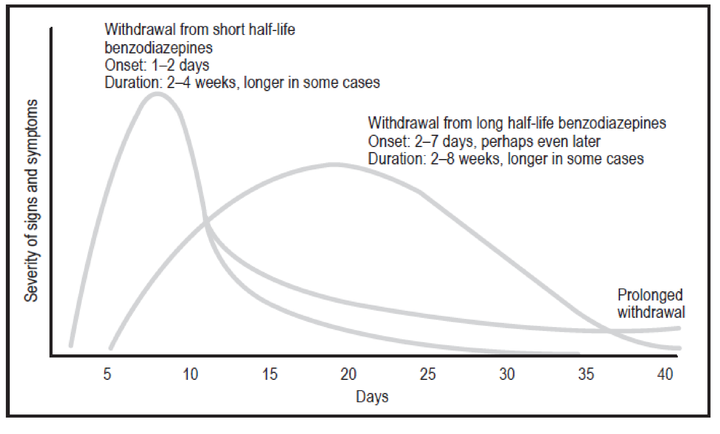
Psychologic	Neurologic	Physiologic
Anxiety	Seizures	Tachycardia
Depression	Delirium Tremens	Elevated BP
Insomnia	Ataxia	Diaphoresis
Depersonialization	Parathesias	Flu-Like Symptoms
Panic Attacks	Perceptual Distortion	Muscle Stiffness
Agitation	Visual Disturbances	Headaches
Acute Psychosis	Memory/Cognitive Impairment	Nausea/Vomiting/ Diarrhea
Irritability	Weakness	Hyperpyrexia
Delirium	Tremors	Shortness of Breath
Agoraphobia	Hypersensitivity	Dysphagia

Symptoms of Benzodiazepine Withdrawal[3]

Figures



Chemical Structure of Alprazolam



Duration of benzodiazepine withdrawal[2]

Conclusion

Benzodiazepine withdrawal is an often under-recognized cause of seizures in undifferentiated patients presenting to the emergency department, but can be teased out through building trust and taking a detailed, focused history. Patients who are no longer symptomatic and have close follow-up can be restarted on their last dosage and safely discharged home.

Take-home Points

- Benzodiazepine utilization and abuse is on the rise in the United States.
- Severe withdrawal should be expected in those with uninterrupted long-term use, undergoing a rapid taper, and those using a benzodiazepine with a short half-life.
- There is currently no consensus on treatment, though many physicians utilize a long-acting benzodiazepine over a long-term taper.
- Checking local prescription monitoring program data is a useful adjunct in certain situations, and may inform the physician of a safe dose for the patient.

Works Cited

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