

A Case of Bupropion-Induced Non-Convulsive Status Epilepticus

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Case Report: A 32 year-old male with a history of depression and systemic lupus erythematosus presented to the emergency department after an intentional overdose of between 30 to 90 tablets (based on pill count) of his 300 mg bupropion XL. Prior to arrival, EMS reported two generalized tonic-clonic seizures, followed by another shortly after presentation, and he was subsequently intubated. Initial vital signs: BP 138/62 mmHg; HR 145 beats/min; RR 18/min (ventilator); O₂ 94%. His initial EKG showed sinus tachycardia at 148 beats/min, with a QTc of 549 msec. Gastric lavage was performed, without return of discrete pill fragments, and whole bowel irrigation with polyethylene glycol was initiated after administration of activated charcoal. He was noted to have fixed and dilated pupils, without motor activity. He was given a total of 12 mg of lorazepam, and then placed on infusions of fentanyl and propofol. Neurology was consulted and a bedside EEG was performed which showed numerous bursts of generalized epileptiform activity and electrographic temporal seizures. He was given a 0.2 mg/kg loading dose of midazolam and 5 grams of pyridoxine, with continued titration of the propofol, but no clinical change was observed. Phenobarbital loading was initiated and he was transferred to a tertiary care center. Upon arrival at the receiving hospital, he no longer exhibited seizure activity on EEG, although on physical exam his pupils continued to be fixed and dilated and he demonstrated no corneal or gag reflexes. Over the course of several days, he regained reflexes and began to make purposeful movements, without recurrent seizure activity. He had a prolonged hospital course, attributed to aspiration pneumonia. Five days post presentation, his serum bupropion concentration (drawn at time of transfer) returned at greater than 400 ng/mL (reference range 50 ng/mL). Levels were not trended by the primary team.

Conclusions: We present a case of bupropion-related non-convulsive status epilepticus, associated with high serum concentrations refractory to several therapeutic interventions. Given the ubiquity of prescription bupropion for multiple indications, this concerning consequence of overdose should be included in the differential diagnosis of an unresponsive patient.