

Successful Use of Intralipid Therapy to Reverse Acute ECG Changes in a Poly-Anticonvulsant drug Overdose: A Case Report

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ABSTRACT

Introduction: Epilepsy, a prevalent neurological disorder, necessitates the use of anticonvulsant medications. Since the introduction of phenobarbital in 1912, numerous antiepileptic drugs (AEDs) have emerged, each targeting seizures via distinct mechanisms. Newer AEDs like Lamotrigine, Topiramate, Levetiracetam, and Lacosamide offer improved safety profiles but can present severe side effects, especially in overdose scenarios. This case report details the management of a poly-anticonvulsant overdose in a 57-year-old male, highlighting the successful use of intralipid emulsion therapy to reverse acute ECG changes.

Case: A 57-year-old male with a history of bipolar disorder, depression, seizure disorder, hypothyroidism, and hyperlipidemia was brought to the emergency department after an intentional overdose involving approximately 3000 mg of Lacosamide, 800 mg of Lamotrigine, 2400 mg of Quetiapine, and an unknown amount of Carbamazepine. Initial treatment with sodium bicarbonate and magnesium sulfate failed to resolve the patient's widened QRS (146 ms) and prolonged QTc (520 ms), which deteriorated to 158 ms and 580 ms, respectively. Following expert consultation, intralipid therapy was administered, resulting in rapid normalization of ECG findings and subsequent full recovery.

Conclusion: This case underscores the efficacy of intralipid therapy in reversing ECG changes in poly-anticonvulsant overdose, particularly when conventional treatments are inadequate. The rapid improvement following intralipid administration supports its consideration in similar overdose scenarios, warranting further research to optimize its use in clinical practice.

Keywords: Epilepsy, wide QRS, intra-lipid therapy, Antiepileptic.

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