

WALKING ON A TIGHTROPE WITH LITHIUM: ACUTE NEUROTOXICITY IN BIPOLAR DISORDER

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OBJECTIVE: Bipolar disorder (BD) is a chronic psychiatric illness characterized by recurrent mood episodes, with a global lifetime prevalence of 0.4% to 2.4%. Lithium, a widely used mood stabilizer, is effective in managing mood episodes and reducing suicidal risk. However, its therapeutic mechanisms remain unclear, and its narrow therapeutic range increases the risk of toxicity, particularly in long-term use. This report presents a case of a BD patient who developed delirium due to acute lithium elevation.

CASE: A 24-year-old woman with BD was hospitalized with psychotic mania. Her psychiatric history included a seven-year course with periods of remission and relapse, requiring lithium and electroconvulsive therapy. Non-adherence to medication led to another manic episode in 2023, necessitating hospitalization and lithium therapy. On evaluation, she exhibited irritability, pressured speech, grandiosity, persecutory delusions, and impaired insight. Her psychomotor activity was elevated, and neurological and physical exams were unremarkable. Treatment

with lithium (900 mg/day), diazepam, and aripiprazole was initiated. During the third week, her psychotic symptoms persisted, and oral intake declined. She developed fluctuating disorientation, hand tremors, balance issues, and slowed speech. Laboratory tests revealed hypoglycemia, elevated uric acid, and a high lithium level (1.23 mEq/L). Lithium dosage was reduced to 600 mg/day, and hydration was initiated, leading to the resolution of symptoms. Patient consent was obtained.

DISCUSSION: Lithium toxicity can arise from overdose, dehydration, or medication interactions. In this case, toxicity was linked to reduced oral intake due to psychotic symptoms. Mild toxicity manifests as tremors and fatigue, whereas severe toxicity may cause irreversible neurotoxicity. Early recognition and dose adjustments are crucial. This case underscores the importance of monitoring not only lithium serum levels but also hydration and oral intake in BD patients to prevent complications.

Keywords: Bipolar disorder, lithium toxicity, neurotoxicity, delirium