

THE ONSET OF DIABETES INSIPIDUS (DI) IN A PATIENT USING LITHIUM FOR YEARS

Zeynep Arslan Barlas, **Tugba Caglar**², **Ilkay Keles Altun**³

Sağlık Bilimleri University, Bursa Yüksek İhtisas Eğitim ve Araştırma Hastanesi, Department of Psychiatry, Bursa, Türkiye

OBJECTIVE: Lithium is the gold standard for treating bipolar affective disorder. However, its narrow therapeutic range and side effects limit its use. This case report aims to discuss the development of nephrogenic diabetes insipidus (NDI) due to irregular lithium use and a weight loss drug containing borax pentahydrate.

CASE: A 46-year-old female patient, diagnosed with bipolar affective disorder 25 years ago, was admitted with a manic episode. She had been using lithium regularly for two years but began using it irregularly over the last two months. Additionally, she had taken a weight loss drug containing borax pentahydrate, purchased online. During clinical follow-up, laboratory tests revealed hypernatremia, hyperchloremia, and a decreased glomerular filtration rate (GFR). Following a nephrology consultation, NDI was diagnosed, and lithium treatment was discontinued. The patient received intravenous hydration, and both GFR and electrolyte levels normalized within two weeks.

However, polyuria and polydipsia persisted for about a month. Written consent was obtained for the case report.

DISCUSSION: NDI can occur in patients using lithium and is usually reversible. However, in some cases, recovery may take months or even be permanent, as seen here. The weight loss drug used by the patient contained not only borax pentahydrate but also Epsom salt, magnesium, zinc, mate leaf extract, and potassium sorbate. The effects of these substances and their combinations are poorly understood. Borax pentahydrate, in particular, can be toxic to kidneys, as it is absorbed in the gastrointestinal system and excreted through the kidneys. This case suggests that the weight loss drug exacerbated lithium's nephrotoxic effects. This report emphasizes the risk of unregulated supplements and the importance of monitoring renal function in lithium users.

Keywords: Bipolar affective disorder, lithium, nephrogenic diabetes insipidus, borax pentahydrate