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Abstract Title: Case of Oxcarbazepine Induced Hyponatremia

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Description: A 66-year-old Caucasian male with a history of bipolar II disorder, post-traumatic stress disorder, generalized anxiety disorder and insomnia has been treated with 600 mg of oxcarbazepine for over 20 years. He was experiencing 3-4 episodes of diarrhea day as well as 3-4 episodes of nocturia per night. On investigation by his primary care provider, his basic metabolic panel was remarkable for hyponatremia, which was asymptomatic. Patient remained hyponatremic consistently for a year even after diet change and sodium supplementation. His lowest plasma sodium concentration was 126 mEq/L. Upon evaluation by urologist, urinalysis showed high concentration of sodium. Oxcarbazepine dose was decreased to 300 mg and plasma sodium concentration increased to 135 mEq/L.

Discussion and Conclusion: Studies show there is an increased risk of hyponatremia with oxcarbazepine therapy with approximately fifty nine percent of patients experiencing symptomatic hyponatremia within two years of initial therapy.1 Many risk factors increase the chances of developing hyponatremia, but diuretic use and advanced age were of particular importance.1 Patients are also at risk during events that may require an increase in fluid intake such as post-op or during hot weather.2 Patients taking oxcarbazepine should be regularly monitored for hyponatremia and educated about signs and symptoms of severe hyponatremia. Patients with previously well controlled seizures who become refractory to treatment, have altered mental status or other abnormal behaviors should be evaluated for possible hyponatremia. Patients should be instructed about the concomitant use of common other drug therapies such as non-steroidal anti-inflammatory drugs, diuretics, calcium channel blockers, tri-cyclic antidepressants.1 They should also be educated on symptoms of hyponatremia, such as dizziness, somnolence, headache, abnormal vision, insomnia, or ataxia. Routine monitoring of anti-diuretic hormone levels is not indicated as investigations indicate that levels remain within normal range during therapy.2

References:

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2. Sachdeo, R. C., Wasserstein, A., Mesenbrink, P. J., & D'Souza, J. (2002). Effects of oxcarbazepine on sodium concentration and water handling. Annals of Neurology, 51(5), 613–620. https://doi.org/10.1002/ana.10190