Sertraline-Associated Hyponatremia and Subsequent Tolerability of Bupropion in an Elderly Woman

To the Editor: Although hyponatremia is a well-described adverse effect of antidepressant therapy,[1] few reports have examined which antidepressant agents are safe after a patient experiences selective serotonin reuptake inhibitor (SSRI)–associated hyponatremia. We describe a case of sertraline-associated hyponatremia and the subsequent tolerability of bupropion in an elderly woman.

Case report. Ms A, an 87-year-old thin, hypertensive woman with a history of dementia and major depressive disorder (diagnosed before the onset of dementia), was transferred from an assisted living facility to a geriatric psychiatry ward in December 2009 for management of 3 weeks of worsening physical aggression, depressed mood, anxiety, insomnia, and suicidal ideation. The admission physical examination and laboratory studies were unremarkable (including a serum sodium value of 140 mEq/L). The patient was diagnosed with a major depressive episode (using *DSM-IV* criteria), and sertraline therapy was initiated at 50 mg by mouth daily, and trazodone 50 mg was administered on 2 nights at bedtime to manage insomnia. Haloperidol was also given at 0.25 mg by mouth in the morning and 0.5 mg by mouth at night to manage the aggressive behaviors. The patient was also prescribed enalapril 5 mg by mouth daily and levothyroxine 112 µg by mouth daily for management of chronic hypertension and hypothyroidism.

Four days later, the patient demonstrated inability to sustain attention, hypoarousal, and worsened disorientation. Laboratory evaluation revealed a serum sodium level of 126 mEq/L and plasma osmolality of 272 mOsm/kg, thyrotropin level of 4.64 uIU/mL, and urine specific gravity of 1.002 and osmolality of 655 mOsm/kg. Additionally, the patient was found to have acute cystitis. The patient was euvolemic and demonstrated laboratory evidence consistent with the syndrome of inappropriate antidiuresis. Sertraline was discontinued, fluids were restricted, and antibiotic therapy was prescribed. Bupropion immediate release was initiated the next day at 75 mg by mouth daily and then increased the following day to 75 mg by mouth twice daily.

The patient's mental state improved, and electrolyte studies 6 days later revealed serum sodium and osmolality values of 135 mEq/L and 280 mOsm/kg, respectively. The suicidal ideation resolved and the other symptoms improved during the hospital course. The hyponatremia did not recur, and the patient was discharged to the assisted living facility.

Jacob and Spinler[1] reviewed all published material describing SSRI-associated hyponatremia and identified several patient characteristics (age greater than 65 years, woman, diuretic use, history of pneumonia, low body weight, low baseline sodium) commonly associated with development of hyponatremia. That review study was designed to identify patient characteristics associated with hyponatremia and did not address what agents may be safe for patients who experienced hyponatremia.

During the initial clinical studies of bupropion, a norepinephrine and dopamine reuptake inhibitor, 1 group reported on a patient who experienced hyponatremia during imipramine monotherapy, then during bupropion monotherapy.[2] Although 1 additional case described bupropion-associated hyponatremia,[3] 2 other case reports[4,5] demonstrated the tolerability of bupropion in elderly patients who previously experienced antidepressant-associated hyponatremia. Our case is the third to demonstrate tolerability of bupropion in an elderly patient with SSRI-associated hyponatremia and suggests that bupropion may be a reasonable antidepressant choice for these patients.

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