

Hyponatremia Associated with Bupropion

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Backgrounds: Bupropion is widely used for the treatment of depressive disorder and smoking cessation. Hyponatremia, including a syndrome of inappropriate secretion of antidiuretic hormone (SIADH), is an uncommon complication of treatment with antipsychotic drugs. We present a case of bupropion induced hyponatremia for the first time in the Korea.

Case: A 60-year-old man came to this hospital complaining fatigue and general weakness of body for 3 days. He had a history of hypertension, old myocardial infarction and depressive disorder. He was being treated with antidepressant agents, including escitalopram (SSRI), mirtazapine (TCA), clonazepam and alprazolam. Mirtazapine was substituted with bupropion due to the patient gaining weight in late December 2010. About a week later, the patient began complaining of the symptoms. His sodium level was markedly decreased to 113 mgEq/L and osmolality was 240 mOsm/kg. His thyroid function test was within normal range. We performed rapid ACTH test. But, the level of serum cortisol increased insufficiently. However, aldosterone was raised up to 219 pg/mL from 45 pg/mL at basal, such as a pattern consistent with secondary adrenal insufficiency. The psychiatric drugs were thought to be the offending agents and were withdrawn from the treatment. Three days later, his symptoms were improved and sodium level slowly increased to 123 mEq/L. At that time, the patient again complained of severe anxiety and insomnia. He was restarted bupropion, escitalopram, mirtazapine and alprazolam. Two days later, his serum sodium was decreased again from 128 mEq/L to 124 mEq/L. He was stopped bupropion immediately which was thought to cause the hyponatremia. Two weeks after withdrawn bupropion, his serum sodium had returned to the normal range, which was 136 mEq/L. It did not decrease thereafter and his symptoms began improving. There was not any evidence of internal malignancy suggesting SIADH in a brain, chest and abdominal computed tomography as well as tumor markers. In addition, we could not find the cancerous lesions in endoscopy and colonoscopy.

Conclusion: Elderly patients who are taking antipsychotic drugs, especially bupropion, should be carefully monitored serum sodium levels, so could be avoided potentially fatal side effect of bupropion induced hyponatremia.

Key Words: Bupropion, 항정신약물, 저나트륨혈증
Bupropion, Antipsychotics, Hyponatremia