CASE REPORT

SEVERE HYPONATREMIA, EPISTAXIS, AND FLUOXETINE

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Hyponatremia is one of the most common electrolyte abnormalities and can be life threatening. Fluoxetine is a serotonin reuptake inhibitor and may rarely cause hyponatremia. Furthermore, fluoxetine may rarely increase the risk of bleeding events. We report a 66-year old woman who presented with severe hyponatremia and epistaxis associated with the use of fluoxetine.

Keywords: Epistaxis, fluoxetine, hyponatremia, syndrome of inappropriate antidiuretic hormone

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INTRODUCTION

Fluoxetine is a widely used selective serotonin reuptake inhibitor (SSRI) used in the treatment of depression.[1] Hyponatremia, one of the most common electrolyte abnormalities, when severe (<120 meq/L), has a poor prognosis and fatal outcome.[2,3] Fluoxetine may rarely cause hyponatremia by causing syndrome of inappropriate antidiuretic hormone (SIADH), particularly in elederly.[4] Furthermore, SSRIs, including fluoxetine, may increase the risk of bleeding reactions.[5,6] To the best of our knowledge, simultaneous presence of the nasal bleeding and hyponatremia associated with fluoxetine use has not been reported. Here, we report a case presenting with severe hyponatremia and epistaxis associated with fluoxetine use.

CASE REPORT

Our patient was a 66 year old female who presented to the emergency department with anorexia, nausea, weakness and nasal bleeding. She had hypertension and type-2 diabetes for about 10 years. She has been taking diltiazem, aspirin, insulin glargine and fluoxetine. Three weeks before admission, she was started on fluoxetine 20 mg tablet/day for depression. The family history was non-contributory. On physical examination, she was afebrile, oriented and cooperative. Heart rate was 76/min and blood pressure was 140/85 mmHg. There was no dehydration or oedema and she was euvolemic.

Pulmonary and cardiac examinations were normal. Other than mild confusion, neurological examination was unremarkable. The patient was hospitalized and a nose pack was applied. Aspirin was discontinued. Serum sodium was 116 mmol/L on admission, while serum and urine osmolalities were 238 mOsm/kg and 299 mOsm/kg, respectively. Urinary sodium on spot sample was 85 mmol/L. Other laboratory parameters including hemogram, prothrombin time, activated partial thromboplastin time, renal and liver function tests, lipid profile, serum cortisol level and thyroid hormones were within normal limits. Chest X-ray was normal. We concluded that her hyponatremia was associated with fluoxetine, which could have caused SIADH. After consultation with the psychiatry department, we discontinued fluoxetine and also commenced fluid restriction. Her hyponatremia improved and serum sodium came to normal limits on the fourth day of admission. Her epistaxis stopped after nasal packing and the pack was removed after 1 day. The examination of the patient's nasal cavity was normal. She was discharged and was to be followed up on an outpatient basis. She continued to have normal serum sodium during the 6 month follow-up period and did not report any further epistaxis and.

DISCUSSION

SSRIs are usually effective, well tolerated and safe drugs.[1,4] Notwithstanding the effectiveness of SSRIs, these drugs might have side effects like sexual dysfunction as well as change in weight, sleep disturbances and anxiety.[7] A rare side effect of fluoxetine is hyponatremia.[4] Hyponatremia is one of the most frequently observed electrolyte imbalances and is defined as a condition in which the serum sodium level is lower than 135 mmol/L.[2,3] Hyponatremia can cause signs and symptoms related to all systems of the body. Symptoms may vary depending on the duration and/or rate of hyponatremia development and serum sodium level.[3] Patients may be admitted to the emergency unit with symptoms of hyponatremia such as anorexia, headache, nausea, vomiting, confusion, weakness, lethargy, syncope, seizure, coma and respiratory arrest.[3]

The cause of fluoxetine associated hyponatremia is SIADH.[1,4] Common causes of SIADH include cancer, pulmonary diseases and central nervous system disorders.[3] In addition, SIADH is a common cause of hyponatremia in geriatric patients.[3,8] Hyponatremia due to fluoxetine has been rarely and predominately reported in elderly patients.[9] Dehydration and/or

concurrent use of diuretic drugs in patients likely increases the risk of hyponatremia development.[9] Drug discontinuation is recommended if symptomatic hyponatremia occurs.[2]

Fluoxetine use may rarely cause some bleeding side effects.[6] Observational studies of SSRIs showed abnormal bleeding complications such as easy bruising, stroke, petechiae, upper gastrointestinal and intraoperative bleeding, purpura, hematomas, epistaxis and hematomas.[5,6] SSRI associated bleeding may be due to decreased intra-platelet serotonin concentrations that may affect platelet aggregation.[10] Impaired platelet aggregation usually results in increased risk of bleeding events. In particular, use of SSRIs together with medications which can affect haemostasis may increase the risk of bleeding.[6]

In conclusion, fluoxetine use should be kept in mind as a cause of hyponatremia particularly in the emergency department setting. Furthermore, they might impose a significant risk of bleeding events when there is concomitant use of fluoxetine and the medications affecting haemostasis, such as nonsteroidal anti-inflammatory drugs, aspirin and warfarin.

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REFERENCES

1. Zahajszky J, Rosenbaum JF, Tollefson GD. Fluoxetine. In: American Psychiatric Publishing Textbook of Psychopharmacology, 4th ed, American Psychiatric Publishing, Inc, Washington, DC 2009. p.289.
2. Spasovski G, Vanholder R, Allolio B, Annane D, Ball S, Bichet D, *et al*. Clinical practice guideline on diagnosis and treatment of hyponatremia. Nephrol Dial Transplant 2014;29 Suppl 2:i1–39.
3. Adrogué HJ, Madias NE. Hyponatremia. N Engl J Med 2000;342(21):1581–9.
4. Labbate LA, Fava M, Rosenbaum JF, Arana GW. Drugs for the treatment of depression. In: Handbook of Psychiatric Drug Therapy, 6th ed, Lippincott Williams & Wilkins, Philadelphia, PA 2010. p.54.
5. de Abajo FJ, Rodríguez LA, Montero D. Association between selective serotonin reuptake inhibitors and upper gastrointestinal bleeding: population based case-control study. BMJ 1999;319(7217):1106–9.
6. Serebruany VL. Selective serotonin reuptake inhibitors and increased bleeding risk: are we missing something? Am J Med 2006;119(2):113–6.
7. Hu XH, Bull SA, Hunkeler EM, Ming E, Lee JY, Fireman B, *et al*. Incidence and duration of side effects and those rated as bothersome with selective serotonin reuptake inhibitor treatment for depression: patient report versus physician estimate. J Clin Psychiatry 2004;65(7):959–65.
8. Janicic N, Verbalis JG. Evaluation and management of hypo-osmolality in hospitalized patients. Endocrinol Metab Clin North Am 2003;32(2):459–81.
9. Wilkinson TJ, Begg EJ, WinterAC, Sainsbury R. Incidence and risk factors for hyponatremia following treatment with fluoxetine or paroxetine in elderly people. Br J Clin Pharmacol 1999;47(2):211–7.
10. Li N, Wallén NH, Ladjevardi M, Hjemdahl P. Effects of serotonin on platelet activation in whole blood. Blood Coagul Fibrinolysis 1997;8(8):517–23.

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