

Report of case: Fluoxetine-associated symptomatic hyponatremia in the young woman without comorbidity

 Ibrahim Gundogmus,  Azize Beril Tasci,  Abdullah Akgun,  Derya Kaymak Polat,  Abdullah Bolu,  Ozcan Uzun

Gulhane Faculty of Medicine, Department of Psychiatry, Ankara, Turkey

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Dear Editor,

Fluoxetine, an antidepressant of the selective serotonin reuptake inhibitors (SSRI) group is used for the treatment of in a wide range of psychiatric disorders including depressive disorder, anxiety disorder, post-traumatic stress disorder, bulimia nervosa, panic disorder, and obsessive compulsive disorder. Although known as an effective and well-tolerated antidepressant, it may cause side-effects acceptable to patients. The most common side effects of fluoxetine use include nausea, headache, diarrhea, and insomnia; sedation and orthostatic hypotension are rare adverse effects (1,2). In addition to these expected side effects, there are reports of hyponatremia due to fluoxetine use in the literature. However, the majority of these reports were elderly or patients with risk factors (especially diuretics using) (3,4). To our knowledge, fluoxetine-induced hyponatremia in young female patient without risk factors isn't reported in the literature. Here, the report is aimed to present that the patient of fluoxetine related with symptomatic hyponatremia. In contrast to the cases reported in the literature, our patient was taking 40 mg / day fluoxetine and there were no known risk factors for concomitant drug use and old age.

Ms. D, 35-years-old, female, single, working as a nurse and graduated college. The patient was admitted to our psychiatry clinic with depressive symptoms such as continuous low mood, feeling helpless, lack of interest, anhedonia, feeling tearful, poor sleep quality, lack of confidence, easy fatigability, neglecting her interests, lack of energy and death wishes. After detailed mental examination, Structured Clinical Interview for the DSM (SCID) was applied according to Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 criteria and the patient was diagnosed with major depressive disorder. Psychiatric history of the patient was evaluated

and fluoxetine 20 mg / day was started considering her concerns. Three weeks later, the fluoxetine dose was increased to 40 mg / day. Body mass index of the patient was calculated as 24.8 and there was no other medication she was using. In addition, there were no abnormalities in the laboratory parameters prior to the use of fluoxetine and there was no history and no risk factor for vascular/ cardiac/renal diseases. The serum laboratory parameters of the patient prior to starting fluoxetine were as follows: sodium: 137 mEq / l; potassium: 5 mEq / l. The electrocardiogram (ECG) did not suggest a pathology feature. Two weeks after the onset of fluoxetine 40 mg, the patient presented to the emergency department with vomiting, nausea, muscle weakness, loss of energy, malaise, confusion, and irritability. Central nervous system examination performed by the neurologist revealed no focal neurological deficit and neurological pathology. Cardiologist's cardiovascular system examination, ECG, blood pressure measurement, echocardiography and pulse were normal. Other system examinations revealed no data that could explain the current situation. Only in laboratory tests, serum sodium levels were found to be 130 mEq/ l. The patient was given intravenous normal saline infusion to increase serum sodium level to 138 mEq/ l. Fluoxetine was thought to be a possible cause of hyponatremia, as no other cause could be identified to explain the cause of hyponatremia. Fluoxetine dose was decreased and discontinued. Naranjo algorithm was used to evaluate fluoxetine-related hyponatremia-related adverse effects and score: 6 = Possible adverse effects. (5).

When all the features of the case were considered together, the possible cause of hyponatremia was thought to be fluoxetine. Because the development of hyponatremia occurred concurrently with fluoxetine treatment, and serum sodium levels returned to normal with the stopped

Received: 06.12.2019 Accepted: 28.02.2020 Available online: 25.05.2020

Corresponding Author: Ibrahim Gundogmus, Gulhane Faculty of Medicine, Department of Psychiatry, Ankara, Turkey

E-mail: dibrabrahim06@gmail.com

of fluoxetine intake. It has been previously reported in the literature that hyponatremia is a rare side effect of fluoxetine. However, it is known to occur mostly in the elderly female population (3,4). However, our patient was young women, without comorbidity and not drug use. Therefore, we believe that our report is valuable. The most likely cause of fluoxetine-related hyponatremia can be a syndrome of inappropriate antidiuretic hormone (6). Therefore it is suggested that patients using diuretics and elderly are at risk (7).

We think that hyponatremia is an uncommon but dangerous side effect of fluoxetine. Clinicians should pay attention to even signs of mild hyponatremia. Clinicians prescribing fluoxetine, especially for taking diuretics and elderly patients should be aware of the possibility of symptomatic hyponatremia caused by vomiting, muscle weakness, energy loss, weakness and confusion, which will reduce unwanted events. However, future studies need to clarify the relationship between hyponatremia and fluoxetine.

Competing interests: The authors declare that they have no competing interest.

Financial Disclosure: There are no financial supports.

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