Case Report

Hyponatremia in an elderly patient on Sertraline

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Abstract *: SSRIs are commonly prescribed in psychiatric settings. However incidences of hyponatremia associated with them are sometimes reported. This case illustrates the problem in an elderly patient.*

Key Words : *Hyponatremia, Sertraline*
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INTRODUCTION

Sertraline is an antidepressant of the selective serotonin reuptake inhibitor (SSRI) class and well tolerated in elderly patients for the treatment of depressive disorders[1] although there are some potentially serious side effects including hyponatremia.[2-4]

The Case:

We describe here a case of a 66 year old male who developed hyponatremia. Mr. U.K., 66 years old retired man from middle socio-economic Hindu family of urban background was admitted in Orthopedics unit with fracture of left femur of 7 day duration and hypertension for which he was on treatment with Amlopress 5 mg OD. Patient had been also diagnosed to have obsessive compulsive disorder and he was on Sertraline 50 mg and this dose was shifted to Sertraline 100 mg and Clonazepam 1 mg.

On admission patient was apyrexic with a blood pressure of 130/80 mm Hg. and a pulse of 80 beats /min. Systemic examination was normal. Hemoglobin was 10.2 gm./dl, total RBC count 3.69 million/cu. mm, PVC 31%, TWBC 13600/ cu mm., Neutrophil 78%, Lymphocyte 19%, Monocyte 2%, Eosinophil 1%, FBS 98mg%, Blood Urea 22mg%, Serum Creatinine 0.7mg%. Urine examination reported normal.

On the fourth day of admission, patient developed nausea and had 4-5 episodes of vomiting. USG abdomen was normal. Patient was managed medically with Sucralfit Gel and Mucaine Gel. Patient's Blood Urea was 60mg%, S. Creatinine 0.8mg%, S. Sodium 133.2 meq/l and S. Potassium 5.5 meq/l. Patient's urine output was 2500 ml.

On the sixth day of admission patient was observed to be drowsy, blood pressure was 140/ 90 mm. Hg., Serum Sodium was 112 meq/l, Serum Potassium 3.8 meq/l, Random Blood Sugar 117 mg%. Sertraline and Clonazepam therapy was discontinued. Fluid intake was restricted, corrective intravenous fluids and medication started. Patient's serum and urine osmolality and urinary sodium examination was advised for possible SIADH but could not be afforded. Over the next 24 hours Serum Sodium improved to 118 meq/l., Serum Potassium was 3.79 meq/l, Blood Urea 47 mg%, Serum Creatinine 1.18 mg%.

In the following 48 hours patient's general condition became stable, Serum Sodium improved to 123 meq/l, Serum Potassium 3.7 meq/l, which again dropped to 118 meq/l & 3.12 meq/l respectively the next day. In view of the irritability, occasional agitated behaviour and decreased sleep patient was prescribed 0.75 mg Haloperidol with which he improved over a one week period.

On the eleventh day of admission Serum Sodium was 127 meq/l, Serum Potassium was 3.7 meq/ l, which the subsequent day improved to 135 meq/l and 3.8 meq/l with urinary output at 1900ml/24 hours.

Patient was subsequently managed by the Orthopedic unit.

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Discussion:

Sertraline affects water & sodium intake which may be associated hyponatremia caused by higher levels of Vasopressin & Oxytocin with lower urinary volumes.[5]

Sertraline has been reported to be associated with hyponatremia in elderly patients who may be at an increased risk.[6] The syndrome of inappropriate anti-diuretic hormone secretion (SIADH) has been associated with hyponatremia in patients on selective serotonin reuptake inhibitors (SSRI).[7-8] Drugs are thought to cause SIADH by direct or indirect stimulation of Vasopressin release from the posterior pituitary gland. Whether in our patient the cause of hyponatremia was SIADH is not clear as unfortunately urine and plasma osmolality, urine sodium and hormone levels could not be assessed because of unaffordability though normal renal tests are reported with SIADH. The definite reversal to normal serum sodium levels after fluid restriction, lack of any clear alternative, temporal relationship may make SIADH a cause due to a direct central serotonergic stimulus though mechanism of SSRI induced hyponatremia as on Naranjo probability scale can be multifactorial.[9-10] Median time to onset of hyponatremia was reported as 13 days (range 3 to 120days).[6, 11-12]

Symptoms present at plasma sodium concentrations less than 130 mmol/l and include anorexia, nausea, vomiting, headache, diarrhea, weakness, lethargy, confusion, convulsions and coma.[7]

Treatment includes withdrawing the suspect drug and restricting fluid intake among other modalities for other causes. If serum sodium is low (i.e. <125 mmol/l), some authorities advocate cautious sodium replacement with normal or hypertonic (5%), saline.[13-14] Our patient also improved with similar line of management. Routine monitoring with investigation of serum electrolytes is suggested, in the elderly on SSRI's.

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