

Hypernatraemia in a child after discontinuation of sertraline

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Hypernatraemia has not previously been reported as a complication associated with either sertraline or other selective serotonin reuptake inhibitors (SSRIs). We describe a 7-year old girl who, following withdrawal of sertraline, developed hypernatraemia.

Fortunately she remained clinically asymptomatic and the hypernatraemia resolved spontaneously. This may be a possible complication of sertraline withdrawal.

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Introduction

Selective serotonin reuptake inhibitors (SSRIs) are the most frequently used antidepressants. They have a good tolerability and safety in case of overdose. Sertraline is an SSRI which inhibits central nervous system neuronal uptake of serotonin. The half-life of metabolites of sertraline is about 60 to 100 hours and the clearance in children is greater than in adults.

Recently, there have been concerns about the use of SSRIs in children and adolescents^{1,2}. These concerns have related to both the lack of efficacy and also the risk of suicidal behaviour, especially on withdrawal. A recent review recommended that in children and adolescents, only specialists in child and adolescent psychiatry, should prescribe SSRIs due to their side effects and their lack of efficacy². Some of the rare reported adverse effects are seizures, stuttering, sexual dysfunction and hyperpigmentation^{3–5}.

The syndrome of inappropriate antidiuretic hormone secretion (SIADH) accompanied by hyponatraemia is a recognised complication of SSRI use. It is a well-known complication of sertraline

and there are case reports with citalopram, especially in the elderly population^{6–9}. One of the possible mechanisms reported to be associated with antidepressant induced SIADH is the serotonin stimulatory effect of antidiuretic hormone. It is mediated by the 5HT₂ and 5HT₁ receptors¹⁰.

To the author's knowledge, there is no previous report of hypernatraemia associated with sertraline or other SSRIs. This is a case report of a patient who developed hypernatraemia after discontinuing sertraline.

Case report

A 7-year old girl with tonic-clonic epilepsy from the age of 4 years was taking sodium valproate 600 mg/day and topiramate 25mg/day. The patient and her parents were interviewed and she was diagnosed as a case of autistic disorder according to DSM-IV diagnostic criteria. Her mother said that another physician had prescribed sertraline 50 mg/day about 2 months ago to manage her child's stereotypic behaviour. The child had mild learning disability with an estimated IQ score of 70–80. She was examined and had no signs of dehydration and no history of a poor fluid

intake. The following investigations were all normal: urea and electrolytes, triglyceride levels, liver function tests, electrocardiogram (ECG) and magnetic resonance imaging (MRI) of the brain. She was weaned off the sertraline over a period of 6 days, while continuing with the valproate and topiramate. The plasma sodium level on the last day was 135 mmol/l. Five days later she returned for follow up and urea and electrolytes and liver function tests were requested. She was clinically well and physical examination remained normal. She was afebrile with a heart rate of 90 beats/min and a blood pressure of 90/60 mmHg. Her plasma sodium concentration, however, was 150 mmol/l. This level was confirmed by repeat analysis. Four days later, the hyponatraemia had resolved (plasma sodium 138 mmol/l).

Discussion

The mechanism of hyponatraemia is unclear. In order to demonstrate a causal relationship between sertraline and hyponatraemia, it would have been necessary to rechallenge the patient with sertraline. However, this was not considered appropriate. The onset of hyponatraemia soon after discontinuation of sertraline strongly suggests that this phenomenon might be secondary to sertraline discontinuation. A decrease in ADH production, no longer stimulated by sertraline, might be a possible explanation.

To the author's knowledge, this is the first report of possible sertraline-induced hyponatraemia. One needs to be aware of this potential complication following discontinuation of sertraline. Routine monitoring of electrolyte levels in children, especially during the first weeks of discontinuation of sertraline may be worthwhile.

Disclosure

No financial conflict of interest.

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