

A CASE SERIES ON ESCITALOPRAM INDUCED HYPONATREMIA

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ABSTRACT

Background: Escitalopram is a choice of medication for significantly treating depression and anxiety coming under SSRI classification. The Escitalopram initiated hyponatremia may be intense and can lead to death. Even though the cases reported with hyponatremia is very low, we have come across 4 cases significantly leading to severe hyponatremia. **Case presentation:** The case – I of a 58-year-old female with psychosis and generalised anxiety on escitalopram developed hyponatremia by 5th day of treatment (Na-125). Case – II – a 32-year-old female with major depression, and on Escitalopram for a month, reported at the emergency department due to fatigue and generalised weakness, the electrolyte level indicated severe hyponatremia (Na-119). Case – III – a 72 years old male with CPOD and depression on escitalopram developed hyponatremia (Na-128). Case – IV – a 50-year-old female patient with generalised anxiety prescribed with escitalopram, complained of weakness on 7th day and found to be hyponatremic (Na-123). All the cases the condition was managed symptomatically by withholding the drug. On the ADR probability scale, it was found to be certain for 3 cases and probable for 1 case as per the WHO scale and Probable in the Naranjo scale. **Conclusion:** This case indicates the need for serum sodium level monitoring among the patients who are on Escitalopram, which is an indicator of ADR.

KEYWORDS: Escitalopram, Hyponatremia, ADR.**BACKGROUND**

Escitalopram is a drug of choice for major depression and generalized anxiety belonging to the class of Selective serotonin reuptake inhibitors (SSRI).^[1] Hyponatremia is a condition in which the serum sodium concentration level goes below 135 mEq/L, maybe due to excess use of diuretic, frequent diarrhoea, heart failure, liver disease, renal disease, and syndrome of inappropriate antidiuretic hormone secretion (SIADH).^[2] Escitalopram induced hyponatremia cases are rare, with very few literature availabilities, as ADR incidence rate is estimated at 1.13.^[3,4] Here we report a series of cases that may be aware of the continuous monitoring of serum sodium during Escitalopram therapy.

CASE PRESENTATION

All cases summarised under table 1

CASE I: A 58-year-old female admitted due to psychosis, hypertension and diagnosed with generalised anxiety disorder (GAD) with past medication history of Losartan 25mg BD, Risperidone 2 mg. Additionally Nexito (Brand name for the generic Citalopram) 5 mg BD was added to the treatment plan along with past medication. At the time of admission, the serum sodium level was found to be 139 mEq/L followed by 135 mEq/L on next day all other Lab parameters were found to be normal. On the 5th day of hospital admission, the

patient developed drowsiness and fatigue. On examining the blood, the serum sodium level was observed at 125 mEq/L indicating an ADR due to newly added Nexito. The drug was thus withdrawn from the treatment plan, with an introduction of small dietary modification to improve the sodium level was done. On 2nd day after the withdrawal of the drug, it was found that the sodium level was slowly rising and it reached to 130 mEq/L, followed by 136 mEq/L on 3rd day leading to the normal state. Later on, the drug escitalopram in patient's prescription for GAD was substituted with the drug Mirtazapine 15 mg OD.

CASE II: A 32-year-old female having major depression, taking Escitalopram 10mg OD for 1 month, presented to the emergency department due to fatigue, generalised weakness and gradual decline in mental status. On laboratory analysis, serum sodium level was 119 mEq/L. leading to abrupt drug withdrawal and start of 3% Normal Saline immediately. Later 0.95% Normal Saline prescribed till Sodium level became normal. At 4th-day sodium level reached 139 mEq/L. After the patient's sodium level became stable, with regular monitoring, Escitalopram was re-started and, in a day, again a slight deviation in Sodium was observed. Therefore, the drug escitalopram was discontinued.

CASE III: A 72 years old male patient with COPD and newly diagnosed depression was prescribed with Nexito 5 mg BD which in turn led to the development of confusion and drowsiness by 4th day. The Sodium level was found to be at 138 mEq/L at admission and gradually decreased to 135 mEq/L on 2nd day and by 4th day it became 128 mEq/L. Suspected an ADR induced by Escitalopram. As the patient was aged and have hypertension and type – II diabetes the chances of hyponatremia were high due to other drugs. So, the Physician assumed that the occurrence of hyponatremia wasn't due to the drug and it's due to some other reason, because of that, hyponatremia was clinically managed without withdrawing the drug. The sodium level was made up to normal using normal saline within 2 days and

discharged the patient with the same drug. On discharge, the patient was advised for a follow up after 4 days with serum sodium level.

CASE IV: A 50-year-old female patient diagnosed with generalised anxiety prescribed with Nexito 5mg BD in OPD and sought help in the emergency department due to weakness and confusion after 7 days. On lab investigation, the serum sodium level was found to be 123 mEq/L. Thus, the drug was discontinued immediately and the hyponatremia was managed by giving normal saline. The Sodium level became normal on 2nd day with 137 mEq/L. Later the physician replaced the Escitalopram drug with Mirtazapine.

Table No. 1: Summary of all 4 cases.

Case	Age	Sex	Dose	Na [†]	C/o	Therapy	Recovery	Comorbidity	Remarks
I	58	F	5 mg BD	125	Drowsiness & fatigue	W/H	2 days	Psychosis, GAD, HTn	Substituted Mirtazapine
II	32	F	10 mg OD	119	Fatigue & weakness	W/H & Fluids	4 days	Depression	RE- failed. Stopped.
III	72	M	5 mg BD	128	Confusion & drowsiness	Fluids	2 days	COPD, HTn DM II	Continued. No follow up
IV	50	F	5 mg BD	123	Weakness & confusion	W/H & Fluids	2 days	GAD	Substituted Mirtazapine

†Sodium level at time of ADR

RESULT AND DISCUSSION

The Escitalopram induced hyponatremia is a less common but can lead to a very serious and fatal condition. This case series highlights the clear association of Escitalopram induced hyponatremia in various age group, in the absence of any significant medical comorbidity or concomitant use of other drugs.

If the condition is unnoticed, it can lead to severe hyponatremia which may lead to life-threatening complications.

By using ADR probability scale, it was found to be certain for 3 cases and probable for 1 case in the WHO scale and probable in the Naranjo scale [Table no.2].^[5,6]

Table No. 2: Causality assessment of Cases.

	WHO-UMC	NARANJO SCALE
Case I – 58/Female	Certain	Probable
Case II – 32/Female	Certain	Probable
Case III – 72/Male	Probable	Probable
Case IV – 50/Female	Certain	Probable

On average there is a variation of 7-8 mEq/L in all the cases indicating directly that the Escitalopram ADR can result in severe hyponatremia condition.

Thus, leading to a conclusion, that the patients who are on Escitalopram should be advised with the importance of diet management and fluid intake.

Also, the influence of concomitant medication for other co-morbid condition has some influence in the level of sodium, thus strict monitoring is required in this type of patients.

The patient who developed hyponatremia due to Escitalopram shouldn't be ideally re-challenged with the same drug, due to the accompanying risk of causing highly severe hyponatremia and thus, it is advisable to use alternative antidepressants like Mirtazapine.^[3,7]

CONCLUSION

Thus, this case series will make aware all the clinicians that the ADR of most commonly prescribed Escitalopram is prominent and requires a continuous monitoring of serum sodium level.

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