

## A Case Report of Hyponatremia in a Diabetic Patient with Hemiparesis

Dr. Fatima Soufe<sup>1\*</sup>

<sup>1</sup>Consultant Emergency Medicine, Qatar

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\*Corresponding author: Dr. Fatima Soufe

### Abstract

### Case Report

Hyponatremia is a condition in which the concentration of sodium in level in blood becomes abnormally low. The present case is of a male patient of age 58 years Hyponatremia and CVA with left sided hemiparesis. The patient developed clinical symptoms as weakness, tremor, and micturition and was treated successfully with sodium normal saline and potassium supplements. After successful treatment, the patient was released.

**Keywords:** Hyponatremia, hemiparesis, Sodium electrolyte.

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## INTRODUCTION

Hyponatremia is a condition in which the concentration of sodium in level in blood becomes abnormally low. Sodium is an electrolyte and it helps to regulate the amount of water in blood and cell [1-2].

In general drinking too much water results the sodium content in the body to become diluted. In this condition the body water level increases and the cells begin to swell, this swelling can cause many health problems from mild to life threatening [3].

Hyponatremia is more common in people with certain diseases like kidney failure, congestive heart failure, Lung disease, Liver disease, and Brain problems and alcoholics [4,5]. Moreover the excessive sodium loss is also observed in conditions like excessive sweating, Vomiting, Diarrhea, and diuresis. Kidneys need to excrete solutes through water excretion, so increase in dietary protein and salt can help to improve water excretion.

In diabetic patients the case of hyponatremia is very rare but it occurs in case of diabetic ketoacidosis and chlorpropamide and thiazide diuretics uses [6]

## CASE REPORT

This case is of patient of age 58 years, male having clinical symptoms for three days with severe weakness, tremor, unable to stand up, micturating on the bed as he is unable to get up and go to bathroom since 3 days. The patient was apparently asymptomatic 3 days back then he developed weakness progressively increasing and tremors on standing up and constipation. The patient has history of past illness with left sided hemiparesis and diabetes mellitus. He was on medication with Ecosprin 75mg OD and Metformin 500mg OD since 3 years. He was also alcoholic and chronic smoker before his cerebro vascular accident. His details objective data and laboratory reports are given below in Table-1 and Table-2. Based on the subjective and objective data the patient is diagnosed as Hyponatremia and CVA with left sided hemiparesis.

**Table-1: Objective data**

Parameter	Value
Temperature	Afebrile
Blood pressure	90/70mmHg
Pulse rate	88bpm
Respiratory rate	22cpm
CVS	S1S2+
CNS	Left sided hemiparesis

**Table-2: Laboratory Reports**

Parameters	Referred value	Normal values
Total WBC	10,000/cumm	4000-11,000/cumm
Neutrophils	77%	40-80%
Lymphocytes	17%	20-40%
Monocytes	02%	02-10%
Esnophyllis	04%	01-06%
Hemoglobin	<b>11.7gm%</b>	13-17gm%
Total RBC	4.2ml/cumm	4.3ml/cumm +/-0.5
Plateles	4.9Lks/cumm	1.5-4Lks/cumm
ESR	12mm/hr	25mm/hr
Random Blood sugar	106mg/dl	70-160mg/dl
Blood urea	29mg/dl	15-40mg/dl
Creatinine	01mg/dl	0.5-1.2mg/dl
Sodium	<b>120mmol/L</b>	135-155mmol/L
Potassium	<b>2.8mmol/L</b>	3.5-5.5mmol/L

## DISCUSSION

The patient was given treatment as following chart of medications given in Table-3. The given

prescription is rational and there are no drug-drug interactions. The patient was observed for daily progress.

**Table-3: Treatment chart**

S.No	Brand name	Generic name	Indication	Dose	R.O.A	Frequency
1.	IVF.Normal saline	Sodium chloride	Sodium supplement	100ml	Intravenous	Per hour
2.	T.Ecosprin	Aspirin	Pain killer	75mg	Oral	OD
3.	T.Metformin	Metformin Hydrochloride	Anti hyperglycemic	500mg	Oral	OD
4.	T.Goodwin	Multivitamin	Vitamin supplement		Oral	OD
5.	Super.potklor	Potassium chloride	Potassium supplement	200ml	Oral	BD
6.	Liquid paraffin	Liquid paraffin	Laxative	150ml	Oral	TID

**Table-4: Day to day Progress**

Vitals	1 <sup>st</sup> Day	2 <sup>nd</sup> Day	3 <sup>rd</sup> day
Temperature	Afebrile	Afebrile	Afebrile
Blood pressure	100/80mmHg	120/80mmHg	120/80mmHg
Pulse rate	84bpm	82bpm	84bpm
Respiratory rate	18cpm	16cpm	18cpm
CVS	S1S2+	S1S2+	S1S2+

The patient was discharge on 3 day after improvement. The discharge medication were as follows Syrup potassium chloride 200ml BD, T. Aspirin 75mg OD, T.Metformin 500mg OD, T.Goodwin PO BD to treat associated conditions. The patient was advised to drink water in moderate quantity, to take potassium containing food like sweet potatoes, potatoes, banana, orange, tomatoes etc., to take sodium containing food like root vegetables, spinach, salted nuts etc, to take the medicines as prescribed by the doctor and to take highly restricted salt diet as advised by the doctor.

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