



A STUDY OF CLINICAL AND MANAGEMENT PROFILE OF HYPONATRAEMIA:

Nephrology

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ABSTRACT

Hyponatraemia is an acute or chronic state of clinical emergency when the blood serum level of sodium falls less than 135 mmol/L. The different states can be either hypervolemia, euvolemia or hypovolemia. This state if not treated immediately can be fatal. This study puts in an effort to study the clinical and management profile of hyponatraemia cases.

KEYWORDS

Clinical, Management Profile, Hyponatraemia.

INTRODUCTION:

A serum level of less than 135mmol/lit is defined as hyponatraemia. It can be due to be either hypervolemia, euvolemia or hypovolemia condition^{1,2,3}. It has a high prevalence especially with patients with metabolic disorders^{4,5}. Diabetes is one such condition. Over correction of dehydration is the leading cause of the illness. Acute is a state where the whole scenario arises and manifests within 48 hours. Hyponatremia causes neurological deficits and the patients come with a plethora of symptoms. Pinpoint diagnosis is the need of the hour as any delay in identifying can actually cause fatal irreversible brain damage to the patients^{6,7,8}. The correction also if identified has to be done in a graded manner, if not may again be fatal by causing osmotic demyelination⁹.

The grading of the hyponatremia is as follows. Mild is defined as serum level in the range of 130 Eq/lit to 134 mEq/lit. Moderate Hyponatraemia is defined as serum levels between 125 mEq/L - 129 mEq/L, and Severe Hyponatraemia is defined as less than 124 mEq/lit. The treatment should be corrected < 10Eq/lit over 24 hours^{9,10}.

With all these in the background it is important to take necessary steps so as to do justice to the patients. This study puts in an effort to study the clinical and management profile of hyponatraemia cases. This study is intended to help the physicians and also clinical practitioners to identify and also help the patients so as to stall the always fatal outcome if treatment is delayed.

Aims and Objectives:

To study the clinical and management profile of hyponatraemia cases.

MATERIALS AND METHODS:

Study design: A retrospective study.

Study period: February 2017 – August 2018.

Study setting: Department of General Medicine

Study population: All patients presented to our centre Al Azhar Medical College and Super Speciality Hospital, Kerala.

Sample size: 123 patients

Study group: Patients clinically and laboratory diagnosed with Hyponatremia.

Inclusion Criteria: All the patients were below 60 years.

Exclusion Criteria:

Patients who did not consent.

All the statistical Analysis was done using latest SPSS software 2015 california.

Results:

Table 1: Sex Distribution

Figure 1: Age Distribution

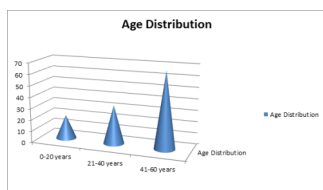


Figure 2: Male and Female Prevalence

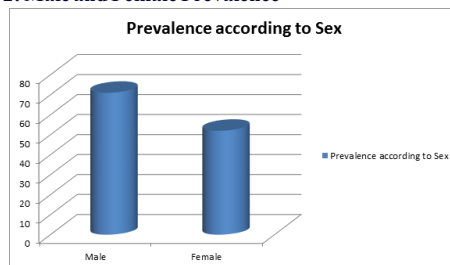


Figure 3: Severity

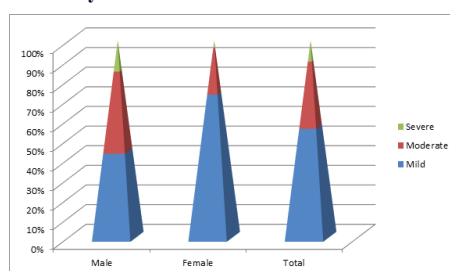


Table 1: Clinical Symptoms

Symptoms	Male	Female
Disorientation	31	44
Hiccups	23	36
Vomiting	45	29
Nausea	48	23
Confusion	35	42
Oedema	11	16
Convulsion	03	01
Anorexia	01	03

Figure 4: Acute vs Chronic

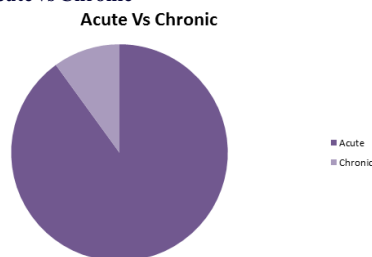


Table 2: Treatment Modality

	Treatment	Duration	Complication
Acute	3% saline, IV fluids, fluid restriction	4.34 days	2 people with sequale
Chronic	3% saline, IV fluids, fluid restriction	6.92 days	1 person with sequale 1 person demyelination syndrome

Table 3 : Association of fatality/Complication

	Treatment	Duration	Complication	P-value
Acute	3% saline, IV fluids, fluid restriction	4.34 days	2 people with sequale	>0.05
Chronic	3% saline, IV fluids, fluid restriction	6.92 days	1 person with sequale 1 person demyelination syndrome	>0.05

DISCUSSION:

The points that should be remembered when hyponatremia is dealt are, the grading of the hyponatremia. Mild is defined as serum level in the range of 130 Eq/lit to 134 mEq/lit. Moderate Hyponatraemia is defined as serum levels between 125 mEq/L - 129 mEq/L, and Severe Hyponatraemia is defined as less than 124 mEq/lit. The treatment should be corrected < 10Eq/lit over 24 hours^{9,10}. Determining the cause of hyponatraemia is the first step in evaluating patients with hyponatraemia and is crucial to guiding correct management.

In our study majority of the patients who came belonged to the age group 40-60 years. This perhaps reflects on the fact that younger generation suffers less as they have systems working to the full capacity to correct the alterations. In our study majority of the patients were males. Four fifths were alcoholics and were also known to have different metabolic disorders. The severity was more seen in males. They had it because majority of them had other metabolic disorders and also many of them were alcoholics. Disorientation which followed closely vomiting and nausea were the commonest complaints. And males and females had similar symptoms and definitely they followed a pattern. Over 90 percent of them had acute onset of the disease. Only ten percent had chronic onset. Treatment was similar to both the groups. Saline, iv fluids and also fluid restriction was followed. The duration of the stay in chronic patients was more when compared to the other group. The complications were also of the same magnitude. Immediate and Prompt treatment is necessary for the condition.

CONCLUSION:

Immediate and Prompt treatment is necessary for the condition and reduces the fatality by enormous times.

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