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A study of clinical and management profile of Hyponatraemia in the department of surgery

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Abstract

A serum level of less than 135mmol/lit is defined as Hyponatraemia. It can be due to be either hypervolemia, euvolemia or hypervolemia condition. It has a high prevalence especially with patients with metabolic disorders. 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. Hyponatraemia 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. The correction also if identified has to be done in a graded manner, if not may again be fatal by causing osmotic demyelination. 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.

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 hypervolemia condition [1-3]. 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. Hyponatraemia 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 [6-8]. The correction also if identified has to be done in a graded manner, if not may again be fatal by causing osmotic demyelination [8].

The grading of the Hyponatraemia is as follows. Mild is defined as serum level in the range of 125Eq/lit to 134mEq/lit. Moderate Hyponatraemia is defined as serum levels between 125mEq/L - 129mEq/L, and Severe Hyponatraemia defined as less than 124mEq/lit. The treatment should never be corrected more than 25mEq/lit over 24 hours [9, 10].

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 in the Department of Surgery.

Materials and Methods: Study design: A retrospective study.

Study period: February 2019 – August 2020.

Study setting: Department of Surgery, Kanachur Institute of Medical Sciences, Mangalore.

Study population: All patients presented to our centre.

Sample size: 73 patients

Study group: Patients clinically and laboratory diagnosed with Hyponatremia.

Inclusion Criteria

All the patients were below 60 years.

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Exclusion Criteria

Patients who did not consent.

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

Results

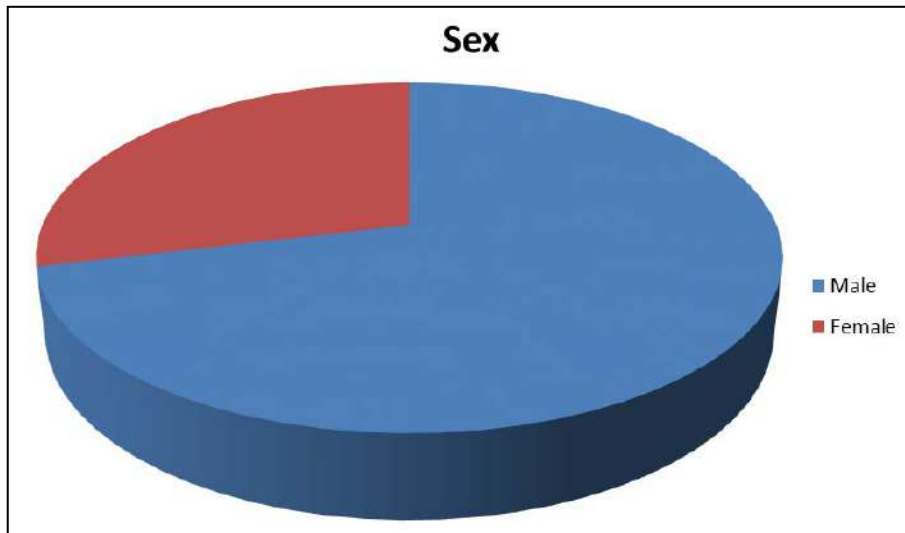


Table 1: Sex Distribution

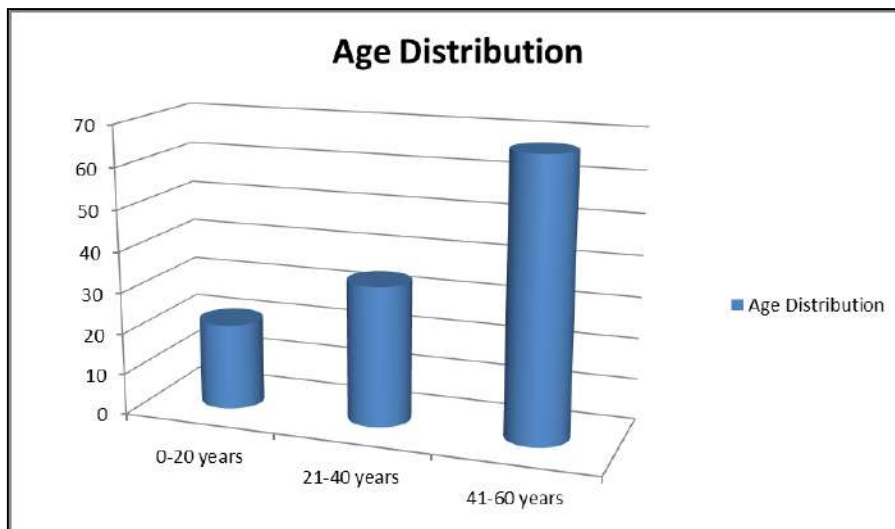


Fig 1: Age Distribution

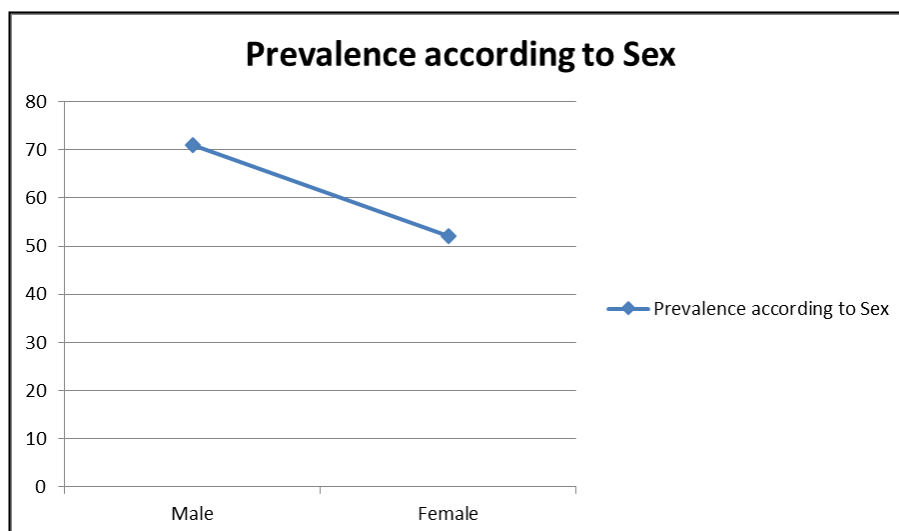


Fig 2: Male and Female Prevalence

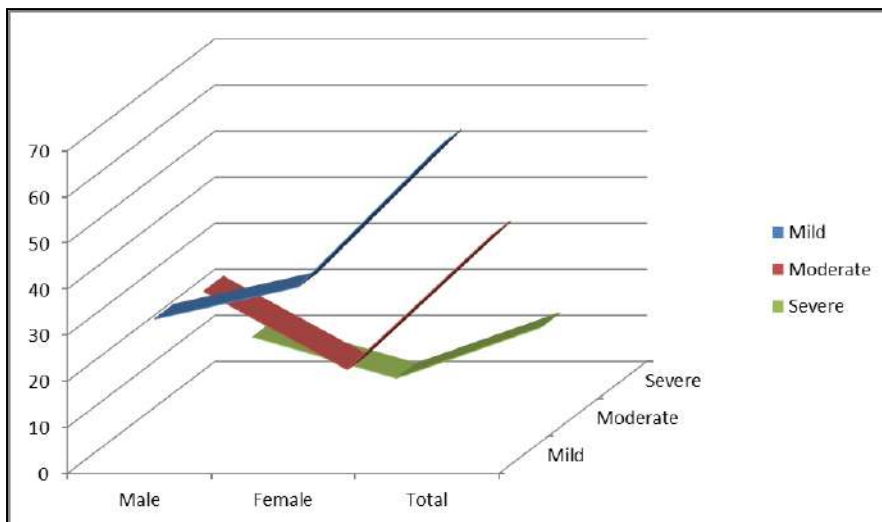


Fig 3: Severity

Table 1: Clinical Symptoms

Symptoms	Male	Female
Disorientation	31	21
Hiccups	23	12
Vomiting	12	18
Nausea	13	19
Confusion	34	20
Oedema	17	07
Convulsion	01	02
Anorexia	02	01

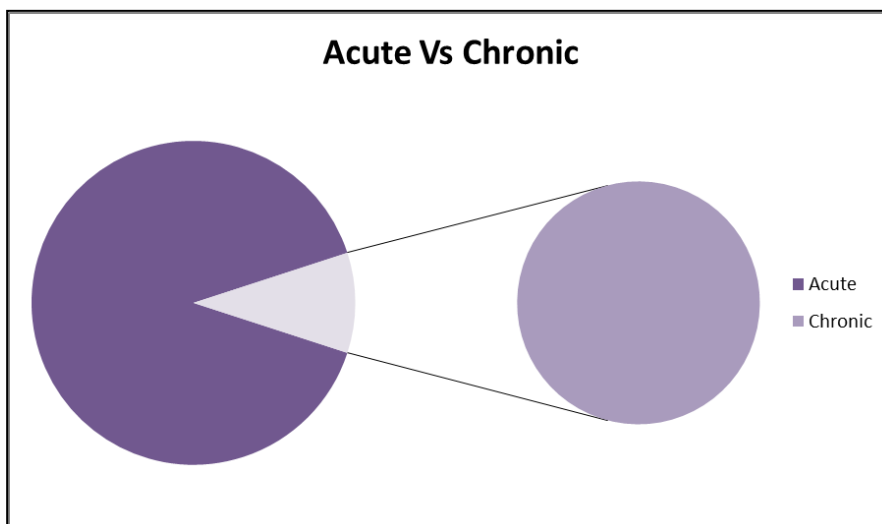


Fig 4: Acute vs Chronic

Table 2: Treatment Modality

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

Table 3: Association of fatality/Complication

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

Discussion

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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