

Characteristics and aetiology of patients with hyponatraemia

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Introduction

Hyponatraemia is the most common electrolyte abnormality encountered in hospitalised patients.

The objectives of this retrospective analysis were to study:

- the aetiology of hyponatraemia
- the distribution of patients according to speciality
- the prevalence of comorbid conditions
- the frequency of use of various medications.

Methods

This retrospective study included all inpatients with serum sodium ≤ 128 mmol/l at any point during their hospital stay at Royal Free Hospital between 1st March 2013 and 31st May 2013.

Data were collected after review of medical case notes, prescription charts and laboratory results.

Results

Aetiology	N=58 (%)
Hypovolaemic	46.6%
Diuretics	24.1%
GI Na losses	13.9%
Poor oral intake	8.6%
Euvolaemic (SIADH)	34.6%
Pneumonia	10.3%
Various causes	8.7%
Unknown cause	8.7%
Malignancy	6.9%
Hypervolaemic	18.8%
Liver disease	10.2%
Heart failure	8.6%

Comorbidities	N=139
Hypertension	50%
Arrhythmia	25.2%
Diabetes	25.2%
Cancer	24.5%
CKD	21.6%
Heart Failure	21.6%
CAD	20.9%
Liver disease	16.5%
COPD	12.9%
Hypothyroidism	12.9%
CVA/TIA	11.5%
ESRF	7.2%

Results

139 patients (69 males, 70 females) with a mean age (\pm SD) of 70.2 ± 16.1 years were identified over this 3-month period.

77% of patients were under medical specialities, the most common being Geriatrics (16.5%), Hepatology (14.4%), General Medicine (13.7%), Oncology (8.6%), Cardiology (5.8%), Nephrology (5%) and Neurology (5%); 19.4% were under surgical specialities, the most common being Orthopedics (5.8%) and General Surgery (4.3%); 3.6% of patients were treated in ICU.

The most frequently prescribed drugs were proton pump inhibitors (49.6%), opioids (28.8%), loop diuretics (27.3%), ACE-inhibitors (26.6%), K-sparing diuretics (13.7%), ARBs (12.2%), thiazide diuretics (9.4%).

Conclusions

- The aetiology of inpatient hyponatraemia is variable.
- Most patients have multiple comorbidities.
- Considering the wide distribution of patients into specialities and variable aetiology of hyponatraemia, more widespread utilisation of expert input may be needed to improve patient care.