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HOSPITALISED GERIATRIC HYPONATREMIA: PREVALENCE, IN-HOSPITAL FALL AND BURDEN OF CONDITION

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INTRODUCTION

Hyponatremia is the most frequent electrolyte disorder among the elderly and is associated with cognitive decline, frailty, fall events and mortality. The study aimed to determine the prevalence of hyponatremia and in-hospital fall in elderly patients seen at the emergency department (ED), and the association between severity of hyponatremia with length of stay (LOS), rehospitalisation and mortality.

METHODOLOGY

This was a cross-sectional study of patients aged ≥ 65 years seen at the ED in 6 months with admission Na < 135 mmol/L. Pseudohyponatremia from hyperglycemia was corrected for glucometer reading ≥ 15 mmol/L. Patients who went home against medical advice and with incomplete data were excluded. The calculated sample size was 194, but 163 were recruited and dichotomised into mild-moderate ($n=92$) and severe hyponatremia ($n=71$).

RESULTS

The prevalence of geriatric hyponatremia was 29.6%, with a male preponderance [52.1%, $p=0.99$, confidence interval (CI): -0.16 to 0.16] and mean age of 74.57 ± 6.25 years ($p=0.02$, CI: -3.21 to 0.69). Mean adjusted Charlson comorbidity index (ACCI) score and number of medications were 6.6 ± 0.20 ($p=0.77$) and 6.6 ± 0.20 ($p=0.51$), respectively. Chronic hyponatremia within 6 months was seen in 41%. Mean admission serum Na was 127.9 ± 0.18 and 117.76 ± 0.71 mmol/L in mild-moderate and severe hyponatremia, respectively ($p<0.01$). In-hospital fall prevalence was 1.2%. There were no significant associations between hyponatremia severity with LOS ($p=0.08$), inpatient mortality ($p=0.61$), readmission within 30 and 60 days ($p=0.96$ and $p=0.37$, respectively), and 30- and 60-day mortality ($p=0.65$ and $p=0.53$, respectively).

CONCLUSION

One-third of elderly patients at the ED had hyponatremia, with close to two-fifths found to have chronic hyponatremia. The burden of the condition was reflected in longer LOS and high rate of rehospitalisation and mortality.