

Hyponatremia and Outcome: Is Severity More Important Than Etiology?

Background and objective: Hyponatremia is the most common electrolyte abnormality encountered in a hospital setting, and the data regarding the contribution of hyponatremia to overall mortality are conflicting. The study objective was to determine patients' clinical profiles and outcomes with hyponatremia.

Methods: This prospective cross-sectional study was conducted at Dayanand Medical College and Hospital, Ludhiana, and included 375 adult patients aged more than 18 years with a confirmed diagnosis of hyponatremia. Patients were subdivided into three groups based on the severity of hyponatremia: mild (130-135 mmol/L), moderate (125-129 mmol/L), and profound (<125 mmol/L).

Results: The most common symptom was confusion (57.3%) followed by deep somnolence (40%) and nausea (36.8%). The most common cause of hyponatremia was diuretics (30.7%), followed by the syndrome of inappropriate antidiuretic hormone secretion (SIADH) (17.8%) and chronic liver disease (CLD) (14.1%). The severity of hyponatremia did not significantly influence the outcome. Patients with CLD and chronic kidney disease (CKD) as the etiology of hyponatremia had significantly worse outcomes compared to other causes of hyponatremia. The most common type was hypovolemic hypotonic followed by euvolemic hypotonic and hypervolemia hypotonic hyponatremia. Nearly half of the total deaths were observed in the hypervolemic hyponatremia group and were significantly higher compared to the other two groups ($p=0.001$). Correction of hyponatremia (i.e., serum sodium >135 mmol/L) was significantly linked with good outcomes ($p=0.003$).

Conclusion: Our study showed that the etiology of hyponatremia was a more important prognostic indicator rather than the severity of hyponatremia. Normalization of serum sodium was associated with improved survival.