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RISK FACTORS

- Malignancies—particularly lung, head and neck, and central nervous system (CNS) cancers
- Pulmonary and CNS disorders
- Medications, such as chemotherapy, targeted therapies, antidepressants, and analgesics



CAUTION

The underlying cause needs to be treated to prevent recurrence.

BEST PRACTICE

Close monitoring of neurologic status is essential to patient safety.



CAUSES/ PATHOPHYSIOLOGY

- Unregulated production of antidiuretic hormone (ADH)
- Kidneys conserving excess water
- Leads to serum hyponatremia and water intoxication

SIGNS & SYMPTOMS

- Related to the rate of onset and severity of hyponatremia
- Mild: thirst, fatigue, muscle cramps, headache, nausea, anorexia
- Moderate: weight gain, poor urine output, progressive neurologic symptoms
- Severe: delirium, confusion, agitation, ataxia, weakness



BEST PRACTICE

Plasma sodium should be slowly replaced over 24–48 hours to prevent complications.

DIAGNOSTIC CRITERIA

- Plasma sodium: less than 135 mEq/L
- Plasma osmolality: less than 275 mOsm/kg
- Urine osmolality: greater than 300 mOsm/L
- Urine sodium: greater than 30 mmol/L
- Adrenal and thyroid function normal



EMERGENCY INTERVENTIONS

- Depends on the rate of onset and severity of hyponatremia
- Mild to moderate: sodium 120–134 mEq/L
 - Fluid restriction: 500–1,000 cc/day
 - Demeclocycline: 600–1,200 mg/day
 - Seizure precautions
- Severe: sodium less than 120 mEq/L
 - Hypertonic saline (3%)
 - Furosemide
 - May use vasopressin-2 receptor antagonists (conivaptan)
 - Frequent neurologic examinations and seizure precautions



ADDITIONAL RESOURCES

- Cope, D.G. (2018). Syndrome of inappropriate antidiuretic hormone secretion. In M. Kaplan (Ed.), *Understanding and managing oncologic emergencies: A resource for nurses* (3rd ed., pp. 589–614). Pittsburgh, PA: Oncology Nursing Society.
- Tasler, T., & Bruce, S.D. (2018). Hyponatremia and SIADH: A case study for nursing consideration. *Clinical Journal of Oncology Nursing*, 22, 17–19. <https://doi.org/10.1188/18.CJON.17-19>
- Thomas, C.P. (2019). Syndrome of inappropriate antidiuretic hormone secretion. Retrieved from <https://emedicine.medscape.com/article/246650-overview>