The leading cause of hyponatremia in patients with cancer is syndrome of inappropriate antidiuretic hormone secretion (SIADH); this oncologic emergency requires immediate intervention. Left untreated, it can result in increased mortality and morbidity. A sodium level less than 135 meq/L is an electrolyte irregularity and defined as hyponatremia. It is extremely critical that oncology nurses are knowledgeable and able to evaluate and determine when patients are in fluid and electrolyte crisis. Nurses should be aware of the specific cancers and treatments that put patients at risk for developing hyponatremia. This article presents a case study for nursing consideration.

AT A GLANCE

- Continue to assess patients for oncologic emergencies like SIADH.
- Be aware of specific cancers and regimens that may predispose patients to hyponatremia.
- Educate patients and caregivers about the side effects of their treatment regimens.

KEYWORDS
SIADH; hyponatremia; arginine vasopressin; sodium; mortality

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Hyponatremia and SIADH

A case study for nursing consideration

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Hyponatremia is an electrolyte abnormality commonly encountered in oncology practice and is usually defined by a serum sodium level less than 135 meq/L (Castillo, Vincent, & Justice, 2012). Syndrome of inappropriate antidiuretic hormone (SIADH) is the leading cause of hyponatremia in patients with cancer, occurring in as many as 30% of all cases (Raftopoulos, 2007). The cardinal symptoms of SIADH are presented in Table 1. The crucial signs of SIADH are hyponatremia, serum hypo-osmolality, and less than maximally diluted urine. Common symptoms include weakness, lethargy, headache, anorexia, and weight gain (Castillo et al., 2012). SIADH is an oncologic emergency that needs prompt evaluation and management. Hyponatremia in patients with cancer is associated with significant mobidity and mortality. Patients with malignancy-associated SIADH have considerably worse outcomes than patients with cancer and SIADH because of other etiologies (Goldvaser et al., 2016).

Case Study

D.J., a 55-year-old married Caucasian man, father of two, and recreational volleyball coach, presented to a clinic with an enlarged nodule in his right groin, initially thought to be an infection related to a recent bee sting. He was originally evaluated by his primary care provider after the bee sting to evaluate the lump that remained on his leg several weeks after the injury. His vital signs were stable, he was alert and oriented, he had no labored breathing, his abdomen was flat and nondistended, he had right lower quadrant tenderness with deep palpation, and he had no rashes or lower extremity edema. The primary care provider felt the surgical scar tissue under the previous lymph node but did not detect any swelling or lymphadenopathy. His past medical history was positive for an arrhythmia and bee sting. His psychosocial status was negative for alcohol, smoking, and illicit drug use. D.J. had stopped coaching but was still attending the games as tolerated. His family history showed that his mother, paternal aunt, and paternal grandfather had lymphoma. He underwent an ultrasound of the right groin, which revealed a group of abnormal lymph nodes, the largest measuring 3.2 cm. D.J. had an excisional tissue biopsy of the right inguinal lymph node, which is the gold standard for diagnosis of diffuse large B-cell lymphoma (DLBCL) (National Guideline Alliance, 2016). He was clinically diagnosed with DLBCL, which was identified in 95% of the tissue with 5% high-grade lymphoma. A Ki-67 proliferation index was not conducted. A positron-emission tomography (PET) scan revealed stage IV DLBCL with involvement of multifocal nodule soft tissue. There was skeletal involvement throughout the chest, abdomen, and pelvis with a superficial sternal soft tissue lesion, as well as increased uptake and thickening of the gastric wall near the fundus with multiple axial skeletal lesions at the 10th thoracic vertebra. The