

## Insatiable thirst: Managing polydipsia

Julia Perch, MD, and M. Kevin O'Connor, MD

Assess for psychiatric symptoms such as anxiety or delusional beliefs that might contribute to your patient's water consumption

**P**sychothetic polydipsia (PPD) is a chronic, relapsing, and potentially life-threatening disorder characterized by compulsive consumption of large quantities of water resulting in "delusional hyponatremia." PPD occurs in 6% to 20% of psychiatric patients, most often with schizophrenia.<sup>1</sup>

In most patients with PPD, an electrolyte disturbance remains asymptomatic. However, superimposed and sudden ingestion of 3 to 4 liters of water can rapidly further dilute plasma and overwhelm the body's compensatory reserves, leading to brain edema, seizures, coma, and even death.

The following prevention and treatment strategies might reduce morbidity and mortality in hospitalized patients diagnosed with PPD and lessen the cost of treating this serious illness.

**Develop rapport.** Understand that your patient has little control over his or her compulsive water intake. Remain non-judgmental to help gain your patient's trust.

**Inquire** about underlying psychiatric symptoms that might contribute to PPD. Does your patient have an overwhelming anxiety, delusional belief, or both? Effectively targeting specific symptoms will improve your chances of success.

**Encourage communication** among treatment team members. PPD patients are notoriously creative in sneaking water from unexpected places such as toilets and shower rooms. Staff vigilance is required to detect and prevent such clandestine behaviors.

**Consult with an internist** when necessary, especially if your patient has a co-

morbid cardiac condition that requires a low-sodium diet and/or diuretics.

**Review psychotropic medications.** In case reports of schizophrenia patients with PPD, switching from a typical to an atypical antipsychotic has shown efficacy in treating PPD.<sup>2</sup>

**Restricting fluids** to 2 to 3 liters a day combined with "a token economy"—a method of positive reinforcement to increase desired behavior—has been used to successfully treat the disorder.<sup>2</sup>

**Monitor adherence** by weighing patients twice a day and checking serum sodium levels frequently. Normal water retention is cyclic and peaks in the early afternoon; therefore, early-morning screening for hyponatremia may not accurately reflect the severity of water abuse. A diurnal weight gain of  $\geq 0.6\%$  is unusual and might point to PPD.<sup>2</sup>

**Consider administering** an angiotensin-converting enzyme (ACE) inhibitor. In clinical trials 60% of patients taking ACE inhibitors show decreased water consumption.<sup>2</sup>

**Order 24-hour, 1-to-1 observation** if you suspect continuous water abuse.

**Think about placing** a patient with severe PPD in a locked unit in a long-term psychiatric institution, away from all water sources.

### References

1. de Leon J. Polydipsia—a study in a long-term psychiatric unit. *Eur Arch Psychiatry Clin Neurosci.* 2003;253:37-39.
2. Dundas B, Harris M, Narasimhan M. Psychogenic polydipsia review: etiology, differential, and treatment. *Curr Psychiatry Rep.* 2007;9:236-241.

Dr. Perch is a resident and Dr. O'Connor is associate professor and clinical director of psychosomatic medicine, department of psychiatry, University of Medicine and Dentistry of New Jersey, Newark.