

Diabetes Insipidus Assessment

This condition is due to antidiuretic hormone (ADH) deficiency, which leads to the excretion of large volumes of dilute urine. The ADH deficiency is most often caused by insufficient production of ADH or an inability of the kidney to respond to the presence of ADH. Excessive water intake due to psychological problems or a lesion in the thirst center of the brain can lead to diabetes insipidus symptoms.



PLAY PICMONIC

Polyuria

Polly-urinates

Patients with diabetes insipidus may experience extremely large amounts of urine output. These patients exceed the normal (1.5 to 2.5 liters/day) and may experience excessive urination of 4 to 30 liters per day! It is imperative to provide adequate fluid replacement.

Nocturia

Noctural-moon-urine

Nocturia is excessive urination that awakens patients from sleep. DI patients can exceed the normal capacity of the bladder (around 400 mL) in as little as an hour.

Low Specific Gravity (USG)

Low Gravity Urine

Excessive urine production causes very dilute urine which is measured by urine specific gravity. The normal range is between 1.005-1.025 therefore patients with diabetes insipidus often have a urine specific gravity of less than 1.005. Osmolarity of the urine is also low at 50-200mOsm/kg.

Polydipsia

Polly-dipper

Polydipsia is excessive thirst. The sensation of thirst is the first sign of dehydration. These patients attempt to drink water in excess. Never deprive a patient suspected with DI more than 4 hours without water as it may cause severe dehydration.

Dehydration

Empty-canteen

The first sign of dehydration is thirst, along with confusion, dry skin, poor skin turgor, and dry mucous membranes. DI patients should be monitored closely for dehydration as it causes most of the complications in the disorder.

Hypotension

Hippo-BP

Decreased volume due to excessive urine loss causes hypovolemia. This causes weak peripheral pulses and a low blood pressure.

Tachycardia

Tac-heart-card

Compensatory mechanisms to maintain cardiac output include increasing the heart rate. A classic patient with dehydration will present with hypovolemia, tachycardia, and dry mucous membranes.

Confusion

Confucius

CNS changes are often evident in patients and may begin as confusion, lethargy, or irritability, which may progress to a sustained coma. CNS changes in these patients are related to a hyperosmolar serum and usually hypernatremia.