

Lithium

Lithium-Battery

Lithium is the most common cause of acquired nephrogenic diabetes insipidus. Kidney function tests should be obtained every 3 months for patients on lithium therapy. Other drugs that can induce nephrogenic diabetes insipidus include amphotericin B and demeclocycline.

Electrolyte Disturbances

Electric-lights Disturbed

Nephrogenic diabetes insipidus can occur due to electrolyte imbalances, including hypokalemia and hypercalcemia. The decreased ability of the kidney to concentrate urine contributes to this process.

Clinical Features

Polyuria and Polydipsia

Polly-urinating and Polly-drinking

Resistance to antidiuretic hormone in nephrogenic diabetes insipidus causes increased urine excretion, resulting in polyuria. This will trigger thirst, causing the patient to drink more water which will in turn result in polydipsia. Polyuria is characterized by urine output greater than 3 L/day in adults or 2 L/m² in children.

Nocturia

Nocturnal-moon-urine

Excessive urine excretion also results in nocturia. Patients can report that they frequently wake up in the middle of the night to urinate. This can lead to daytime sleepiness and sleep deprivation.

Hypovolemia

Hippo-volume-cup

The increased urine output will cause a decrease in blood volume resulting in hypovolemia. Patients can experience dehydration symptoms such as dry mucous membranes, poor skin turgor, and confusion.