

UNIT 11 - URINARY SYSTEM

Diseases and Disorders of the Urinary System

A. **Cystitis**

Cystitis is the inflammation of the urinary bladder caused by bacteria. It is more common in women than in men. Signs and symptoms of cystitis include urgency, frequency, burning upon urination, dysuria, and possible urethral discharge. It is treated with antibiotics.

B. **Diabetes Insipidus**

Diabetes insipidus is the excessive urination of water due to a lack of the antidiuretic hormones (ADH). The kidneys are not able to absorb water which results in the excessive formation of urine. Causes may include neoplasms, infections, or head trauma. The signs and symptoms include four to 16 liters of urine daily, excessive thirst, and excessive fluid intake. Treatment may include hormone replacement therapy.

C. **Glomerulonephritis**

Glomerulonephritis, inflammation of the glomeruli, is caused by a bacterial infection. The signs and symptoms include edema, oliguria, proteinuria, azotemia, hematuria, and fatigue. Treatment includes antibiotic therapy, diuretics, bedrest, and fluid restrictions. It typically resolves within two weeks.

D. **Incontinence**

Incontinence is the inability to control urination. It may be caused by aging, pregnancies, or surgery in the lower pelvic area (such as prostate surgery). It may be treated with medications, bladder muscle retraining, and sometimes, surgery.

E. **Kidney Stones**

Kidney stones (renal calculi, nephrolithiasis) are crystallized mineral chunks that develop in the renal pelvis or calyces. Stones may develop as minerals crystallize on the renal papillae and break off into the urine. Intense pain, known as a renal colic, develops as rhythmic muscle contraction of the ureter attempts to dislodge it. Other symptoms include fever, chills, and hematuria. Hydronephrosis can develop as a complication of this disorder. Predisposing factors for kidney stones include dehydration, infection, obstruction, and genetics. Treatment includes medication to relieve the pain, forcing fluids, and sometimes surgical intervention such as lithotripsy.

F. Renal Failure

Renal failure is the sudden interruption of kidney function due to obstruction, reduced circulation, or kidney disease. It may be acute, which comes on suddenly, or chronic, which occurs over a long period of time. The acute form has a good prognosis. Signs and symptoms of renal failure include oliguria, azotemia and electrolyte imbalances. Treatment includes a modified diet, IV fluids, and possibly, temporary dialysis until the kidney function returns.

G. Urinary Tract Infections

Urinary tract infections include cystitis and urethritis. They are generally caused by bacteria and are treated with antibiotics.