

NURS 821 Alterations in Reproduction; Alterations in Elimination

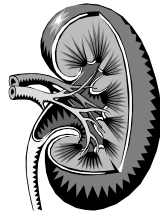
Lecture 10

Part 3 Post Renal Causes of Renal Disease

Classification of Renal Failure

■ Post-

- are conditions which obstruct the urinary collecting system



Causes of Renal Failure cont'd

• Post-Renal

- | | |
|--|-------------------------------|
| – Congenital collecting duct anomalies | – Pyelolithiasis |
| – Urethral strictures | – Carcinoma |
| – Surgical procedures | – Lymphoma, Hodgkin's disease |
| – Radiation fibrosis | – Prostatic hypertrophy |
| | – Obstructive uropathy |

Urinary Tract Infections (UTI)

- At risk population
 - Females-anatomy, intercourse, pregnant
 - Immune suppressed, especially diabetics
- Normal innate resistance:
 - Micturition
 - Low urinary pH
 - Ureterovesicular junction
 - Males decreased risk due to anatomy, prostatic secretions, longer urethra
- Etiology: typically gram- bacteria

UTI

- Pathophysiology
 - Bacteria ascend to kidney from anywhere in the urinary tract:urethra, prostate, bladder
 - Cystitis-most common site
 - As becomes more advanced-hemorrhagic cysts, suppurative, sloughing of bladder, gangrenous cystitis
 - Manifestations-asymptomatic (10%), frequency, urgency, dysuria, suprapubic pain, low back pain

Nephrolithiasis-Renal Calculi

- Common cause of UT obstruction in adults
- Etiology:
 - Decreased excretion of crystal growth inhibitors-? Genetic
 - Promoted by certain diseases, drugs, diets
 - increased urinary concentration allows concentration of particulates
 - Urine pH affects solubility of particulates
 - Alkaline urine-increases crystallization of calcium carbonate and calcium phosphate
 - Acid urine-increases uric acid crystals

Renal Calculi

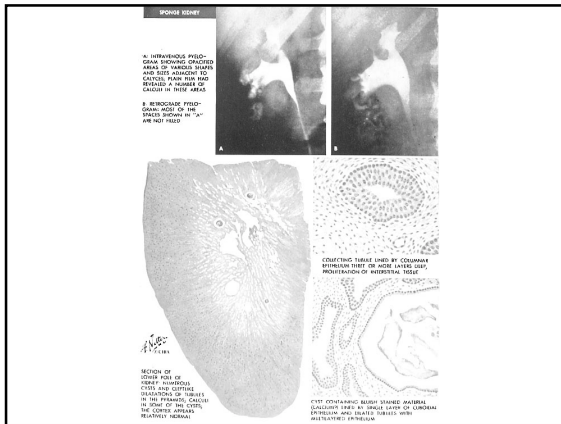
- At risk population-
 - Immune compromised
 - Sedentary
 - Infrequent micturition
 - High protein diet
 - Dehydration
 - Malnutrition

Renal Calculi (cont)

- Types:
 - **Calcium**-most common; middle aged men; genetic; high calcium diet
 - **Cystine**-rare-cystinuria-metabolic problem
 - **Uric acid**-gout; metabolic disorder of protein metabolism
 - **Magnesium, phosphate, ammonium**

Renal Calculi Manifestations

- Pain-varies with location and size, if < 5mm may pass unnoticed
- Above ureters-no symptoms unless infection or obstruction
- If reaches ureters
 - May suddenly stop urine output
 - Hallmark pain- intense colicky with rhythmic contractions as body tries to advance stone, distension and spasm of ureters
 - Flank, costovertebral angle or radiating to groin
 - N,V
 - hematuria



RC Complications

- Can continue to grow, becoming staghorn calculi-growing in renal pelvis and extending
- hydroureter
- RF due to obstructive uropathy
