Management of Patients With Urinary Disorders

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Routes of infection in the urinary tract

1. Ascending from bladder to kidney (reflux)
2. Ascending from urethra to bladder
3. Descending from bladder to urethra
4. From rectum, cervix, or prostate to bladder
5. From bowel to bladder
Urethrovesical Reflux

Backward flow of urine from the urethra into the bladder

Figure 45-1, pp. 1572
Ureterovesical Reflux

Backward flow of urine from the bladder into the ureters

Figure 45-1, pp. 1572
Bladder Infection With Long-Term Catheterization

Catheterization

- Bacterial ascension
- Bacterial colonization
- Permanent bacteria
- Manipulation of catheter
- Change of catheter
- Irrigation
- Unintentional removal

Bacterial invasion

- Damaged mucosa

Bladder infection

- Damaged and inflamed mucosa

Detrusor irritation

- Detrusor spasms

Inflammatory cells, red blood cells

- Fibrin, other glutinous products
URINARY TRACT INFECTION: (U.T.I.)

CYSTITIS:
- Frequency
- Urgency
- Suprapubic Pain
- Dysuria
- Hematuria
- Fever
- Confusion
- in Older Adults

PYELONEPHRITIS:
- Flank Pain
- Dysuria
- Pain At Costovertebral Angle
- Same S & S as Cystitis

DX: →
- Dipstick for Leukocyte Esterase and Nitrates
- UA / C & S
- ↑ Risk in older adults

TX: →
- Anti-Microbials
- ↑ Fluid Intake Prevention

NURSING GOALS:
* Symptomatic Relief
* Teaching & Prevention
  - Showers Better Than Baths
  - Perineal Cleansing
  - “Front To Back”
  - Voidsing After Intercourse
  - Anti-Microbial Therapy
  - No Scented Toilet Paper
  - No Perfumes, Etc. to Perineal Area
  - Empty Bladder Regularly

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PREVENTING CYSTITIS

Drink 8 to 10 Glasses of Fluid Per Day...

Women Should Wipe From Front to Back

Avoid Vaginal Deodorants And Bubble Baths...

Urinate After Intercourse...
Potential Sites of Urinary Calculi

Three narrowed areas
1. Ureteropelvic junction
2. The ureteral segment near the sacroiliac junction
3. Ureterovesical junction
RENAL CALCULI

• ↑ Incidence in Males

• Nausea & Vomiting

• Agonizing Flank Pain
  May Radiate To:
  Groin
  Testicles
  Abdominal Area

• Sharp, Sudden,
  Severe Pain:
  (May be intermittent
  depending on
  stone movement)

• Hematuria

• Dysuria

• Urinary Frequency

• Diagnosis
  Ultrasound
  IVP
  Renal Stone Analysis
  Retrograde pyelogram
  Cystoscopy
  Measure Urine pH

• Risk Factors - Etiology
  Infection
  Urinary Stasis & Retention
  Immobility
  Dehydration
  ↑ Uric Acid
  ↑ Urinary Oxalate

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Methods of Treating Renal Stones

Figure 45-6, pp. 1592
Position & Complication

Lithotomy position
Methods of Treating Renal Stones (cont.)

Figure 45-6, pp. 1592
Methods of Treating Renal Stones (cont.)

Figure 45-6, pp. 1592
Cutaneous Urinary Diversions

Figure 45-7, pp. 1598

A. Conventional ileal conduit. The surgeon transplants the ureters to an isolated section of the terminal ileum (ileal conduit), bringing one end to the abdominal wall. The ureter may also be transplanted into the transverse sigmoid colon (colon conduit) or proximal jejunum (jejunal conduit).

B. Cutaneous ureterostomy. The surgeon brings the detached ureter through the abdominal wall and attaches it to an opening in the skin.

C. Vesicostomy. The surgeon sutures the bladder to the abdominal wall and creates an opening (stoma) through the abdominal and bladder walls for urinary drainage.

D. Nephrostomy. The surgeon inserts a catheter into the renal pelvis via an incision into the flank or, by percutaneous catheter placement, into the kidney.
**Continent Urinary Diversions**

*Indiana pouch.* The surgeon introduces the ureters into a segment of ileum and cecum. Urine is drained periodically by inserting a catheter into the stoma.

*Continent ileal urinary diversions (Kock pouch).* The surgeon transplants the ureters to an isolated segment of small bowel, ascending colon, or ileocolonic segment and develops an effective continence mechanism or valve. Urine is drained by inserting a catheter into the stoma.

In male patients, the *Kock pouch* can be modified by attaching one end of the pouch to the urethra, allowing more normal voiding. The female urethra is too short for this modification.

*Ureterosigmoidostomy.* The surgeon introduces the ureters into the sigmoid, thereby allowing urine to flow through the colon and out of the rectum.