

## **KIDNEY CANCER (P. 1144 - 1145)**

- Arise from the cortex or pelvis (and calyces)
  - Tumors can be benign or malignant (malignant are more common)
- Adenocarcinoma (renal cell carcinoma) is the most common type (men, 50-70)
  - Higher risk with cigarette smoking, family history, obesity, HTN, exposure to asbestos, cadmium and gasoline and ESRD

### CLINICAL MANIFESTATIONS

- No early signs, usually undiagnosed until progressed → 30% have mets at diagnosis
  - Common metastases sites: ungs, liver, long bones, renal vein and vena cava
- Symptoms from compressing, stretching or invading near by structures
  - Hematuria, flank pain, and palpable mass
- Weight loss, fever, HTN and anemia
- CT scan used for diagnosis
  - Ultrasound determines if it is a solid mass tumor or cyst (90% are cysts)
  - Angiography, percutaneous needle aspiration, MRI and IVP are also used
    - Increased use of CT and MRIs have increased early diagnosis
- Radionuclide isotope scanning to detect metastases

### NURSING AND COLLABORATIVE MANGEMENT

- Robson's system of staging renal carcinoma
  - I: limited to kidney: small tumor <7 cm
  - II: soreading to perirenal fat but confined with fascia
  - III: tumor invades renal vein or vena cava or regional lymph nodes (or both)
  - IV: presence of metastases
- Radical nephrectomy for stages I, II and some III
  - Removal of kidney, adrenal gland, surrounding fascia, part of the ureter and draining lymph nodes
- Metastatic treatments or when surgery is not an option
  - Radiation therapy is used palliatively when inoperable or stage IV
  - Cryoablation (freezing) and radiofrequency ablation (heat)
  - Chemotherapy (adenocarcinoma is refractory to most chemo)
    - 5-fluorouracil (5-FU), floxuridine (FUDR) and gemcitabine (Gemzar)
  - Biologic therapy
    - A-interferon and interleukin-2(IL-2)
  - Target therapy
    - Sunitnib(Sutent), Sorafenib(Nexavar), temsirolimus(Torisel), everolimus (Afinitor), ofatumumab(Arzerra), bevacizumab(avastin) and pazopanib (Votrient)
  - Survival rate is low however do remain stable for a prolonged period of time

## **BLADDER CANCER (P. 1145 - 1146)**

- Most frequent malignant tumor of the urinary tract is transitional cell carcinoma of the bladder
  - Usually papillomatous growths within the bladder
  - Men, 60-70, smoking, rubber and cable industry dyes, chronic abuse of phenacetin-containing analgesics (not on the market now), cervical radiation and cyclophosphamide

- Squamous cell cancer of the bladder – chronic renal calculi, chronic lower UTIs, long term indwelling catheters have increased risk

#### CLINICAL MANIFESTATIONS

- Microscopic, gross, painless hematuria(chronic or intermittent)
- Bladder irritability with dysuria, frequency and urgency

#### DIAGNOSTIC STUDIES

- Urine specimen (neoplastic, atypical and exfoliated cells)
  - Bladder tumor antigens
- CT, ultrasound, MRI for detection
- Cystoscopy (most reliable for detection) and biopsy to confirm
- Jewett-Strong-Marshall classification system
  - Based on depth of invasion or bladder wall and surrounding tissues
  - Superficial (carcinoma in situ [CIS], O, A) – 80% → do not invade bladder wall
    - Although more easily cured, 95% reoccurrence rate in 15 years
  - Invasive (B1, B2, C)
  - Metastatic (D1-D4)

#### NURSING INTERVENTIONS

- Encourage patient to increase fluid intake and to quit smoking
- Assess for secondary UTI
- Stress need for routine follow up
- Address fears and concerns about sexual activity and bladder function

#### COLLABORATIVE MANAGEMENT

- Low stage, low grade bladder cancers respond to instillation of intravesical chemotherapy and transurethral resection of the bladder tumor (TURBT)
- Surgical therapy
  - Transurethral resection with fulguration
    - Diagnosis and treatment of superficial lesions
    - Used to control bleeding if poor operative risk or with advanced tumors
    - Tumor mass is excised through cystoscope then cauterized
  - Laser photocoagulation
    - Used to treat superficial bladder cancer, can be repeated a number of times
    - Benefits: bloodless destruction of lesions, minimal risk of perforation and lack of need for a urinary catheter
    - Disadvantages: staging cannot be completed
  - Open loop resection with fulguration
    - Snaring of polyp types of lesion
    - Used to control bleeding, for large superficial tumors and multiple lesions
  - Cystectomy (segmental, partial or radical)
    - For large lesions and no metastasis and create urinary diversion
    - Partial → resection of portion of the bladder wall with margin of normal tissue
    - Radical → removal of bladder, prostate, seminal vesicles, uterus, cervix, urethra and ovaries
  - Postoperative management

- Drink large volumes of fluids for first week (no alcohol)
  - Self-monitor urine
    - Pink for first several days (not bright red or with clots) → 7-10 days dark red or rust colored flecks in urine (scabs)
  - Opioid analgesics with stool softener
  - 15-20 minute sitz bath 2-3 times a day
    - Promote relaxation and reduce urine retention
  - Follow up cystoscopies every 3-6 months for three years then yearly
- Radiation therapy
  - Primary therapy when inoperable or surgery is refused
  - Often combined with systemic chemotherapy
- Intravesical immunotherapy
  - Intravesical = delivered directly into the bladder via urethral catheter
    - Therapy usually weekly intervals for 6-12 weeks
  - Bacille Calmette-Guerin (BCG)
    - Treatment of choice for carcinoma in situ
    - May cause flu like symptoms, frequency, hematuria, systemic infection
    - N/V and hair loss NOT experienced
  - A-interferon (Roferon-A, Intron A)
    - When BCG fails
- Intravesical chemotherapy
  - Empty bladder → instill → retained for about 2 hours (change position every 15 minutes to coat all surfaces of bladder) → drain
  - Thiotepa (Thioplex)
  - Valrubicin (Valstar)
- Systemic chemotherapy