

## Urothelial tumors

### To know?

- history
- Risk factors
- Examination
- Investigations
- differential diagnosis
- Treatment options

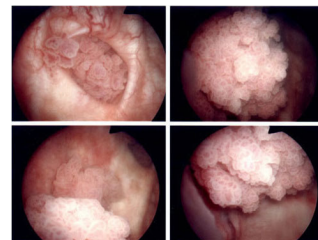
### Case presentation

- 60 yrs old female , smoking for 20 yrs , stopped 2 yrs ago, has intermittent gross painless heamaturia for 3 mnths
- Came now because she is passing clots

### On exam

- Chronically ill, pale. Full bladder
- other systems NAD
- What next?

### Sonar – Bladder tumour




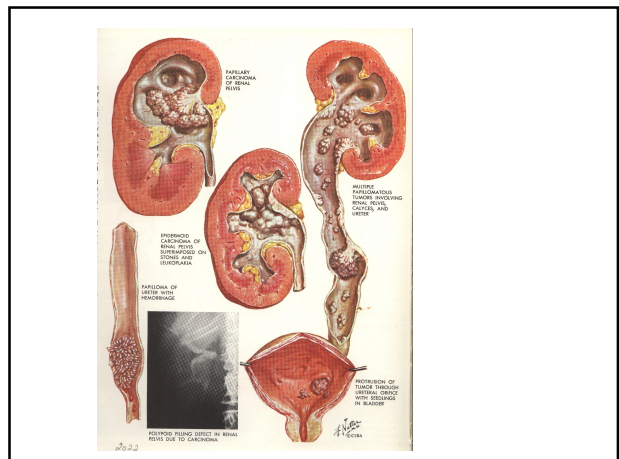
- Biopsy TCC - muscle invasive
- General work up
  - Urea and creatinine
  - FBC
  - LFT
  - CXR
  - CT Scan abd + pelvis with contrast
  - radical cystectomy and urinary diversion done

- ### Urine test
- Indirect (simplest way)
    - Urine dipstix
  - Direct
    - Chamber count (no. of RBC / ml urine)
    - Sediment count (no. of RBC in centrifuged urine)

- ### hematuria
- Life-threatening
  - Highly significant (requiring treatment)
  - Moderately significant (requiring observation)
  - Insignificant

- Bladder cancer
- Renal cell carcinoma
- Renal lymphoma
- Renal transitional cell carcinoma
- Ureteral transitional cell carcinoma
- Urethral cancer
- Abdominal aortic aneurysm
- Carcinoma of prostate
- Metastatic carcinoma

- ### Urothelial tumours
- Bladder tumours
  - Upper tract tumours
- 



## BLADDER TUMOURS

### Epidemiology

- 2.5 x more men than women
- More common in whites than African Americans
- 142 per 100 000 men – age 65 to 69
- 296 per 100 000 men – age > 85

### Etiology

- Occupational risk
  - Dry cleaners
  - Autoworker
  - Painter
  - Soot from coal
  - Chemical dyes
  - Rubber industries
  - Textile industries

### Etiology - TCC

- Smoking
  - 4 x higher incidence
  - Number, duration, degree of inhalation
- Analgesic abuse
- Chronic cystitis
- Pelvic irradiation
- Cyclophosphamide

### Etiology – Squamous cell Ca

- Schistosomiasis
- Bladder stones
- Indwelling catheters

### Clinical presentation

- Disuria
- Frequency
- Urgency
- Haematuria
- Flank pain
- Pelvic mass
- Weight loss
- Bone pain
- Sterile pyuria

### Special investigations

- U- dipstix
- U MCS
- Urine for cytology ?value

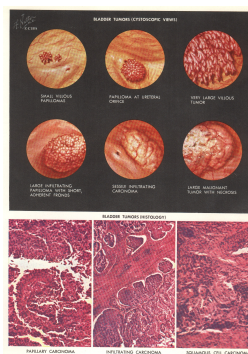
### What will the urologist do?

- Renal + bladder sonar
- Cystoscopy
- Retrograde pyelogram
- Bladder biopsy + fulgeration
- Endoscopic resection of the bladder tumor – size, clinical impression

### Indications for resection( TURBT)

- Smaller
- Low stage
- No hydronephrosis
- Complete TUR/ biopsy ?

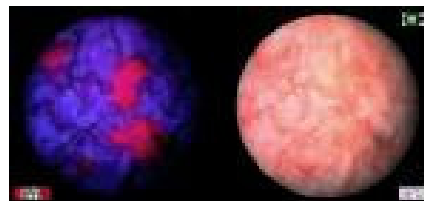
### Endoscopy



### Cystoscopy – TCC bladder

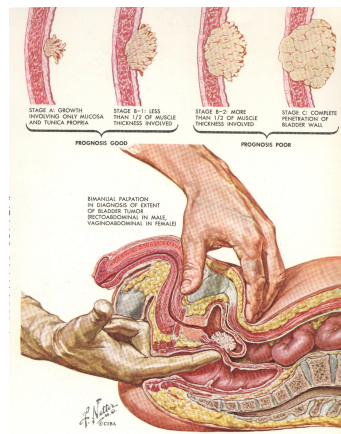


### Cystoscopy 5- Aminolevulinic acid installation



## Histology

- Epithelial tumours
  - TCC
  - Squamous cell Ca
  - Adenocarcinoma
- Tumors of bladder wall
  - Rhabdomyosarcoma
  - Leyomyosarcoma
- Secondary tumours
  - Metastases



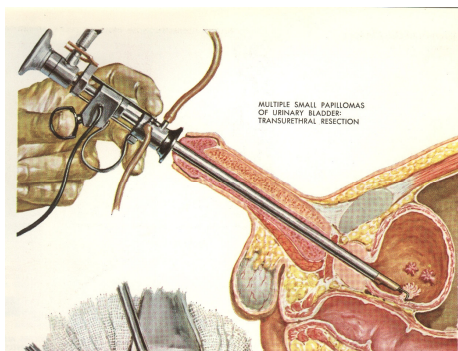
## Management

- Depends on
  - Depth of infiltration
    - Non muscle invasive
    - muscle Invasive = Tumour infiltrating detrusor muscle
  - Grade of tumour
    - High or low grade
  - Metastatic work up
  - Concomitant diseases

## Management - TCC

- Non muscle invasive- low grade
  - Resection or fulguration
- Superficial high grade disease
  - Resection or fulguration
  - Intravesical immune therapy
    - BCG installations
  - Intravesical chemotherapy
    - Mitomycin C Installations
- Strict follow - up regime

## Transurethral resection



## Management - TCC

- Muscle invasive disease
  - Clinically resectable
    - pelvic lymph adenectomy + radical cystectomy + urinary diversion
    - Partial cystectomy

- Clinically unresectable
  - Radiation therapy
  - Chemotherapy + re-assessment regarding salvage surgery

## Management - TCC

- Metastatic disease
  - Chemotherapy
    - Methotrexate,vinblastine,doxorubicin,cisplatin
    - Newer agents = Taxoids,gemcitabine

## What can you do?

- Recognize possible risk factors.
- Urine dipstix on every patient you see.
- Haematuria is cancer until proven otherwise
- Motivate patient to avoid risk factors
- Motivate patient to stick to the follow up regime proposed by the urologist. (Sometimes a lifelong commitment)

## Management - SquamousCa

- Resectable
  - Pelvic lymphadenectomy + radical cystectomy + neo bladder or
  - urinary diversion may be catheterisable or incontinent e.g Bricker's
- Unresectable
  - Radiation

## Differential diagnosis?



Figure 21-19. Intravenous urogram in another Egyptian boy shows sclerotic changes of the bladder and right lower ureter by schistosomal polypoid lesions.

## UPPER TRACT TUMOURS

### Etiology

- Rare tumours
- Same etiological factors as bladder TCC
- Natural history
  - Early lymphatic and vascular invasion = thin wall

### Clinical signs and symptoms

- Haematuria
  - gross/microscopic
  - 75% of pt.
- Flank pain
- Colic pain
- Flank mass
- Weight loss

### Diagnosis

- Intravenous pyelogram
  - Non opaque filling defect
- Retrograde pyelogram
  - Non opaque filling defect
- CT Scan with contrast
  - If tumour is in the renal pelvis
  - Difficult to distinguish from Renal cell CA

### IVP – Non opaque filling defect Renal pelvis



### What will the urologist do?

- Endoscopic biopsies of tumour
- Evaluate rest of urinary tract – Field disease
- Management will depend on
  - Grade of tumour
  - Depth of infiltration
  - Metastatic work up
  - Concomitant diseases

### Management

- Non Metastatic disease
  - Gold standard = nephroureterectomy with a cuff of bladder
  - Endoscopic ablation – prograde or retrograde
  - Segmental ureterectomy+ primary anastomosis or ureterneocystostomy +/- adjuvant therapy
- Metastatic disease
  - Chemotherapy