بسم الله الرحمن الرحيم
MANIFESTATIONS OF THE UROLOGICAL DISEASE

(URINARY SYMPTOMS)
URINARY SYMPTOMS

I - HAEMATURIA

II - PAIN

III - URINARY FREQUENCY

IV - ANURIA

V - RETENSION
I- HEMATURIA

- The passage of blood in the urine may result from lesions of the urinary tract.
- The commonest causes are trauma, tumour of the kidney, ureter, bladder, calculous disease, and bilharziasis.

CAUSES OF HEMATURIA:

A- Lesions of the urinary tract:

1- Renal:

* Injury.  
* Infarction.  
* Acute inflammation.  
* Stone.  
* T.B.  
* Polycystic kidney.  
* Growths (carcinoma, hypernephroma).
2- Ureteric:
*Stone. *Growth e.g. Carcinoma. * Bilharziasis.
3- Vesical:
4- Urethral:

B- Disease of the adjacent organs:

C- Blood and general disease:

D- Drugs:
The more common causes of haematuria
IN any case of haematuria always note the following features

1- **Colour:** Whether dark brown (renal haematuria) or bright red (bladder and prostate).

2- **Amount:** Whether profuse (tumours) or slight (inflammation and calculi).

3- **Relation to micturition:** Whether initial (urethera), terminal (bladder and posterior urethra) or total (prerenal, renal or vesical).

4- **Course:** Whether diurnal (stones) or nocturnal (renal TB and SEP).

5- **Pain:** Whether painful (inflammation and calculi) or painless (renal TB or new growth).

6- **Associated symptoms:** e.g. pyuria (infections and stones), necroturia (tumours), dysuria (enlarged prostate, vesical lesions), frequency (cystitis, stones, enlarged prostate) or fever and rigor (infections).
Examination of the urine:

1- Three-glass test:

A- Whether the blood is present in first (urethral), Last (vesical) or all glasses (renal and prerenal).

B- Clots:

- Slender worm like clots indicates a renal origin.

- Whereas bleeding from the bladder produces flat discord or irregular clots.

- While bleeding from the urethra may form short thick cylindrical clots corresponding to the varying calibre of the urethra.
II- Pain

1- Renal Pain.
- Pain arising from the kidney whether associated with inflammation or obstruction at the level of the pelviureteric junction is usually well localised.

2- Ureteric Colic.
- Renal colic is a term that is deeply rooted. Pain passing from loin to groin is more accurately termed ureteric colic.
- It is usually sudden in onset and severe in quality.
- It may radiate into the perineum, or to the vulva in a woman, and the base of penis in man, or go down the inner thigh.

3- Vesical Pain.
- Is usually deep sited suprapubically. It is made worse by the bladder filling or emptying and sometimes by defaecation.
4- PROSTATIC AND SEMINAL VESICLE

- It is an ache pain, it is deep seated either in the rectum or perineum.

5- URETERAL PAIN

- Is typically scalding in nature and associated with active cystitis.

III- FREQUENCY

- Normally, the bladder is emptied 5 or 6 times during 24 hours. Increased frequency of micturition may be due to increased fluid intake (physiological diuresis)

- Increased urine formation (polyuria of diabetes mellitus, diabetes insipidus and chronic nephritis)

- Irritative lesions of the urinary tract, particularly cystitis, vesical calculus, senile prostate and posterior uretheritis.
**V- RETENSION**

**MECHANICAL CAUSES:**
*Urethra (rupture, urethritis, stricture or stone) ;
*prostate (senile enlargement, cancer, acute prostatitis or abscess).
*Bladder (bladder-neck obstruction, stone, or cancer)
*The surrounding structures (pregnancy and pelvic tumours).

**NEUROGENIC RETENTION.**
May be due to spasm of the sphincter or atony of the detrusor (old age, fever, drugs, cord, injury or tabes dorsalis).
IV- Anuria

Anuria is defined as the complete absence of urine production, oliguria is the excretion of only 300 ml in a 24-hour period.

Causes:
1- Prerenal. 2- Renal. 3- Postrenal (obstructive).

1- Prerenal
a- Hypovolaemia. b- Blood loss. c- Sepsis.
d- Cardiogenic shock. e- Anaesthesia. f- Hypoxia.

2- Renal
a- Drugs. b- Poisons. c- Contrast media.
d- Eclampsia. e- Myoglobinuria. f- Incompatible B.T.
g- Disseminated intravascular coagulation. DIC
3- Obstruction.
1- Calculi.  
2- Pelvic malignancy.  
3- Iatrogenic.
4- Retroperitoneal fibrosis.  
5- Bilharzia.  
6- Crystaluria.

Treatment:
1- Peritoneal dialysis.
2- Haemodialysis.
3- Haemofiltration.
4- Obstructive renal failure. Drainage is the treatment 
   a- Percutaneous nephrostomy.
   b- Insertion of a J stent; radiographic imaging is essential for 
      this.
   c- Open surgery.
INVESTIGATIONS OF THE URINARY TRACT

1- URINE:
- Microscopy.
- Biochemistry.
- Bacteriology.
- Malignancy.

2- RENAL FUNCTION TEST:

3- RADIOLOGY- CONTRAST STUDIES:
A- Intravenous urogram.
B- Antegrade pyelography.
C- Digital subtraction arteriography (DSA).
D- Cystography.
E- Urethrography.
F- Venography.
4- ULTRASONOGRAPHY.
a- Abdominal, transrectal ultrasonography.

5- COMPUTED TOMOGRAPHY. C.T.

6- MAGNETIC RESONANCE IMAGING. MRI.

7- RADIOISOTOP SCANNING.

8- ENDOSCOPY.
Normal interavenous urogram showing the outline of both kidneys with the collecting system and upper ureters.
A ureteric catheter about to enter the left ureteric orifice. Cystoscopic view.
Retrograde ureterogram demonstrating the collecting system. Radiolucent filling defect in the renal pelvis.
A calculus in the kidney casts an acoustitic shadow.
Computed tomography showing renal cell carcinoma of the right kidney.
A non contrast CT scan showing a calculus in left upper ureter.
Reconstructed spiral computed tomography scan showing calculi in the right kidney
GOOD LUCK

PROFESSOR

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