Common Problems in Urology

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Outline
1. Renal Colic
2. Urinary Retention
3. Acute Scrotum

Renal colic

*The most common urologic emergency*

- Sudden increase of pressure in the urinary tract and the ureteral wall.
- Pain comes in waves and does not decrease if you change positions.
- One of the most painful experiences, similar to giving birth
Typical characteristic
- Very sudden onset
- Colicky in nature
- Radiates to the groin as the stone passes into the lower ureter.
- May change in location, from the flank to the groin
- The patient cannot get comfortable, and may roll around in agony.
- Associated with nausea / Vomiting

Investigations
- History + Physical examinations
- UA, Urine pregnancy test
- CBC
- Imaging
  - Film KUB
  - U/S abdomen
  - IVP
  - CT KUB +/- Abdomen

Renal colic ?? Really ??
- Diverticula disease
- AAA

Differential diagnosis
- Acute appendicitis
- Ovarian pathology Diverticulitis
- Ectopic pregnancy
- Bowel obstruction
- Abdominal aortic aneurysms
- Testicular torsion
- Burst peptic ulcer
- Pneumonia
- Myocardial infarction
- Inflammatory bowel disease (Crohn’s, ulcerative colitis)

A possible stone on a KUB necessitates an IVU for anatomical delineation..... or a non-contrast CT
**Acute Management of Ureteric Stones**

**Pain relief**
- NSAIDs
- Intramuscular or intravenous injection, by mouth, or per rectum
- +/- Opiate analgesics (pethidine or morphine).

**Hyperhydration**
'watchful waiting' with analgesic supplements
- 95% of stones measuring 5mm or less pass spontaneously

**Indications for Intervention to Relieve Obstruction and/or Remove the Stone**
- Pain that fails to respond to analgesics.
- Associated fever, pyonephrosis
- Renal function is impaired because of the stone
- Obstruction unrelieved for >4 weeks
- Personal or occupational reasons

**Treatment of the Stone**
- Temporary relief of the obstruction:
  - Insertion of a JJ stent or percutaneous nephrostomy tube.
- Definitive treatment of a ureteric stone:
  - ESWL.
  - PCNL.
  - Ureteroscopy.
  - Open Surgery: very limited.

**Urinary retention**
- Acute Urinary retention
- Chronic Urinary retention
Acute Urinary retention

- Painful inability to void, with relief of pain following drainage of the bladder by catheterization.
- **Pathophysiology:**
  - Increased urethral resistance, i.e., bladder outlet obstruction (BOO)
  - Low bladder pressure, i.e., impaired bladder contractility
  - Interruption of sensory or motor innervations of the bladder

Causes:

- **Men:**
  - Benign prostatic enlargement
  - Carcinoma of the prostate
  - Urethral stricture
  - Prostatic abscess
- **Women:**
  - Pelvic prolapse (cystocele, rectocele, uterine)
  - Urethral stricture;
  - Urethral diverticulum;
  - Post surgery for 'stress' incontinence
  - Pelvic masses (e.g., ovarian masses)

Initial Management:

- Urethral catheterization
- Suprapubic catheter (SPC)

Late Management:

- Treating the underlying cause

Chronic urinary retention

- Obstruction develops slowly, the bladder is distended (stretched) very gradually over weeks/months, so pain is not a feature.
- **Presentation:**
  - Urinary dribbling
  - Overflow incontinence
  - Palpable lower suprapubic mass
Chronic urinary retention

- Usually associated with
  - Reduced renal function.
  - Upper tract dilatation
- Treatment is directed to renal support.
- Bladder drainage under slow rate to avoid sudden decompression> hematuria.
- Treatment of cause.

Acute Scrotum

- Emergency situation requiring prompt evaluation, differential diagnosis, and potentially immediate surgical exploration

Presentation:

- Acute onset of scrotal pain.
- Majority with history of prior episodes of severe, self-limited scrotal pain and swelling.
- N/V
- Referred to the ipsilateral lower quadrant of the abdomen.
- Dysuria and other bladder symptoms are usually absent.
Testicular torsion

Physical examination:
- The affected testis is high-riding Transverse orientation.
- Acute hydrocele or massive scrotal edema
- Cremasteric reflex is absent.
- Tender larger than other side.
- Prehns sign -ve.
  - Manual detortion.

Adjunctive tests:
- To aid in differential diagnosis of the acute scrotum.
- To confirm the absence of torsion of the cord.
  - Doppler examination of the cord and testis
    - High false-positive and false-negative results

Color Doppler ultrasound:
- Assessment of anatomy and determining the presence or absence of blood flow.
- Sensitivity: 88.9% specificity of 98.8%
  - Operator dependent.

Signs
- Prehn +ve = decrease pain when elevate testis ➔ suspected epididymitis
- Dresner’s sign = dark blue spot at scrotal sac ➔ suspected torsion testicular appendix
- Robinowitz’s signs = absent of cremasteric reflex ➔ suspected testicular torsion

- Swollen
- Hydrocele
- Absent blood flow
Radionuclide imaging:
- Assessment of testicular blood flow.
- PPV of 75%, a sensitivity of 90%, and a specificity of 89%.
- False impression from hyperemia of scrotal wall.
- Not helpful in Hydrocele and Hematoma.

Torsion of the Spermatic Cord...

Surgical exploration:
- A median raphe scrotal or a transverse incision.
- Affected side to be examined first.
- The cord should be detorsed.
- Testes with marginal viability should be placed in warm sponges and re-examined after few minutes.
- A necrotic testis should be removed.
- If the testis is to be preserved, placed into the dartos pouch (suture fixation).
- The contralateral testis must be fixed to prevent subsequent torsion.

TORSION

LithotomY Position

In the seventeenth century, Fr Jacques gained great fame as a ‘stone-cutter’ or ‘lithotomist’. He travelled through Europe, practising a bladder-stone removal technique that became the golden standard for a long time.