Testicular Pain

Dr Heng Chin Tiong
Senior Consultant, Department of Urology
National University Hospital

02 June 2012
Case scenario 1

30 year old man complains of intermittent testicular pain for 1 month. Physical examination of the testes: normal

Considerations: What are the possible differential diagnoses?

- Testicular causes
- Non-testicular causes
Case scenario 2

54 year old man complains of scrotal pain for the past 2 months
Physical examination – mild enlargement and nodularity of the left
epididymal head. Minimally uncomfortable.

Differential diagnoses?
- Structural causes. E.g. cyst
- Infective causes epididymitis
- Tumour?
Objective of this lecture

- Review the common and not-so-common causes of testicular pain
- Review the considerations other testicular lesions

  - Pain without any palpable tenderness or pathology
  - Acute pain and swelling of the testis
  - Localized acute pain in the testis
  - Chronic pain post surgery
  - Chronic pain with classical symptoms
  - Lesions not usually associated with pain
Innervation and blood supply of the testes

- **Testes has no somatic innervation**
- **Autonomic supply from the intermesenteric nerves and renal plexus**
- **Blood supply**
  - Testicular artery – branches from the aorta
    - Countercurrent with the pampiniform plexus
    - 2-4 degrees lower than the rectal temperature
  - Artery to the vas
  - Cremasteric artery
Pain without any palpable tenderness or obvious pathology

• Consider referred pain
• Embryological connection between the testes, prostate, bladder and trigone and ureter
• Consider:
  – Bladder stones
  – Distal ureteric stones
  – Prostatitis / chronic pelvic pain
• Do:
  – Urinalysis or urine dipstick – gives a clue for haematuria or infection
  – Digital rectal examination
  – Urine culture
  – US testes – for occult lesions
Acute onset pain with swelling of the testes/epididymis

- My testes are swollen and painful!
- Consider torsion versus epididymitis
  - Torsion
    - May have horizontal lie
    - Testis retracted, swollen and tender
    - Loss of cremasteric reflex
    - Younger age group
  - Epididymitis
    - May mimic torsion
    - Tenderness more on the epididymis (posterior)
    - May have LUTS symptoms or UTI symptoms
  - If in doubt, need emergency US or surgical exploration
  - 6-hour window from onset to irreparable damage
Epididymitis

• **Acute swelling < 6 weeks**
• **Etiology**
  – Young men – consider sexually transmitted organisms – C trachomatis, N Gonorrhoea
  – Older men – urinary obstruction – consider causes of bacteriuria
  – Homosexual – coliforms
Epididymitis / epididymo-orchitis

- **Clinical presentation**
  - Half of men do not have urethral discharge
  - Tenderness and swelling of the epididymis
  - Usually begin at the tail, then spread (to testes)

- **Treatment**
  - Do urine culture and sensitivity
  - Urethral smear if suspect STD
  - Fluoroquinolones, Cotrimoxazole for non STD
  - Doxycycline, ceftriaxone, tetracycline for STD
  - Bed rest, scrotal elevation
Tuberculous epididymitis

• May have acute presentation or chronic
• Difficult to suspect if no other urinary symptoms
• Do UFEME – sterile pyuria – consider genitourinary TB
• Ultrasound may show hypervascular epididymal nodular mass
• Treat with anti-TB treatment, epididymectomy, if not better
Acute onset pain and tenderness at the upper pole of the testis

- **Torsion of the appendix testis / appendix epididymis**
  - Variable presentation: insidious onset of scrotal pain to sudden pain mimicking torsion testis
  - Localised tenderness at the upper pole of the testis/epididymis
  - Blue dot sign
  - Scrotal wall may have oedema
  - Testis mobile, cremasteric reflex intact
Chronic pain post-surgery

- Post hernia repair
- Post vasectomy
Post-hernia repair orchalgia

• Nerve entrapment
• Resolves with conservative treatment
  – NSAIDs
  – Neuroforte/Neurobion
  – Panadol
• If persistent, may warrant surgery to remove any non-absorbable suture material
Post-vasectomy pain syndrome

- Some pain occurs in about 30% of men
- Chronic pain requiring surgery in 0.1%
- Chronic congestive epididymitis
  - Swollen epididymitis
  - NSAIDs, sitz baths, acupuncture, etc
  - Wait at least 3 months
  - Definitive: reversal of vasectomy or epididymectomy
- Sperm granuloma
  - Sperms are highly antigenic
  - Inflammatory response may result in a granuloma up to 2cm diameter
  - Usually resolve with time.
Chronic pain with classical symptoms

- Chronic epididymitis
- Varicocele
- Chronic intermittent torsion
Chronic epididymitis

- Persistently tender and indurated epididymis
- Positive semen or urine culture
- Treat with antibiotics, anti-inflammatory agents, sitz baths
- Pain clinic, acupuncture
- Avoid diagnostic puncture if fertility desired – epididymal obstruction
- Total epididymectomy if fertility not desired
Varicocoele

- Heavy sensation
- Persistent ache
- Relief when lying down
- Surgery if there is typical symptoms related to varicocoele
  - Grade 1: palpable with valsalva
  - Grade 2: palpable without valsalva
  - Grade 3: visible

- Non-surgical treatment
  - Supportive underwear
Varicocele and fertility

- Prevalence 15% - possibly persist from adolescence
- Much higher in subfertile men
- Evidence and recommendation for treatment of varicoceles in the following situations
  - Clinically palpable (i.e. not just based on Ultrasound)
  - Abnormal semen parameters
  - Partner is normal (or potentially correctable infertility)
  - Documented sub-fertility
    - Young men not presently desiring children should also be offered treatment
    - Adolescents should be followed up annually with testicular size +/- semen analysis
Torsion and intermittent torsion

- Intermittent pain associated with nausea
- Affected testis retracted and elevated
- Transverse lie – bell clapper deformity
- Spontaneously disappears after few minutes to hours
- Scrotal orchidopexy – fixes both testes and avoids rotation
Chronic orchalgia of unknown origin

- Ureteric stone
- LUTS
- Occult hernia
- Irritable bowel syndrome
- Referred pain
Lesions not usually associated with pain

- Epididymal lesions
- Testicular adnexal lesions
Epididymal lesions

- Epididymal cyst / Spermatocoele
  - Retention cysts on the rete testes or epididymis
  - Often no treatment needed
  - Surgery for pain
  - Risk of epididymal obstruction
Tumours of the testicular adnexae

• **Adenomatoid tumours**
  – Mainly in age 20s – 30s
  – Small solid lesions in the epididymis
  – Vacuolated cells
  – Surgical excision

• **Mesothelioma**
  – Para-testicular mesothelioma
  – Older individuals
  – 15% metastasize
  – Orchidectomy

• **Cystadenoma**
  – Cystic tumour of the epididymis
    • Excision

• **Other rare tumours**
  – Leiomyosarcoma
  – Liposarcoma
Summary

• There is still no substitute for good history and physical examination.
  – Ultrasound of the testes provides useful additional information on occult pathology

• Management of non-acute testicular pain can be fairly straightforward
  – Surgery is often a last resort

• For sudden onset pain, the main consideration is for torsion which is a surgical emergency
Case scenario 1

• 30-year-old man complains of intermittent left testicular pain for 1 month.
• Physical examination of the testes: normal
• No other symptoms
• Ultrasound of the kidneys and testes normal
• Pain resolved
• Presumptive diagnosis - ? Mild epididymitis, now resolved, Discharged

• 4 weeks later, presented to ED with ureteric colic, passed a 5mm ureteric stone
Case scenario 2

- 54 year old man complains of scrotal pain for the past 2 months
- Physical examination – mild enlargement and nodularity of the left epididymal head. Minimally uncomfortable.
  - US testes – small left epididymal cyst, thickened epididymis consistent with chronic epididymitis
- Treated with multiple courses of antibiotics, analgesics, not better.
  - Eventually had a left partial epididymectomy
- Initially much improved, but symptoms later recurred
  - Patient is sexually active, potentially desiring children
- Not responding to conservative measures
  - Eventually tried acupuncture, with good results
Thank you for your attention