The Testicle and Scrotum

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Areas of Surgical Expertise

Male Infertility

Vasectomy and microsurgical reversal of Vasectomy.

Genital Oncology

Sexual Dysfunction

Ejaculatory disorders

Testicular Pain.

Peyronies Disease

Penile Reconstruction

Other Surgery of the testis and scrotum

Other Surgery of the penis
The Scrotum

Types of problem;

Diseases of the scrotum

Referred pain from the abdomen/spine

‘Chronic testicular Pain’
Trauma
Penile Fracture due to vigorous intercourse
Infection
Epididymitis

- Causes
  - Men less than 35 - Chlamydia and Gonorrhoea
  - Men greater than 35 - Gram negative Bacilli

Full Urological evaluation
- Tender, swollen, red or warm scrotum
- Testicle pain and tenderness
- Dysuria and Frequency and Urgency
- Painful intercourse or ejaculation
- Chills and a fever
- Testicular lump
- Pain or discomfort in the lower abdomen or pelvic area
- Discharge from the penis
- Blood in the semen
Complications

- Scrotal abscess
- Chronic epididymitis
- Testicular atrophy
- Infertility
Specimen - Necrosis due to testicular torsion
Adult Testicular Torsion

Surgical Emergency

Epidemiology

- Commonest 12-18 years
- 1/4000 males less than 25 years of age

Types

- Intra-vaginal
- Extra-vaginal
Testicular Torsion

Clinical Features (Eaton, J Urol 2005)

- Painful recurrent episodes (50%)
- Severe pain of rapid onset
- Nausea and/or vomiting (25%)
- Horizontal lie of the testes

Other symptoms-Abdominal pain (20-30%)
  - Fever (16%)
  - Urinary frequency (4%)

Previous history of trauma and pain attacks, presence of nausea and vomiting, and absence of urinary complaints are the main predictors of TT (Ciftci 2004)
Testicular Torsion

Differential Diagnosis

- Torsion of testicular appendage
- Epididymo-orchitis
Testicular Torsion

Investigations

- MSU/Dipstick

- US sensitivity of 69.2%, specificity of 100%, positive predictive value of 100% and negative predictive value of 97.5%.

- Tc-99m radionuclide imaging
  Sensitivity of 90-100%
Testicular Torsion

Surgical Management

- A salvage rate of 80-100% is found in patients who present within 6 hours of pain.
- After 6-8 hours, the salvage rates decrease to almost 0% at 12 hours.
cocele
Symptoms

- Pain (abdominal/groin/testicular)
- Lump
- Infertility
Varicocele

- Dilatation of the pampiniform plexus of spermatic veins
- Incidence 12% of men in the general population
- 25-35% with infertility
- 90% left sided, 10% on right
- NB- renal cell carcinoma
Grading of varicocele

- I palpable during valsalva
- II palpable on standing
- III visible on standing

Bag of worms
Incidence of Varicocele in 9034 infertile couples

Normal semen quality
11.7%

Abnormal semen quality 25.4%

## Varicocele grade and semen quality

<table>
<thead>
<tr>
<th>Varicocele Grade</th>
<th>n</th>
<th>Total sperm count (mil)</th>
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<tbody>
<tr>
<td>Not present</td>
<td>5841</td>
<td>115</td>
</tr>
<tr>
<td>Grade 1</td>
<td>434</td>
<td>86</td>
</tr>
<tr>
<td>Grade 2</td>
<td>548</td>
<td>67</td>
</tr>
<tr>
<td>Grade 3</td>
<td>271</td>
<td>60</td>
</tr>
</tbody>
</table>

Only studies with status as randomised clinical trials
No evaluation of methodology was performed
Three studies exhibited methodological problems
Inherent selection bias (many couples for ART rather than enter the study).

“Most studies show improvement in postoperative sperm density and motility. The natural pregnancy rates varies, but the overall average is 37%, a clearly higher figure than any reported for non-treatment. Although many of these studies suffer from the flaws of non-randomised trials, these results would be difficult to explain on the basis of chance alone”
Hydrocele
Causes of Acute/Chronic testicular pain

- Idiopathic in 25% of cases
- Intermittent Testicular Torsion
- Post-genitourinary surgery
- Sperm granuloma (post-Vasectomy)
- Varicocele
- Testicular Cancer
- Genitourinary infection (e.g. STD)
Causes of Chronic testicular Pain

- Acute on Chronic
- Assess for referred pain

**Nephrolithiasis** in the mid-ureter (most common)

**Prostatitis/Chronic Pelvic Pain Syndrome**

**Radiculopathy**

- Genitofemoral and ilioinguinal nerves (T10-L1)
- Causes
  - **Inguinal Hernia**
  - **Radiculitis**
  - Entrapment **Neuropathy** after **Hernia Repair**
  - Sperm granuloma