

Causes occlusion of testicular blood vessels and if >6hr viability of the testis is compromised.

Epidemiology

Newborns & adolescent boys 11-16y most common but can occur at any age.

The left side is more commonly affected than the right with 2% of cases being bilateral.

Risk factors

A high insertion of the tunica vaginalis → "bell clapper testis" with a high horizontal lie

May be precipitated by trauma, exercise or cremasteric muscle contraction

Presentation

- Acute sudden painful scrotum which may be reddened. May be referred to abdomen.
- There is a swollen, tender testis retracted upwards.
- Lifting testis up over the symphysis ↑pain the opposite of epididymitis.
- There may be nausea and vomiting
- Both testes may be in the "bell clapper position"

Differential diagnosis

- Torsion of testicular appendage (90%) [or epididymal appendage (~10%)]
 - Usually boys aged 7-12y. Systemic symptoms are rare.
 - Localised tenderness at upper pole of the testis where "blue dot sign" may appear.
- Epididymitis, orchitis, epididymo-orchitis
 - Enlarged tender testis/epididymis. Red swollen hemi-scrotum.
 - Most commonly from reflux of infected urine or STD (Gonococcus, Chlamydia)
- Hydrocele
 - Transilluminating painless swelling.
- Incarcerated hernia
 - Unable to get above this on examination.
- Testicular tumour
 - Slow scrotal enlargement rarely accompanied by pain. ↓Sensation of the testis.
- Mumps
 - There is also swelling of the parotid glands. Rare before puberty

Investigations

Do not delay urological review/OT for investigations if likely torsion. If equivocal then:

Urine: UA, MC&S, STD antigen

Blood: FBC

Imaging: Doppler USS

Management

Manually detorsion: temporising measure pre-OT. Rotate (try laterally first) until ↓pain.

Surgical detorsion: removal of necrotic testis, orchidopexy of all remaining testes.

Prognosis

- 80-90% salvage rate if OT<6hrs pain. 20% if 10-24hrs. ~0% if >24hrs.
- Testicular fertility is usually impaired by torsion. By the torsion or by being a high riding testis in the first place & so at a higher temperature. If bilateral then may → subfertile.
- The psychological effects of absence of a testis may be treated with an implant.