

THE ACUTE SCROTUM

Torsion of the Testis

Torsion of the testis is an emergency as failure to detort testis within 6 hours will lead to testicular necrosis

There are 2 types of torsion:

• Extravaginal

The torsion usually occurs in the perinatal period or during infancy and is thought to be probably due to an undescended testis

• Intravaginal

This is due to a high investment of tunica vaginalis causing a "bell-clapper" deformity. It usually occurs in boys between 10-14 years old.

Table 1. Causes of the acute scrotum

- acute testicular torsion
- torsion of epididymal and testicular appendages
- epididymo-orchitis
- incarcerated inguinal hernia
- idiopathic scrotal oedema
- acute hydrocoele
- Henoch-Schonlein purpura
- tumours
- trauma
- scrotal (Fournier's) gangrene
- symptomatic varicocele

Table 2. Symptoms

- sudden severe pain (scrotum and referred to lower abdomen)
- nausea and vomiting
- no fever or urinary tract infection symptoms until later

Table 3. Physical findings

Early

- involved testis - high, tender, swollen
- spermatic cord - swollen, shortened, tender
- contralateral testis - abnormal lie, usually transverse

Late

- reactive hydrocoele
- scrotal oedema

Investigation

- doppler /radioisotope scan. It may be normal initially

Management

- exploration: salvage rate: 83% if explored within 5 hours
20% if explored after 10 hours
- if viable testis, fix bilaterally
- if non-viable, orchidectomy to prevent infection and sympathetic orchitis (due to antibodies to sperm) and fix the opposite testis

TORSION OF APPENDAGES OF TESTIS AND EPIDIDYMIS

Appendages are Mullerian and mesonephric duct remnants

Importance - in a late presentation there may be confusion with torsion of testis

Table 4. Symptoms

- age 8 - 10 years old
- sudden onset of pain, mild initially but gradually increases in intensity

Table 5. Physical findings

Early

- minimal redness of scrotum with a normal non-tender testis
- tender nodule "blue spot" (usually at upper pole of testis) is pathognomonic

Late

- reactive hydrocoele with scrotal oedema making palpation of testis difficult

Treatment:

- if sure of diagnosis of torsion appendages of testis, the child can be given the option of non-operative management with analgesia and bed rest
- if unsure of diagnosis, explore and remove the twisted appendage (this ensures a faster recovery of pain too!)

EPIDIDYMO-ORCHITIS

Can occur at any age.

Route of infection

- reflux of infected urine
- blood borne secondary to other sites
- mumps
- sexual abuse

Table 6. Symptoms

- gradual onset of pain with fever
- may have a history of mumps
- +/- dysuria or frequency

Table 7. Physical findings

- testis may be normal with a reactive hydrocoele
- epididymal structures are tender and swollen

Treatment

- if unsure of diagnosis, explore
- investigate underlying abnormality (renal ultra sound, MCU and IVU if a urinary tract infection is also present)
- treat infection with antibiotics

IDIOPATHIC SCROTAL OEDEMA

The cause is unknown but has been postulated to be due to an allergy.

Symptoms

- sudden acute oedema and redness of scrotum
- painless
- starts as erythema of perineum and extending to lower abdomen
- well child, no fever
- testes: normal

Treatment

This condition is self-limiting but the child may benefit from antibiotics and antihistamines.