

# Acute scrotum

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- ▶ Acute scrotal pain with or without swelling and erythema
- ▶ Most conditions are nonurgent .But, it's critical to differentiate between them & testicular torsion
- ▶ Age at presentation is an important clue  
(torsion of the appendix testis/epididymis → prepubertal boys • testicular torsion → neonates and adolescents)

► DDX:

- Torsion of the testis
- Torsion of the appendix testis/epididymis
- Epididymitis/orchitis
- Hernia/hydrocele
- Trauma/sexual abuse
- Tumor
- Idiopathic scrotal edema (dermatitis, insect bite)
- Cellulitis
- Vasculitis (Henoch-Schönlein purpura)

# TESTICULAR TORSION

Results from twisting of the spermatic cord which compromises the testicular vasculature and results in infarction

Probability of testicular salvage declines significantly beyond **6 hours**

Typically occurs before age 3 years or after puberty

Less common in prepubertal boys and after age 25 years

- ▶ Presentation: sudden onset of severe, unilateral testicular pain /lower thigh/ or lower abdominal pain , nausea and vomiting

(Intermittent testicular pain → incomplete torsion with spontaneous detorsion)

- ▶ enlarged testis, retracted up, transverse orientation, anteriorly located epididymis, severe generalized testicular tenderness , swelling and erythema , cremasteric reflex is often absent

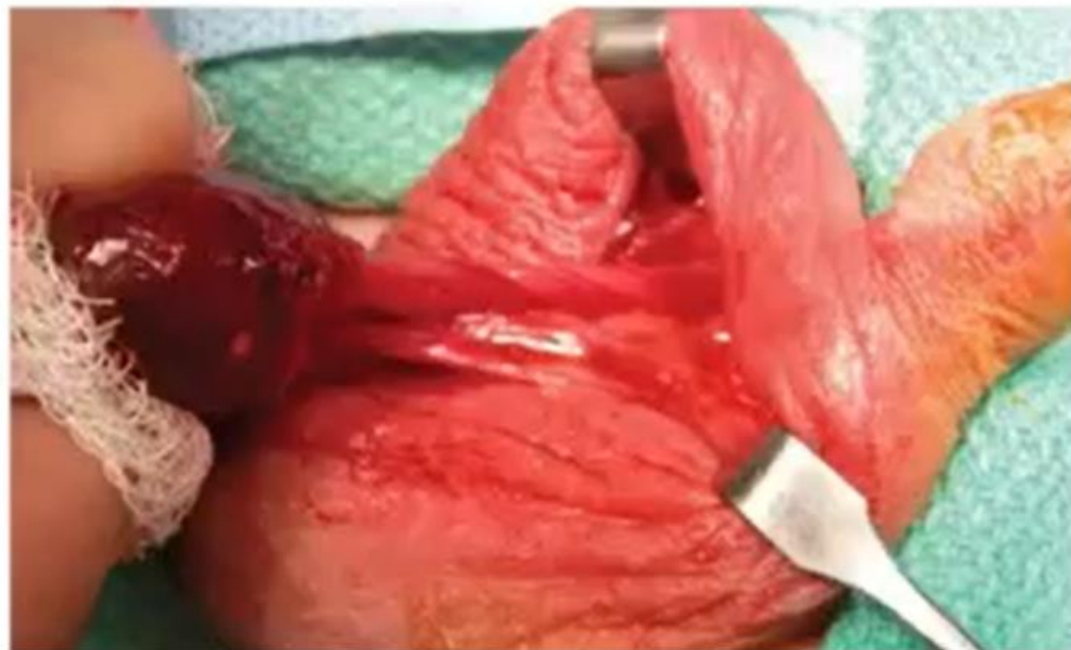
► Two types of torsion:

Extravaginal : occurs perinatally  
spermatic cord twists proximal to the tunica vaginalis  
the tunica and testis to spin on the vascular pedicle

Intravaginal : more common in children and adolescents  
spermatic cord twists within the tunica vaginalis  
'bell-clapper' deformity

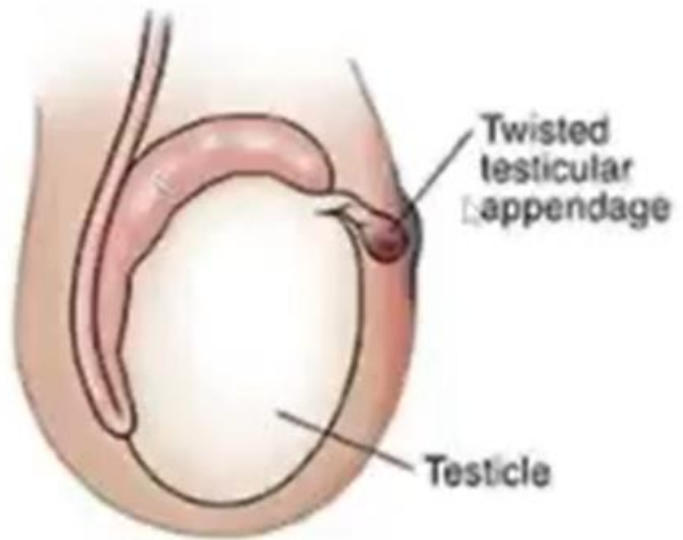


- ▶ Exploration under GA, detorsion, placement in warm saline/gauze, and fixation , in addition to contralateral fixation
- ▶ If the testis is clearly nonviable, it should be removed



# Torsion of Testicular Appendages

- ▶ Torsion of the appendix testis or appendix epididymis is the most common cause of an acute scrotum
- ▶ Most commonly between ages 7 and 10 years (? prepubertal hormonal)
- ▶ Presentation: sudden onset of pain and nausea , appendage can be palpated/ focally tender ( blue dot sign)
- ▶ Self-limited
- ▶ Management : NSAIDs, restricted activity, and warm compresses



# Epididymitis/Orchitis

Bacterial (rare in children) : Retrograde bacterial infection (from the bladder and urethra)

Scrotal pain and swelling typically have a slow onset, worsening over days

On exam : induration, swelling, and tenderness of the hemiscrotum , positive urinalysis and culture, or urethral swab in sexually active adolescents suggests the diagnosis

Treatment : antibiotic therapy

Viral :Mumps orchitis (rare) , Adenovirus, enterovirus, influenza, and parainfluenza virus infections

Treatment : supportive (self-limited)

# Idiopathic Scrotal Edema

Scrotal swelling +erythema

Unknown etiology

Boys 5 to 9 years of age

characterized by: Insidious onset of swelling and erythema that begins in the perineum or inguinal region, and spreads to the hemiscrotum , Pruritus

Testis is not tender

US shows normal testicular blood flow

DDx: Contact dermatitis ,insect bites ,minor trauma ,cellulitis from an adjacent infection



# Henoch-Schönlein Purpura

A vasculitis syndrome that involve the skin, joints, and GI and GU systems

Symptoms :scrotal and spermatic cord pain, erythema, and swelling (in 1/3) , skin purpura, joint pain, and hematuria

Most commonly in boys younger than 7 years of age

Doppler US: normal blood flow to the testis

Management :conservative

# TESTICULAR TRAUMA

- Rare
- Dx: History of trauma , don't forget to check sexual abuse
- Exam: injured testis is swollen and markedly tender ,swelling and bruising of the scrotum
- US: evaluate for rupture of the tunica albuginea

Management : exploration +/- repair of the ruptured tunica albuginea

