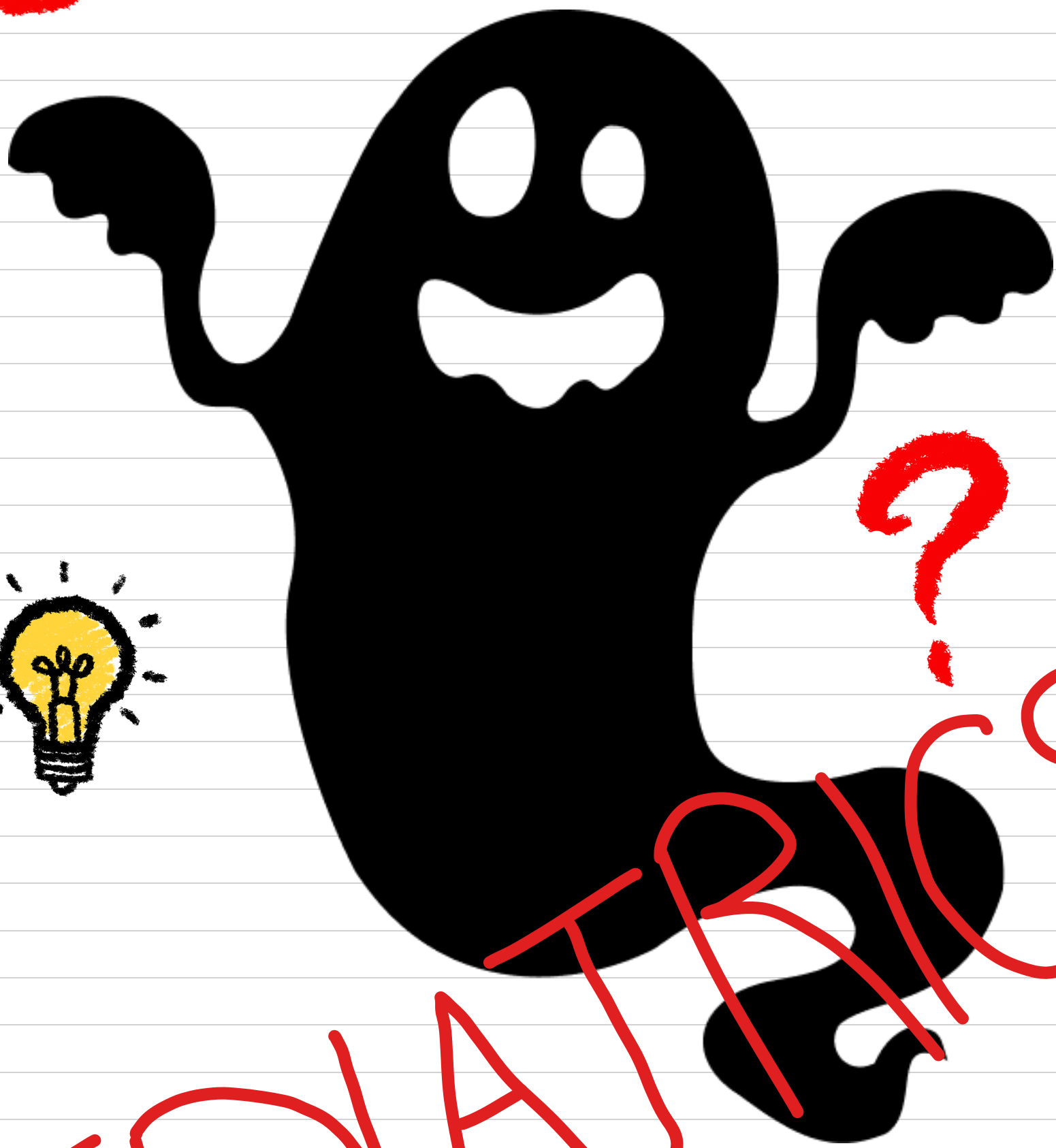
دعواتكم



PEDIATRICS

لا تنسونا من دعواتكم !!

الكاتبة : سارة جمال

بالتوفيق جميعا

Inguino-scrotal disease:

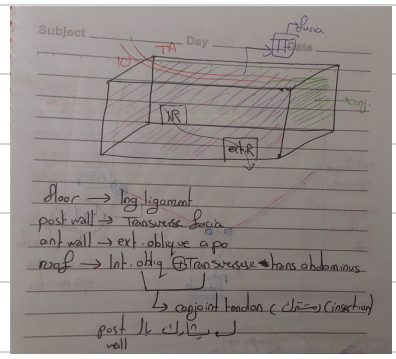
1 Inguinal hernia and hydrocele

- What is Process vaginalis
- In the inguinal canal → gradually obliterates after birth
- In scrotum → forms the tunica vaginalis around the testis

Ⓐ Inguinal hernia : ⟶ pathogenesis: failed obliteration of patent process vaginalis.

*more in premature
* M>F full term but premature M>F
* family history
* Rt>Lt

anatomy

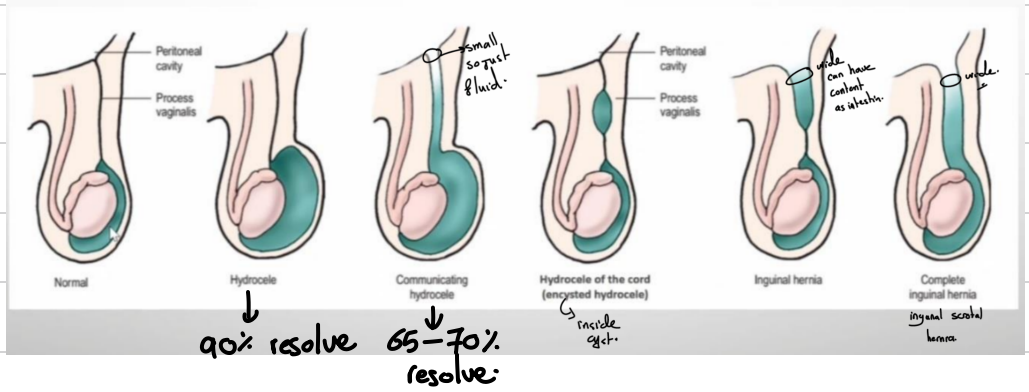


contents of inguinal canal:

♂: ilioinguinal nerve + spermatic cord
♀: : = = + Round ligament

*spermatic cord structures:

① cremasteric muscle (from internal oblique)
② genital branch of genitofemoral n.
③ Testicular artery
④ pampiniform plexus
⑤ Lymphatic channels.
⑥ VAS
⑦ processus vaginalis.



90% resolve 65–70% resolve:

① Hydrocele
② Communicating hydrocele
③ encysted hydrocele (of the cord)
④ Inguinal hernia
⑤ complete Ing hernia (inguinoscrotal)

* sliding hernia : [may contain] → [fallopian tube / ovary / side wall of urinary bladder]
* Amyand's hernia: if @ppendix herniated
* Litter's hernia: meckel diverticulum herniated
* Ritcher hernia : ischemic antimesenteric bowel
* pantaloon hernia: direct + indirect Ing hernia. more in neonates.

most are asymp. ⟶ so can simply be observed for 1-2 years of age
Indications of surgery : pain / fails to resolve / clinical hernia is apparent.

- NO DIFFERENCE IN RECURRENCE (< 0.5%)
- ↓ INCIDENCE OF METACHRONOUS HERNIA
- ↓ OP. TIME FOR LAP. BILATERAL REPAIRS
- ↑ OP. TIME WITH LAP. UNILATERAL REPAIR

Incarcerated hernia ⇒ Try to reduce it
* with sedation (midazolam → apnea) monitor O2
* firm + continous p
* if reduced → admit and repair in 24-48h
* if failed or incomplete reduction or contraindic ↳ EMERGENT surgery

Dont reduce if
① signs of peritonitis ② septic shock

* open v.s. Laparoscopic ppV Ligation
↳ prematurity
↳ younger age
↳ female gender
↳ Lt sided unilateral hernia.

MESH is ALMOST NEVER used in CHILDREN
except: reccurent herneas in children with CONNECTIVE TISSUE DISORDER or MUCOPOLYSACCHARIDOSES

Ⓑ Hydrocele : accu of peritoneal fluid in non obliterated process vaginalis.

Surgery : high ligation of process vaginalis + drainge of hydrocele. ⟶ Lord's / Bottle / Jaboulay's procedure

Deep inguinal ring
- abd descent guided by the gubernaculum and anti-mullerian Hormone
- Inguino-scrotal descent along the processus vaginalis driven by testosterone

2 UDT: undescended Testes

* RF: premature or Low brith weight
* usually descend spontaneously by 6-12 months of age
* classification:
  - Non palpable UDT
    - → Testicular agenesis
    - → Intraabdominal UDT
    - → Vanished testis (atrophied due to previous vascular insult as perinatal torsion/trauma/iatrogenic)
    - → small testis / obese child / no experienced examiner.
  - palpable UDT:
    - → inguinal udt
    - → retractile testis (cremastric overactivity)
    - → ascending testis (acquired iatrogenic)
    - → peeping testis
    - → ectopic testis

- ASSOCIATED ANOMALIES:
  - PATENT PROCESSUS VAGINALIS
  - EPIDIDYMAL ABNORMALITIES
  - PRUNE-BELLY SYNDROME
  - GASTROSCHISIS
  - BLADDER EXSTROPHY
  - PRADER–WILLI, KALLMAN, NOONAN SYNDROMES
  - TESTICULAR DYSGENESIS
  - ANDROGEN INSENSITIVITY SYNDROMES

MALIGNANCY RISK
FERTILITY

presentation: emtty hemiscrotum during neonatal checkup or later visits

- HISTORY IS IMPORTANT (GESTATIONAL AGE, PRESENT AT BIRTH, HISTOY OF TRAUMA/TESTICULAR TORSION , PREVIOUS INGUINAL SURGERY)

on exam ① scrotum → size
- darker skin color
- presence of rugae
- signs of development

② palpate scrotum bilateraly + testis + ing region.

MANAGEMENT

HORMONES (LH-RH AGONIST)
CONTROVERSIAL

SURGERY
WHY WE DO SURGERY ?

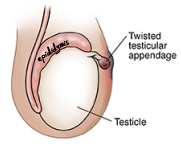
- REDUCES THE RISK OF MALIGNANCY AND INFERTILITY
- REDUCES THE RISK OF TORSION
- EASIER EXAMINATION
- PSYCHOLOGICAL : NORMAL-APPEARING SCROTUM
- ENHANCE ENDOCRINE FUNCTION

3 Acute scrotum:

* = acute scrotal pain
* most are nonurgent
* age → l.m clue

torsion of the appendix testis/epididymis → prepubertal boys

testicular torsion → neonates + adolescents



Torsion of testis
torsion of the appendix testis/epididymis
Trauma/sexual abuse
Tumor
hernia/hydrocele
epididymitis/orchitis
idiopathic scrotal edema (dermatitis)
cellulitis
vasculitis. (Henoch-Schönlein purpura)

Ⓐ **testicular torsion** = twisting of the spermatic cord → compromise vasculature → infarction

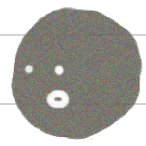
* salvage ↓↓ after 6 hours.
* befor 3y + after puberty
* presentation: sudden, severe, unilateral testicular pain/lower thigh/lower abd pain, nausea and vomiting
* if intermittent → incomplete torsion with spontaneous detorsion.
* enlarged testis/retracted up/transverse orientation/ant. located epididymis/severe generalized testicular tenderness/swelling/erythema

Cremastric reflex is often absent.

2 types:
- Extravaginal: spermatic cord twists proximal to the tunica vaginalis (tunica + testis spin on the vascular pedicle)
- Intravaginal: more in children and adolescents. ♀ spermatic cord twists within the tunica vaginalis "Bell-clapper deformity"

Tx: ⊛ exploration under GA/detorsion/placement in warm saline-gauze/fixation/contralateral fixation.
⊛ if nonviable → remove

Ⓑ **Torsion of testicular appendages** → m.c.c of acute scrotum



* btw 7 and 10
* presentation: sudden onset of pain and nausea, appendage can be palpated [Blue dot sign]
* self limited, NSAIDS, restricted activity, warm compresses.
* physical: induration, swelling, tenderness of hemiscrotum, ⊕ urinanalysis and culture/urethral swab in sexually active suggest dx.
* Tx: Abx + supportive (self limited)
* Viral: Mumps orchitis (rare), Adenovirus, enterovirus, influenza, and parainfluenza virus infections
* scrotal pain + swelling + slow onset + worsening overdays.

Ⓒ **idiopathic Scrotal edema**

* swelling + erythema
* 5-9 years
* insidious onset and erythema begins in the perineum or inguinal region and spread to hemiscrotum, pruritis.
* Testis is not tender DDx: contact dermatitis/insect bites/minor trauma/cellulitis

(D) Henoch-schonlein purpura

* vasculitis syndrome ⇒ involve (skin/joints/GI/GU)
* symp: scrotal + spermatic cord pain / erythema / swelling / skin purpura / joint pain / hematuria
* 7y.
* doppler US: normal ↓. flow to testis.
* Management: Conservative.

(E) Testicular trauma:

* injured testis is swollen and tender , swelling and bruising of the scrotum
* evaluate for rupture of tunica albugina
* Tx: exploration ± repair ruptured↑