EM Basic- Testicular pain

Most important diagnosis to rule out- Testicular torsion

-Don't let the patient sit out in triage for a long time

-**TIME = TESTICLE**

First decision- patient in distress or no apparent distress

-No distress- can get a full history and exam

-Distress- rapid exam and history, ultrasound, urology consult

Usual age of torsion

-Bimodal distribution- neonates and teenagers (average age 14)

-However, 30% of torsions are over 21 years old

Anatomical causes of torsion

-"Bell clapper deformity"- testicle is not attached anteriorally to the scrotum like normal

-This allows the testicle to twist on itself -> testicle ischemia

History

-Onset of pain- When did the pain start

-What was the patient doing when pain started?

-What makes pain better or worse?

-Sudden or gradual onset?

-Constant or intermittent pain?

-Fevers? Urinary symptoms? Abdominal pain?

-Penile discharge? Lesions? Rectal pain?

-Medications, past medical and surgical history, allergies

PEARL- Don't discount torsion because patient didn't have direct trauma to the testicle. Mechanisms can be minor or non-existent and torsion can occur during sleep (cremaster contractions during REM sleep)

Exam

-Do a rapid head to toe exam

-Don't neglect the abdomen! Pain in testicle may be referred from abdomen to the testicle

-Examine the groin for masses, swelling, and hernias

-Try to have the patient stand up to do a testicular exam

Exam (cont.)

-Check the lie of each testicle

-Should be completely vertical- if testicle is at an angle this strongly suggests torsion

-Check cremaster reflex

-Slide glove finger up thigh- should see scrotum retract

-Lack of cremaster reflex strongly suggests torsion

-Palpate each testicle individually

-Start on the unaffected testicle- keeps patient from startling and allows you to get a better exam

-Have the patient point to where the pain is

-Palpate entire testicle

-Epididymis is located on posterior aspect about 2/3rs of the way from the top of the testicle

-Prehn's sign

-Elevation of the testicles reduces patient's pain

-Suggests epididymitis (reduces stretch on epididymis)

PEARL- DO NOT use Prehn's sign to solely rule out torsion. 30% of patients with torsion will have a positive Prehn's sign!

-Check for hydrocele (fluid collection) and varicocele (dilated scrotal veins

Patient in lots of distress and/or strong suspicion of torsion?

-**TIME = TESTICLE**

-Call ultrasound and urology consult simultaneously

-Don't delay- salvage rate starts decreasing at 4 hours

-Torsion is a clinical diagnosis but few urologists will take patient to the OR without an ultrasound so bump your patient to the front of the line

PEARL- Get an ultrasound in all patients with testicular pain. You (and the patient) can't afford to miss torsion- BUT- ultrasound can be falsely negative in a patient who is torsing and de-torsing. The patient may have to go to the OR if the diagnosis and/or ultrasound is equivocal

Give the patient pain control

-IV morphine, Dilaudid (hydromorphone), fentanyl

Other testicular diagnoses

Epididymitis- inflammation of the epididymis
-Usually caused by GC/Chlamydia, rarely sterile urine reflux
-Pain can be sudden or gradual- can mimic torsion
-Check a urine
-In general- men <35 y.o.- Sexually transmitted infections (STIs)
-Men >35 y.o. - enteric organisms (E. Coli)
-However- lots of overlap

Treatment
-**Pain control**- Ibuprofen 400-800mg PO three times per day, opoid for breakthrough pain (Percocet/oxycodone, Vicodin/hydrocodone)

-**Scrotal elevation**- jock strap or two pairs of "tighty whities"

-**Antibiotics**
-**STIs** - Rocephin (ceftriaxone) 250mg IM and doxycycline 100mg PO twice a day x10 days
-**Enterics**- Levaquin (levofloxacin) 500mg PO daily x10 days

PEARL- No harm in treating patient with ceftriaxone, doxycycline and levofloxacin to cover all bases if cause is unclear or STI test takes days to come back

Torsion of the testicular appendage
-A small part of the testicle that is not necessary for function
-Can twist on itself and cause pain
-Located close to epididymis- can mimic epidiymitis on ultrasound
-"Classic" sign- blue dot sign near epididymis
-Treatment- pain control, scrotal support, antibiotics if ultrasound is equivocal or suggests epidiymitis

Varicocele/hydrocele- PCP/urology routine followup
-Hydrocele- fluid collection in testicle
-Small amount of fluid inside testicle is can be normal
-Varicocele- dilation of scrotal veins
-Causes dull aching pain

Testicular masses
-Most often found on external exam or ultrasound
-Get urology followup (urgent vs. in ED)
-Urology may request workup labs
-Beta HCG (produced by some tumors)
-Alpha feto-protein (usually a send-out test)
-LDH

Inguinal hernias
-First question- does hernia reduce?
-If hernia reduces- routine followup with general surgeon return precautions for hernia that doesn't reduce or causes lots of pain
-If hernia doesn't reduce- consult surgeon
-Incarcerated- irreducible hernia
-Strangulated- hernia that twists on itself
-If less incarcerated less than 4 hours can try tilting patient head down on the bed, pain control to reduce
-Consult a surgeon before doing this for advice

Mumps
-Viral infection mostly eradicated by vaccination
-Causes testicular pain and swelling
-Supportive care, pain control

Fournier's gangrene- Emergent surgical diagnosis
-Aggressive deep space groin infection
-Most common in immunocompromised and diabetics
-Discoloration of the skin, crepitus, tenderness
-Get STAT CT of abdomen/pelvis with IV contrast
-Antibiotics- Zosyn (piperacillin/tazobactam) and Clindamycin

Manual detorsion
-If patient has torsion and urologist is far away and/or patient has torsed a long time then you may have to attempt manual detorsion
-"Open the book"- rotate testicle to the ipsilateral thigh
-Torsions may be anywhere from 180- 720 degrees
-"Open the book" only works if testicle rotated medially
-30% of children in one study had lateral rotation
-Attempt detorsion- successful if pain relieved, get repeat ultrasound and go to OR non-emergently to secure testicle to prevent re-occurrence
-If pain worse then go the other direction
-Don't totally knock the patient out- need to be awake to see if pain gets better

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