**EM Basic- Testicular pain**

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**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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