Question 1

A 15 y.o. sexually active male presents with right scrotal swelling and pain for one day. Pain has gradually worsened and currently, pt has difficulty walking. Pt denies any nausea or vomiting, but has had subjective fever and endorses mild burning on urination. On exam, right scrotum is swollen. R testis is vertically oriented and is tender to palpation. Pain is improved somewhat upon gentle elevation of testis. Cremasteric reflex is present. UA shows 12 WBCs per HPF.

Question 1

Based on the most likely diagnosis, what is the appropriate treatment?

A. Surgical repair
B. Empiric treatment with Ceftriaxone and Doxycycline
C. Empiric treatment with Ciprofloxacin
D. Conservative management with scrotal support, bed rest, and NSAIDS

Question 1

Based on the most likely diagnosis, what is the appropriate treatment?

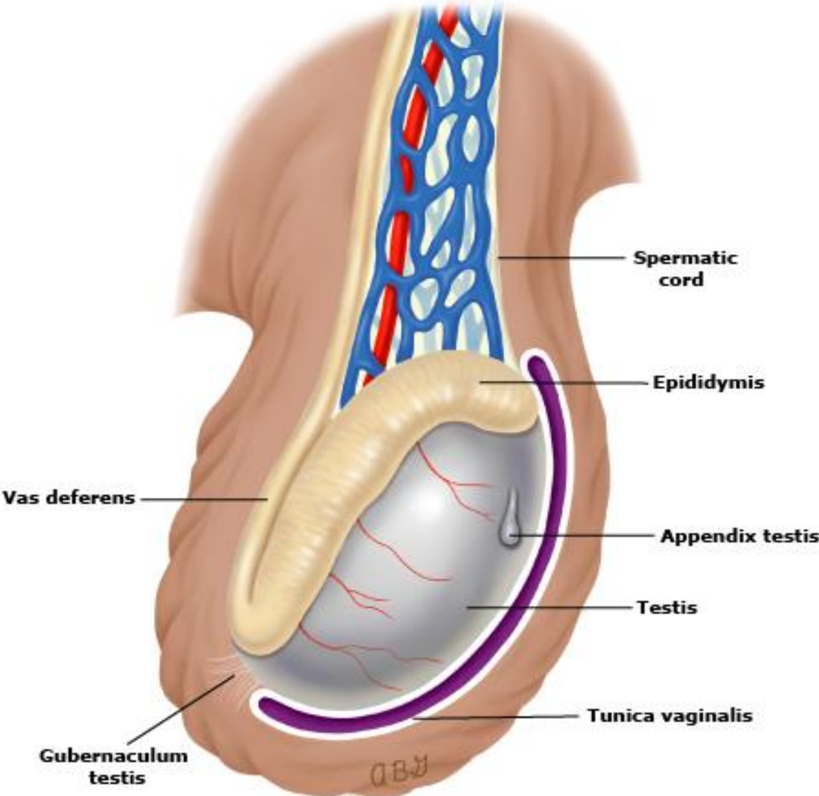
A. Surgical repair
B. Empiric treatment with Ceftriaxone and Doxycycline
C. Empiric treatment with Ciprofloxacin
D. Conservative management with scrotal support, bed rest, and NSAIDS

DDx of scrotal pain in children and adolescents

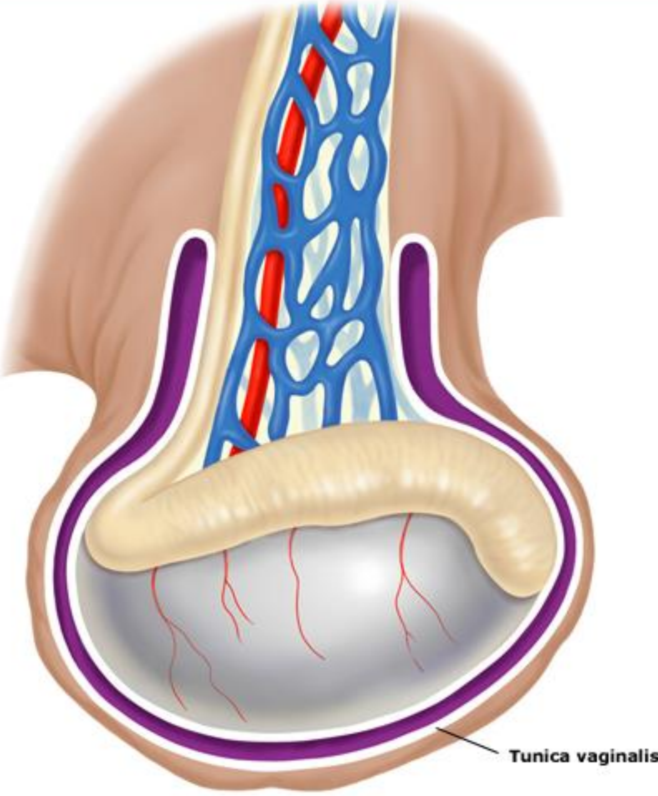
	Testicular torsion	Torsion of appendage	Acute epididymitis
Historical features			
Peak incidence	Perinatal and puberty	Prepubertal	<2 years and postpubertal
Onset of pain	Usually sudden	Usually sudden	Usually gradual
Duration of pain	Usually < 12 hours	Usually >12 hours	Usually >24 hours
Previous episodes	Typical	Unusual	If previous episode
Nausea and vomiting	Common	Uncommon	Uncommon
Fever	Unusual	Unusual	Common
History of trauma	Occasional	Unusual	Unusual
Dysuria or discharge	Rare	Rare	Common
Physical findings			
Suggestive findings	Bell-clapper	Palpable nodule "Blue dot"	None
Cremasteric reflex	Usually absent	Usually present	Usually present
Tenderness	Testicular initially, then diffuse	Appendage initially, then testis	Epididymis initially, then diffuse
Scrotal erythema or edema	Common >12 hours	Common >12 hours	Common >12 hours
Laboratory tests			
Pyuria	Unusual	Unusual	Common
Positive smear or culture	No	No	Often
Leukocytosis	Common	Uncommon	Common
Perfuson studies			
Color Doppler ultrasound•	Decreased blood flow, spermatic cord knot	Normal or increased	Normal or increased
Radionuclide	Decreased blood flow	Normal or increased	Normal or increased

*In some boys with scrotal pain, significant overlap in history, physical examination, and diagnostic studies exist. When testicular torsion cannot be excluded, surgical consultation is advised.
•Color Doppler ultrasound is the preferred perfusion study.

Normal testicular anatomy



Bell clapper deformity



Explanation

In a prospective study of 338 children with an acute scrotum evaluated at a single institution, the following clinical scoring system for testicular torsion was derived

- **Nausea or vomiting** – 1 point
- **Testicular swelling** – 2 points
- **Hard testis on palpation** – 2 points
- **High riding testis** – 1 point
- **Absent cremasteric reflex** – 1 point

Explanation

- Fluoroquinolones are no longer recommended when N. gonorrhea is suspected because of the growing resistance. Also, fluoroquinolones are not recommended in children <18 y.o. if other alternatives exist [why]
- NSAIDs, rest, and scrotal support are recommended for cases of torsion of the appendiceal testis or appendiceal epididymus

References

- Brenner JS and Ojo A. Causes of scrotal pain in children and adolescents. *UpToDate*. Accessed 2/24/2014
- Workowski KA and Berman S. Sexually Transmitted Diseases Treatment Guidelines, 2010*. MMWR.* December 17, 2010 / 59(RR12);1-110

Question 2

A 15 y.o. female comes to the ED complaining of burning on urination for 3 days. She denies any hematuria, fever, or back pain. She also denies any vaginal discharge. However, on asking about her sexual history, patient states she recently became sexually active. She states that her partner always uses a condom. UA is positive for leukocyte esterase and >10 WBCs.

Question 2

What is the appropriate therapy for this patient?

A. Treatment for cystitis based on local resistance patterns
B. Treatment for cystitis based on local resistance patterns, plus one dose of Azithromycin
C. Treatment for cystitis based on local resistance patterns, plus one dose of Azithromycin and Doxycycline x 10 days
D. Treatment for cystitis based on local resistance patterns, and wait for results of GC/chlamydia testing

Question 2

What is the appropriate therapy for this patient?

A. Treatment for cystitis based on local resistance patterns
B. Treatment for cystitis based on local resistance patterns, plus one dose of Azithromycin
C. Treatment for cystitis based on local resistance patterns, plus one dose of Azithromycin and Doxycycline x 10 days
D. Treatment for cystitis based on local resistance patterns, and wait for results of GC/chlamydia testing

Explanation

- Males typically present with urethral discharge
- Females more commonly report dysuria and frequency
- Urethritis can be documented based on any of the following:
  - Mucopurulent or purulent discharge on exam
  - GS of urethral secretions demonstrating ≥5 WBC per oil immersion field. This is the preferred rapid diagnostic test for urethritis. GS may show GNID
  - Positive leukocyte esterase test on first void urine or microscopic exam of first void urine sediment demonstrating ≥10 WBC per HPF

Recommended Regimens
Azithromycin 1 g orally in a single dose OR **Doxycycline** 100 mg orally twice a day for 7 days

Alternative Regimens
Erythromycin base 500 mg orally four times a day for 7 days OR **Erythromycin ethylsuccinate** 800 mg orally four times a day for 7 days OR **Levofloxacin** 500 mg orally once daily for 7 days OR **Ofloxacin** 300 mg orally twice a day for 7 days

Partners of confirmed cases should be treated

References

- Workowski KA and Berman S. Sexually Transmitted Diseases Treatment Guidelines, 2010*. MMWR.* December 17, 2010 / 59(RR12);1-110