

Diagnostic Considerations

Men who have acute epididymitis typically have unilateral testicular pain and tenderness, hydrocele, and palpable swelling of the epididymis. Although inflammation and swelling usually begin in the tail of the epididymis, it can spread to the rest of the epididymis and testicle. The spermatic cord is usually tender and swollen. Spermatic cord (testicular) torsion, a surgical emergency, should be considered in all cases; however, it occurs more frequently among adolescents and men without evidence of inflammation or infection. For men with severe unilateral pain with sudden onset, those whose test results do not support a diagnosis of urethritis or urinary tract infection, or for whom diagnosis of acute epididymitis is questionable, immediate referral to a urologist for evaluation for testicular torsion is vital because testicular viability might be compromised.

Bilateral symptoms should increase suspicion of other causes of testicular pain. Radionuclide scanning of the scrotum is the most accurate method for diagnosing epididymitis but it is not routinely available. Ultrasound should be used primarily for ruling out torsion of the spermatic cord in cases of acute, unilateral, painful scrotal swelling. However, because partial spermatic cord torsion can mimic epididymitis on scrotal ultrasound, differentiation between spermatic cord torsion and epididymitis when torsion is not ruled out by ultrasound should be made on the basis of clinical evaluation. Although ultrasound can demonstrate epididymal hyperemia and swelling associated with epididymitis, it provides minimal diagnostic usefulness for men with a clinical presentation consistent with epididymitis. A negative ultrasound does not rule out epididymitis and thus does not alter clinical management. Ultrasound should be reserved for men if torsion of the spermatic cord is suspected or for those with scrotal pain who cannot receive an accurate diagnosis by history, physical examination, and objective laboratory findings.

All suspected cases of acute epididymitis should be evaluated for objective evidence of inflammation by one of the following POC tests:

- Gram, MB, or GV stain of urethral secretions demonstrating ≥ 2 WBCs per oil immersion field (737) (see Urethritis). These stains are preferred POC diagnostic tests for evaluating urethritis because they are highly sensitive and specific for documenting both urethral inflammation and presence or absence of gonococcal infection. Gonococcal infection is established by documenting the presence of WBC-containing intracellular gram-negative or purple diplococci on urethral Gram, MB, or GV stain, respectively.

- Positive leukocyte esterase test on first-void urine.
- Microscopic examination of sediment from a spun first-void urine demonstrating ≥ 10 WBCs/HPF.

All suspected cases of acute epididymitis should be tested for *C. trachomatis* and *N. gonorrhoeae* by NAAT. Urine is the preferred specimen for NAAT for men (553). Urine cultures for chlamydial and gonococcal epididymitis are insensitive and are not recommended. Urine bacterial cultures should also be performed for all men to evaluate for the presence of genitourinary organisms and to determine antibiotic susceptibility.

Treatment

To prevent complications and transmission of STIs, presumptive therapy for all sexually active men is indicated at the time of the visit before all laboratory test results are available. Selection of presumptive therapy is based on risk for chlamydial and gonococcal infections or enteric organisms. Treatment goals for acute epididymitis are 1) microbiologic infection cure, 2) improvement of signs and symptoms, 3) prevention of transmission of chlamydia and gonorrhea to others, and 4) decreased potential for chlamydial or gonococcal epididymitis complications (e.g., infertility or chronic pain). Although the majority of men with acute epididymitis can be treated on an outpatient basis, referral to a specialist and hospitalization should be considered when severe pain or fever indicates other diagnoses (e.g., torsion, testicular infarction, abscess, or necrotizing fasciitis) or when men are unable to comply with an antimicrobial regimen. Age, history of diabetes, fever, and elevated C-reactive protein can indicate more severe disease requiring hospitalization (1193).

Recommended Regimens for Epididymitis

For acute epididymitis most likely caused by chlamydia or gonorrhea:
Ceftriaxone 500 mg* IM in a single dose

plus

Doxycycline 100 mg orally 2 times/day for 10 days

For acute epididymitis most likely caused by chlamydia, gonorrhea, or enteric organisms (men who practice insertive anal sex):

Ceftriaxone 500 mg* IM in a single dose

plus

Levofloxacin 500 mg orally once daily for 10 days

For acute epididymitis most likely caused by enteric organisms only:

Levofloxacin 500 mg orally once daily for 10 days

* For persons weighing ≥ 150 kg, 1 g of ceftriaxone should be administered.

Levofloxacin monotherapy should be considered if the infection is most likely caused by enteric organisms only, and gonorrhea has been ruled out by Gram, MB, or GV stain. This includes men who have undergone prostate biopsy, vasectomy, and other urinary tract instrumentation procedures. Treatment