Epididymitis and orchitis normally co-exist with isolated epididymitis being more common than an isolated orchitis. Epididymo-orchitis (EO) can be acute (less than six weeks’ duration), sub-acute, or chronic if persisting for more than three months and typically presents with testicular pain and swelling. Sexually transmitted infection (STI) is the most common cause in younger men and urinary tract pathogens are the more common culprits in older men. Acute testicular torsion is the most important differential diagnosis of acute testicular pain especially in younger men.

The most common pathogens in the under 35s are *Neisseria gonorrhoeae* and *Chlamydia trachomatis* and *Escherichia coli* is the most common cause of acute epididymitis in the over 35s. Isolated orchitis is rare and tends to occur in prepubertal boys with mumps. Other rarer infective causes of chronic EO include: TB, and fungal and parasitic infections and tend to be associated with HIV and immunosuppression.

Evidence of torsion includes sudden onset unilateral severe testicular pain and scrotal swelling associated with vomiting with an absent cremasteric reflex and an abnormally lying, very tender testis on examination. Examination of a patient with acute EO classically reveals a swollen, tender testis with swelling of the epididymis which starts at the lower pole and moves up towards the head of the epididymis at the upper pole of the testes. UTI in men is very often associated with bladder outflow obstruction. So it is important to examine the abdomen for a palpable bladder and to perform a digital rectal exam to check for prostatitis which can also cause EO.

A urine dip is a sensitive and very useful test for diagnosing UTI and should be done on all patients presenting with symptoms of EO. Urine microscopy, culture and sensitivity can then confirm the urinary bacterium and guide treatment. To investigate an STI-associated EO and in younger patients, the British Association of Sexual Health and HIV (BASHH) guidelines, recommend urethral swabs for Gram staining, *gonorrhoa* and chlamydial NAAT as well as first pass and mid-stream urine culture. These tests are summarised in table 2, opposite. BASHH and the European Association of Urology (EAU) guidelines state that the urethral swabs and mid-stream urine samples should be taken before starting empirical antibiotics but this is often not done in practice.

**Investigations**

A urine dip is a sensitive and very useful test for diagous UTI and should be done on all patients presenting with symptoms of EO. Urine microscopy, culture and sensitivity can then confirm the urinary bacterium and guide treatment. If an STI is suspected, BASHH guidelines recommend a 500 mg intramuscular injection of ceftriaxone to cover EO when a sexual source is suspected. The dose of ceftriaxone has been increased from 250 mg in the earlier guidelines to 500 mg in the current guidelines for the treatment of non-complicated *gonorrhoa* because of increased resistance of *N. gonorrhoeae* to ceftriaxone. For those with risk factors for *N. gonorrhoeae* infection including previous *gonorrhoa* or known contact, men who have sex with men or those with a purulent discharge, doxycycline 100 mg bd for two weeks is recommended as there is increased resistance of *N. gonorrhoeae* to quinolones. For those without urethral swabs showing Gram-negative diplococci, doxycycline 100 mg bd or ofloxacin 200 mg bd for two weeks should be used. Ofloxacin and doxycycline have been shown to be more effective against *C. trachomatis* than ciprofloxacin.

**Referral**

If an STI is suspected the BASHH guidelines recommend a sexual and urological referral of this age group if they have a febrile UTI, pyelonephritis, recurrent infections or if a ‘complicating factor is suspected’. Another urinary tract cause such as a renal calculus or urethral stricture may be present. The patient’s history and/or those with a sexual history should be referred to a genitourinary medicine (GUM) department for initial investigations and treatment, if this is not possible in general practice, as well as for contract tracing and treatment.

Any patient whose symptoms are not responding should be referred to urology or GUM ideally with an ultrasound scan of the testes.

**Treatment**

Paracetamol and NSAIDs provide good analgesia. Ice packs and scrotal elevation and supports may also help relieve pain.

Antibiotic treatment should be started before microbiological confirmation of the pathogen. The particular antibiotic depends on the likely pathogen meaning appropriate clinical assessment of the likely source is paramount. Guidelines based on the epidemiology recommend different treatments for the under and over 35s when it is the sexual and urological history that should guide treatment.

‘Antibiotic therapy should be started before microbiological confirmation of the pathogen’

If an STI is suspected

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If a UTI is suspected

If an enteric organism is suspected, ciprofloxacin 500 mg bd or ofloxacin 200 mg bd for two weeks is recommended. Fluoroquinolones...