Epididymo-orchitis is an inflammation of the epididymis and/or testicle (testis). It is usually due to infection, most commonly from a urine infection or a sexually transmitted infection. A course of antibiotic medicine will usually clear the infection. Full recovery is usual. Complications are uncommon.

What is epididymo-orchitis?

- **Epididymitis** means inflammation of the epididymis (the structure next to the testicle (testis) that is involved in making sperm).
- **Orchitis** means inflammation of a testicle.

As the epididymis and testis lie next to each other, it is often difficult to tell if the epididymis, the testis, or both are inflamed. Therefore, the term epididymo-orchitis is often used.

What causes epididymo-orchitis?

Most cases are due to an infection. Causes of infection include the following:

**A complication from a urine infection**

Germs (bacteria) such as *E. coli* that cause urine infections can sometimes track down the vas deferens to cause an epididymo-orchitis. This can happen at any age and is the most common cause of epididymo-orchitis in men aged over 35 years. This is because partial blockage of urine flow becomes more common with increasing age, due an enlarged prostate or narrowing of the urethra (urethral stricture). The urethra is the tube that urine flows out of from the bladder. Partial blockage of urine makes you more prone to develop urine infections. A complication of a urine infection is also the usual cause of epididymo-orchitis in young boys.
Sexually transmitted infection

A sexually transmitted infection is the most common cause of epididymo-orchitis in young men (but can occur in any sexually active man). It most commonly occurs with chlamydial and gonorrhoeal infections. In men, these infections typically infect the urethra to cause a urethritis. However, sometimes the infection can track down the vas deferens to the epididymis and testicle (testis).

The mumps virus

The mumps virus used to be a common cause. Most people with mumps develop swelling of the parotid salivary glands. However, mumps in boys also causes epididymo-orchitis in about 1 in 5 cases. The virus gets to the testicles via the bloodstream. This cause is now uncommon since the measles, mumps and rubella (MMR) immunisation is now routinely given to children.

An operation to the prostate or urethra

This may allow germs (bacteria) into the urethra which may track down to the testicles. Epididymo-orchitis used to be a common complication after removal of the prostate (prostatectomy). This is now rare due to better surgical techniques.

Medication

Epididymo-orchitis can occasionally be a side-effect of a medicine called amiodarone. It normally occurs at doses above 200 mg, especially when the dosage range reaches 400-800 mg.

Uncommon causes

Other viral infections are uncommon causes of epididymo-orchitis. Infection from other parts of the body can, rarely, travel in the blood to the testicles, such as tuberculosis (TB) and brucellosis. When this happens it is usually in people who have a problem with their immune system (for example, people with AIDS). Schistosomiasis is a tropical infectious disease that can cause epididymo-orchitis. Men with Behçet’s disease may develop inflamed testicles to cause a non-infective epididymo-orchitis. Injury to the scrotum can cause inflammation of the epididymis and testicle.

Who develops epididymo-orchitis?

Epididymo-orchitis occurs in about 1 in 1,000 males. It is common in men aged 15-30 years and in men aged over 60 years. It does not occur very often before puberty. About 3 in 10 boys who have mumps after puberty develop orchitis. Your risk of getting epididymo-orchitis is increased if you have a catheter or other instruments inserted into the urethra.

Epididymo-orchitis symptoms

Symptoms usually develop quickly - over a day or so. The affected epididymis and testicle swell rapidly and the scrotum becomes enlarged, tender and red. It can be very painful.

There may be other symptoms if the epididymo-orchitis is a complication from another infection. For example: pain on passing urine if you have a urine infection; a discharge from the penis if you have a urethral infection; etc. As with any infection, you may have a high temperature (fever) and feel generally unwell.

Are any tests needed?

Tests to look for infecting germs (bacteria)

A urine test will usually be done if a urine infection appears to be the root cause. A sample (swab) from the urethra or other tests may be done if a sexually transmitted infection is thought to be the root cause. Sexual partners of people with epididymo-orchitis caused by a sexually transmitted infection will also need testing.

See separate leaflets called Genital Chlamydia, Urethritis and Urethral Discharge in Men and Gonorrhoea for more details.

Tests of the urinary tract

Tests to look into the urethra and bladder may be needed if a urine infection is the cause and this is thought to be due to partial blockage of urine flow or other urinary tract abnormalities.

See separate leaflets called Urine Infection in Men and Urine Infection in Children for more details.

Epididymo-orchitis treatment

A course of antibiotic medicines is usually advised as soon as epididymo-orchitis is diagnosed. These normally work well. Pain usually eases within a few days but swelling may take a week or so to go down, sometimes longer. The choice of the antibiotic depends on the underlying cause of the infection.

If a sexually transmitted infection is the cause then you should not have sex until treatment and follow-up have been completed. Sexual partners of men with epididymo-orchitis caused by a sexually transmitted infection may also need antibiotic treatment.

Antibiotics do not kill viruses and they are not needed if a viral infection is the cause - for example, mumps.
You may find that supporting underwear helps to ease the pain. Painkillers and ice packs will also ease the pain.

Are there any complications from epididymo-orchitis?

Most people recover fully and complications are uncommon. Possible complications include:

- A collection of pus due to infection (an abscess) occasionally develops in the scrotum. This may need a small operation to drain the pus.
- Reduced fertility in the affected testicle (testis), especially in cases caused by the mumps virus.
- An ongoing (chronic) inflammation occasionally develops.
- Rarely, serious damage to the testicle may occur and result in dead tissue (gangrene) in the testicle that needs to be surgically removed.

Further reading & references

- Sexually Transmitted Infections in Primary Care; Royal College of General Practitioners and British Association for Sexual Health and HIV (Apr 2013)
- Management of epididymo-orchitis; British Association for Sexual Health and HIV (2010 updated June 2011)

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