INFECTIONS OF THE TESTIS AND EPIDIDYMIS Epididymo-

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Definition Inflammation confined to the epididymis is epididymitis; if this inflammation, usually due to infection, involves the testis it is called epididymo-orchitis. Incidence Epididymitis, commonly preceding epididymo-orchitis, occurs in about 1 in 1000 men annually . Acute epididymitis most commonly occurs in men aged 20–59 years (43% in men aged 20–39 years and 29% in men aged 40–59 years). Childhood (prepubertal) epididymitis is rare; torsion is more common in this age group. Forty-seven per cent of prepubertal boys with epididymitis have associated urogenital abnormalities, includ ing ectopic vas deferens or ureters, and urethral abnormalities. Pathophysiology Infection reaches the epididymis via the vas from a primary infection of the urethra, prostate or seminal vesicles. A general from a sexually transmitted genital infection, while in older men it more usually arises from a urinary infection or may be secondary to an indwelling urethral catheter. In young sexually active men, the most common cause of Chlamydia trachomatis , but gonococcal epi - epididymitis is now didymitis is still occasionally seen. In older men with bladder outflow obstruction, epididymitis may result from a urinary infection – it is proposed that a high pressure in the prostatic urethra might cause reflux of infected urine up the vasa. Blood-bor ne infections of the epididymis are less common but may be suspected when there is epididymal infection without evidence of urinary infection; it is presumably the only possible mechanism in men who have previously undergone a vasec - tomy . Acute epididymo-orchitis can follow any form of ure - thral instrumentation and it is particularly common when an indwelling catheter is associated with infection of the prostate. Infection usually starts in the tail of the epididymis and spreads to the rest of the epididymis and occasionally to the testis. Complica tions include abscess formation, testicular infarction, testicular atrophy , chronic indura tion and inflam - mation and infertility . Clinical features While there may be initial symptoms of a urinary or a genital infection, such symptoms are not always seen. The develop - ment of an ache in the groin and a fever can herald the onset of epididymitis. The epididymis and testis swell and become painful. The scrotal wall, at first red, oedematous and shiny , may become adher ent to the epididymis. Investigation should include a urethral swab, a urine spec - imen for culture, nucleic acid amplification testing (NAAT) of - either a urine specimen or a urethral swab and scrotal ultra - sound. Urinalysis will usually show leukocytes and may show a formal urinary tract infection. NAAT is a sensitive way of iden - tifying both gonococcal and chlamydial ur ethritis. Ultrasound is useful in the initial assessment of epididymitis (Figure 86.12) and will identify abscess formation.

(a) Figure 86.12 Ultrasound /f_i ndings in epididymitis. Enlarged epididymis with a heterogeneous echotexture (grey-scale ultrasonography) increased blood /f_l ow (Doppler ultrasonography) (b) (courtesy of Dr Davide Prezzi). (b) (a) and

sion; if there is any clinical doubt as to the diagnosis then tes ticular exploration should always be performed. Treatment To prevent complications and transmission of sexually trans mitted infections, presumptive therapy is indicated at the time of the visit before all laboratory test results are available. Presumptive therapy is based on risk for chlam ydia and gonorrhoea (usually younger men) and/or gut organisms (usu ally older men). The aims of treatment of acute epididymitis are (i) cure of infection, (ii) impro vement of signs and symp toms, (iii) prevention of transmission of chlamy dia and gon orrhoea to others, and (iv) a decrease in potential epididymitis complications (e.g. infertility and chronic pain). Local sensitiv ities do change with increasing antibiotic resistance. Examples of regimens are shown below from the 2021 Se xually Trans mitted Infections Treatment Guidelines from the US Centers for Disease Control and Pr evention (https://www .cdc.gov/ std/treatment-guidelines/STI-Guidelines-2021.pdf). /uni25CF For acute epididymitis most likely caused by sexually trans mitted chlamydia and gonorrhoea: /uni25CF Ceftriaxone intramuscularly (IM) single dose and oral doxycycline for 10 days. /uni25CF For acute epididymitis most likely caused by sexually trans mitted and enteric organisms (men who practise insertive anal sex): /uni25CF Ceftriaxone IM single dose and levofloxacin for 10 days. /uni25CF For acute epididymitis most likely caused by enteric organ isms: /uni25CF Levofloxacin for 10 days. /uni25CF There should be contact tracing of the partner and treat ment if necessary . In older men, quinolones are the usual initial treatment; however, if there is evidence of systemic sepsis, intravenous antibiotics may be valuable . If an organism is isolated from the urine, this simplifies the choice of antibiotic. Local measures including scrotal support and analgesia are helpful. Oral antibiotic treatment should continue for at least 10 days or until the inflammation has subsided. If abscess for mation occurs, drainage is necessary . Chronic disease Chronic non-tuberculous epididymitis usually follows the fail ure of resolution of an acute episode of epididymitis. Patients Summary box 86.7 Acute epididymo-orchitis /uni25CF /uni25CF /uni25CF /uni25CF - the epididymis feels thickened and tender. Treatment involves use of antibiotics (usually quinolones or doxycycline) and anti-inflammatory agents for 4–6 weeks. Epididymectomy or orchidectomy can be considered if there is no resolution, - although up to 50% of patients continue to have pain despite such surgery .

In young men usually arises secondary to a sexually transmitted genital infection In older men usually arises secondary to urinary infection May be a complication of catheterisation or instrumentation of the urinary tract May need aggressive treatment with parenteral antibiotics

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