

MALE GENITOURINARY SYMPTOMS

“Willies and Water”

Year 2

A discussion of symptoms involving the male bladder, prostate, urethra, penis, testicles and scrotum.

SYMPTOM LIST

An exhaustive list of the symptoms associated with the male genitourinary system and their possible causes. Those in bold are of the greatest importance.

In most cases, symptoms associated with diagnoses that are possible in females only have been excluded.

Other symptoms associated with the listed diagnoses are shown in brackets.

Dysuria

Painful micturition

Cystitis (hypogastric pain, frequency, 10 x more common in females)

Prostatitis (perineal pain, frequency, discharge)

Gonorrhoea (discharge, frequency)

Nonspecific urethritis (discharge – often due to Chlamydia)

Pyelonephritis (loin pain, fever, proteinuria)

Urethral syn. (urinary frequency, sterile urine)

Reiter syndrome (conjunctivitis, arthritis, urethritis)

Ejaculation, Premature

Anxiety

Unreasonable expectations

Emotional disorders

Very rarely organic

Ejaculation, Retarded

Diabetes mellitus (polyuria, polydipsia)

Hypogonadism

Hyperprolactinaemia

Spinal cord tumours, trauma or disease

Parkinson's disease (tremor, rigidity)

Cerebrovascular accident

Cerebral tumour, trauma or abscess

Genitourinary developmental defects

Urethral stricture, fistula or diverticulum

Prostatic disease

Aortic aneurysm

Surgical sympathectomy

Pelvic trauma or tumour

MALE GENITOURINARY SYMPTOMS

Ejaculation, Retrograde

Psychological stress

Prostatectomy

Pelvic surgery or trauma

Spinal cord trauma or tumour

Diabetes mellitus (polyuria, polydipsia)

Congenital abnormalities

Idiopathic

Drugs (eg. clonidine, bethanidine, guanethidine, methyl dopa, phenothiazines, thiazides)

Enuresis

Bed wetting

Urinary tract infections (dysuria, hypogastric discomfort, female)

Lifestyle stress (eg. family break-up, maternal separation, hospital admission, moving home)

Social pressures (eg. poverty, overcrowding, lack of privacy)

Excessively strict toilet training

Intellectual disability

Congenitally small bladder

Diabetes mellitus (polydipsia, polyuria)

Diabetes insipidus

Renal insufficiency

Epilepsy

Spina bifida

Other neurological disorders

Familial

Haematospermia

(Haemospermia)

Blood in ejaculated semen

Idiopathic

Infrequent sexual intercourse

Trauma to penis or prostate (eg. masturbation, excess sex)

Prostatitis (tender prostate on examination)

Seminal vesiculitis

Coagulopathies (easy bruising)

Prostatic carcinoma

Haematuria and Red Urine

Urinary blood

Blood In Urine

Urinary tract infections of any type

Glomerulonephritis (oliguria, oedema, headache)

Renal and ureteric stones (severe pain, nausea)

Bladder or renal tumours (pain)

Renal or bladder trauma

Extremely vigorous exercise

Anticoagulant therapy

Polycystic kidneys

Cytomegalovirus (jaundice, neonate, purpura)

Blackwater fever (severe form of malaria)

Bilharzia (urticaria, frequency, fever)

Renal tuberculosis

MALE GENITOURINARY SYMPTOMS

Analgesic nephropathy (history of compound analgesics)
Haemoglobinuria
Acute renal failure (oliguria, nausea)
Haemophilia (melaena, excessive bleeding, ecchymoses)
Alport syn. (deaf)
Goodpasture syn. (haemoptysis)
Haemolytic-uraemic syn. (anaemia, thrombocytopenia)
Henoch-Schoenlein syn. (purpura, abdominal pain)
Thin basement membrane disease [idiopathic haematuria](asymptomatic)

Nonblood Causes

Porphyria (urine turns red when left standing)
Phenolphthalein and vegetable dyes (eg. fava beans, beetroot)
Heavy urate concentration (pink)\
Drugs (eg. warfarin, heparin, pyridium, aspirin, cyclophosphamide, carbidopa, phenindione, metronidazole)

Impotence

Lack of male potency and libido

Psychogenic

Pituitary adenoma

Addison's disease (fatigue, anaemia, irritable)

Testicular disease or tumours

Diabetes mellitus (polyuria, polydipsia, blurred vision)

Thyrotoxicosis (sweating, fatigue, weight loss)

Alcohol and poisons (eg. lead, mercury)

Panhypopituitarism (fatigue, hypothermia)

Hypothyroidism

Hyperprolactinaemia

Multiple sclerosis (weakness, abnormal sensation)

Hypogonadism (tall, shrill voice, hairless)

Atherosclerosis

Hypercholesterolaemia

Pelvic or penile arterial obstruction

Hypertension

Prostatic carcinoma

Prostatectomy

Multiple sclerosis

Peyronie's disease

Paraplegia

Fractured penis (haematoma)

Depression (insomnia, loss of interest)

Fractured pelvis

Drugs (eg. antihypertensives, sedatives, tricyclics, clofibrate, cimetidine, thiazides, spironolactone, beta-blockers, digoxin, nicotine, marijuana)

Cushing syn. (obese, hirsute, ecchymoses)

Fröhlich syn. (thin skin, scanty hair, obese)

Klinefelter syn. (delayed puberty, hypoplastic genitalia)

Lariche syn. (claudication, poor pulses)

Incontinence of Urine

Enuresis

Urinary tract infections (dysuria, frequency, fever)

Cerebrovascular accidents (neurological signs)

Senility (confusion of old age)

MALE GENITOURINARY SYMPTOMS

Bladder distension due to partial obstruction
Diabetes mellitus (polydipsia, polyuria)
Diabetes insipidus (polydipsia, polyuria)
Renal failure
Faecal impaction
Parkinson's disease (tremor, shuffling gait)
Spinal cord injuries, disease and tumours
Neurogenic bladder
Bladder tumour or stone (haematuria)
Anaphylaxis
Hypercalcaemia
Multiple sclerosis (diffuse neurological anomalies)
Reactive depression (anxiety, agitation, anger)
Shock (eg. anaphylaxis)
Loss of consciousness (eg. convulsions)
Alcohol excess
Drugs (eg. alpha -blockers, caffeine, hypnotics, lithium, tranquillizers, diuretics, tricyclic antidepressants)
Detrusor hyperactivity (urgency incontinence)

Libido, Reduced

Reduced desire for sexual activity

Both sexes

Psychological stress

Pituitary disease (eg. adenoma)
Hyperprolactinaemia
Hypothyroidism (constipation, hoarse, dry skin)
Addison's disease (pigmentation, fatigue, nausea)
Diabetes mellitus (polyuria, polydipsia)
Cerebrovascular accident
Parkinson's disease (tremor, rigidity)
Cerebral space occupying lesions
Psychiatric disease (eg. depression)
Chronic renal failure
Chronic hepatic failure
Carcinoid syn. (flushing)
Cushing syn. (obese, striae)
Malignancies
Drugs (eg. alcohol, steroids, antihistamines, benzodiazepines, antihypertensives, diuretics)

Male

Testicular atrophy or disease

Andropause

Prostate infection or enlargement

Female

Climacteric syn. (menopausal symptoms)
Stage of menstrual cycle
Pregnancy

Nocturia

Nocturnal Polyuria

Renal insufficiency

Congestive cardiac failure (dyspnoea, oedema)
Venous insufficiency (oedema)
Hypoalbuminaemia
Idiopathic

MALE GENITOURINARY SYMPTOMS

Excessive fluid intake.

Drugs (eg. long acting diuretics, alcohol, caffeine)

Diurnal Polyuria

Diabetes mellitus (thirst, tiredness)

Diabetes insipidus

Hypercalcaemia

Psychogenic

Drugs (eg. psychotropics)

Reduced Bladder Capacity

Cystitis (dysuria)

Cerebrovascular accident

Parkinson's disease (tremor)

Bladder calculi or tumour

Bladder outlet obstruction (eg. prostatomegaly)

Age related

Polyuria and Pollakiuria

Excessive urinary output or frequency

Cystitis (dysuria, hypogastric pain)

Chronic renal failure (in end stage only)

Prostatitis (discharge, pain, dysuria)

Diabetes insipidus (polydipsia, low urine SG)

Diabetes mellitus (fatigue, blurred vision, paraesthesiae)

Hypoparathyroidism (tetany, wheeze, convulsions)

Hyperparathyroidism (polydipsia, bone pain, nausea)

Addison's disease (nocturia, pigmentation, weakness)

SLE (macular rash, polyarthritis)

Hypercalcaemia (constipation, nausea)

Obstructive sleep apnoea (snoring)

Anxiety neurosis

Hand-Schuller-Christian disease (eczema, adenitis)

Acromegaly (coarse features, back pain, psychoses)

Hyperaldosteronism (polydipsia, weakness, tetany)

Bilharzia (urticaria, fever, haematuria)

Drugs (eg. lead, diuretics)

Barter syn. (child, short, polydipsia)

Cushing syn. (obese, moon face, striae)

Diencephalic syn. (cachexia, vomiting, pallor)

Potassium wastage syn. (weak, hypokalaemia)

Urethral syn. (dysuria, sterile urine)

Urge syn. (nocturia, urge incontinence)

Priapism

Painful, persistent penile erection

Penile trauma

Bladder calculus

Spinal cord lesions

Leukaemia

Polycythaemia rubra vera

Multiple myeloma

Cerebrovascular accident (CNS signs)

Diabetes mellitus (polyuria, polydipsia)

MALE GENITOURINARY SYMPTOMS

Urethritis (dysuria)
Sickle cell anaemia
Leukaemia (child)
Metastatic carcinoma
Psychiatric disorders
Excess sexual stimulation
Drugs (eg. prazosin, psychotropics, heparin, vasodilators, alcohol, cocaine, marijuana)

Strangury

Very slow, painful micturition
Bladder infection (frequency, hypogastric pain)
Prostatitis
Bladder tumours (haematuria)
Urethritis (dysuria, proteinuria, discharge)
Gonorrhoea (urethral discharge)
Nonspecific urethritis (discharge)
Urethral tumour, trauma, stone or foreign body

Testicular or Scrotal Mass or Tumour

Testicular carcinoma or teratoma (often painless)
Hydrocele (transilluminates)
Spermatocele (above and behind testes, transilluminates)
Inguinal hernia (continuous with abdomen)
Torted testes (severe pain, nausea)
Epididymo-orchitis (pain, fever)
Epididymal cyst
Syphilitic gumma (solid)
Haematoma
Varicocele (above testes, soft)
Idiopathic scrotal oedema (erythema, slight pain)
Acute leukaemia (abnormal WCC, malaise)
Filariasis (elephantiasis) (adenitis, fever)
Fragile X syn. (subnormal intelligence, epilepsy, testis enlarged)

Testicular or Scrotal Pain

Epididymo-orchitis (pain, fever, bacterial or viral)
Torted testes (severe pain, nausea, oedema)
Torted testicular appendage [torted hydatid of Morgagni] (prepubertal, testes palpable)
Testicular tumour (firm, gynaecomastia)
Mumps orchitis (parotid pain and swelling, fever)
Gonorrhoea (discharge, dysuria)
Filariasis (oedema, fever, adenitis)
Brucellosis (fever, myalgia, confusion)
Referred pain from back or ureter

Urethral Discharge

Prostatitis (dysuria, frequency, pain)
Gonorrhoea (dysuria, milky discharge)
Nonspecific urethritis [*Chlamydia*]
Mycoplasma / Ureoplasma infection

MALE GENITOURINARY SYMPTOMS

Urinary Retention and Difficult Micturition

Prostatic hyperplasia (poor stream, infection)

Prostatic carcinoma (back pain, renal failure)

Bladder tumours (haematuria, pain)

Bladder calculus or blood clot

Foreign body in urethra or bladder

Urethral stricture or tumour

Neurogenic bladder

Typhoid fever (abdominal tenderness, cough)

Stress and anxiety

AN EXPLANATION OF THE MOST SIGNIFICANT DISEASES LISTED ABOVE

BILHARZIA (SCHISTOSOMIASIS)

Schistosomiasis (bilharzia) is a fluke infestation transmitted by a species of snail that is found in fresh water streams, rivers and lakes in Egypt, tropical Africa as far south as Zimbabwe, the Caribbean and eastern South America. It is often caught by bathing or washing in fresh water.

The cause is a microscopic animal (trematode fluke) that enters the body by burrowing through the skin, often of the foot. Three different flukes - *Schistosoma mansoni*, *Schistosoma japonicum*, and *Schistosoma mekongi* - may be responsible.

Once in the blood it travels to the veins around the large intestine, where eggs are laid. These pass out with the faeces or urine to infect water supplies. Once in fresh water, the eggs hatch, and the larvae seek out and burrow into the flesh of specific species of fresh water snail. They mature in the snail, and emerge from it ready to enter and infect another human.

Patients do not pass out all the eggs that are laid by the fluke, and they may spread to the liver, lungs or spinal cord to cause further symptoms. Damage caused to organs by the fluke may be permanent.



The first symptom is an itchy patch at the site of skin penetration. Varying symptoms then follow, depending on the areas affected by the fluke as it moves through the body, and the individual's reaction to those changes. Long-term symptoms include diarrhoea, abdominal pain and bloody urine. A particularly severe and rapidly progressive form of the disease is known as Katayama Fever.

The diagnosis involves blood, urine and skin tests, and liver and gut biopsies.

Treatment is difficult, particularly late in the disease, although a number of drugs (eg. praziquantel) can be used to kill the fluke inside the body. Untreated it may cause a low-grade chronic illness, or may progress to death

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in a matter of months. The results of treatment are good if commenced early in the course of the disease, but advanced disease may be incurable.

CYSTITIS

Cystitis is an infection of the urinary bladder that usually occurs in women, with less than 10% occurring in men because the longer length of their urethra (the tube leading from the bladder to the outside).

A bacterial infection can enter the bladder by coming up the urethra from outside the body, or through the bloodstream to the kidneys and then the bladder. Entry from the outside is far more common, and often due to irritation of the urethra with sex. Slackness of the muscle ring that controls the release of urine from the bladder can also allow bacteria to enter the bladder. This damage may be caused by childbirth or prolapse of the womb, and may eventually cause incontinence with a cough or laugh.

The symptoms include burning pain on passing urine, pain in the pelvis, the desire to pass urine very frequently and blood may be seen in the urine. The infection may spread up the ureters to the kidneys to cause acute pyelonephritis.

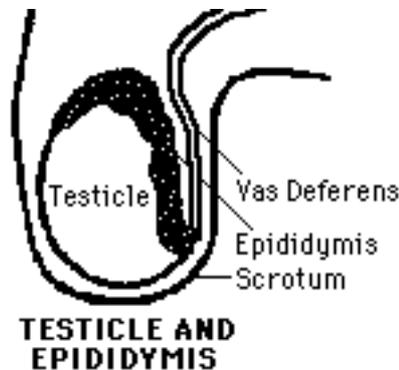
The urine can be cultured to identify the responsible bacteria and correct antibiotic. Further investigations such as X-rays and ultrasound scans of the bladder and kidneys may be performed, to exclude more serious causes of recurrent cystitis.

Appropriate antibiotic tablets for a week or two, and urinary alkalinisers (in the form of a powder that makes a fizzy drink) result in a rapid cure in most patients. Drinking extra fluid will help wash the infection out of the bladder, while passing urine immediately after sex sometimes prevents infections.

Commercial urinary alkalinisers or cranberry juice may be used regularly to prevent cystitis in women who have this problem regularly.

EPIDIDYMO-ORCHITIS

Epididymo-orchitis is a bacterial or viral infection of the testicle and epididymis. The sperm produced in a testicle passes into a dense network of fine tubes that forms a lump on the back of the testicle called the epididymis. These join up to form the sperm tube (vas deferens) that takes the sperm to the penis. Epididymo-orchitis is an infection of both the epididymis and testicle. Orchitis is an infection of the testicle alone, but the infection is almost invariably present in both places.



Men with a bacterial epididymo-orchitis are acutely uncomfortable, have a painful swollen testicle, and a fever. Occasionally an abscess will form, which must be surgically drained. A painful testicle can also be caused by torsion of the testis, which is a surgical emergency requiring immediate treatment. Any boy or man, particularly in the teenage years or early twenties, who develops a painful testicle, must see a doctor immediately - day or night.

Blood tests may show the presence of infection in the body, and treatment involves appropriate antibiotics, aspirin or paracetamol for pain relief, ice may be applied to the scrotum, and a supportive bandage or jockstrap worn. If the infection is caused by a virus such as mumps, there is no effective treatment available. With the correct treatment, bacterial epididymo-orchitis resolves in a couple of days, and usually does not cause any problems with fertility or masculinity. In cases of viral infection there may be problems with fertility in later life.

GONORRHOEA

Gonorrhoea ("clap") is a common sexually transmitted bacterial infection caused by the bacterium *Neisseria gonorrhoeae*, which can only be caught by having sex with a person who already has the disease. It has an incubation period of three to seven days after contact. Some degree of protection can be obtained by using a condom.

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The symptoms vary significantly between men and women.

In women there may be minimal symptoms with a mild attack, but when symptoms do occur they include a foul discharge from the vagina, pain on passing urine, pain in the lower abdomen, passing urine frequently, tender lymph nodes in the groin, and fever. If left untreated the infection can involve the uterus and Fallopian tubes to cause salpingitis and pelvic inflammatory disease, which can result in infertility and persistent pelvic pain. Babies born to mothers with the infection can develop gonococcal conjunctivitis (eye infection).

In men symptoms are usually obvious with a yellow milky discharge from the penis, pain on passing urine and, in advanced cases, inflamed lymph nodes in the groin. If left untreated the prostate can become infected, which can cause scarring of the urine tube (urethra), permanent difficulty in passing urine and reduced fertility.

With anal intercourse, a rectal infection with gonorrhoea can develop and cause an anal discharge, mild diarrhoea, rectal discomfort and pain on passing faeces.

Oral sex can lead to the development of a gonococcal throat infection.

Gonorrhoea may also enter the bloodstream and cause septicaemia. An unusual complication is gonococcal arthritis, which causes pain in the knees, ankles and wrists. Other rarer complications include infections of the heart, brain and tendons.

The diagnosis is confirmed by examining a swab from the urethra, vagina or anus under a microscope, and culturing the bacteria on a nutrient substance. There are no blood tests available to diagnose gonorrhoea. Other sexually transmitted diseases should also be tested for when gonorrhoea is diagnosed, as they may be contracted at the same time. For this reason, blood tests are often ordered when treating anyone with any form of venereal disease.

Gonorrhoea has been readily treated with a course of penicillin until recently, but many strains are now resistant to penicillin and more potent antibiotics (eg. spectinomycin) are required. All sexual contacts of the infected person need to be notified as they may be carriers of the disease and unaware of the presence of the infection. After treatment, a follow-up swab is important to ensure that the infection has been adequately treated. The appropriate antibiotics can cure more than 95% of gonorrhoea cases.

IMPOTENCE - PSYCHOGENIC

Impotence is the inability of a man to obtain a firm erection of the penis when sexually stimulated. It is a very common problem, and something that every man experiences at some time, particularly in middle age and older.

The process of erection sometimes mystifies women. It is one over which the man has no direct control, as it is a local reflex in the pelvis triggered by sexual excitement. A man even has difficulty in detecting if his penis is erect unless it is touched or seen. The penis contains two sausage shaped sponge filled tubes (corpora cavernosa) that fill with blood under pressure when a muscular ring closes off the drainage veins behind the base of the penis.

A wide range of diseases may cause impotence, and these must be excluded by appropriate investigations before a psychological cause is diagnosed, or impotence treatment is given. If a cause is found, that should be specifically treated to resolve the problem. Only if no particular cause can be diagnosed should the various impotence treatments available be used.

A lot of impotence is caused by a psychological feedback mechanism. For one of the reasons listed below, a man may fail to develop an erection when attempting sex. He feels embarrassed and ashamed about this, particularly if it is with a new partner. The next time he tries to have sex he will be anxious as to whether he will be able to perform. This anxiety makes him concentrate on trying to get an erection, which is an almost certain way in which to prevent an erection. After two failures, the anxiety increases, which further decreases the chance of success at subsequent attempts. It requires the patient understanding of the man's partner and the continuing advice of a doctor, to overcome this erection failure cycle.

Common causes of impotence include the overuse of alcohol (which increases the desire, while reducing the ability), stress and anxiety in any aspect of life, difficult circumstances (eg. lack of privacy), heavy smoking, illegal drugs (eg. marijuana, heroin) and medications (eg. those used to lower blood pressure and improve depression, sedatives, cimetidine, clofibrate, digoxin).

Other possible causes of impotence include depression, pituitary gland disease (gland in the brain which controls all other glands including the testes), testicular diseases or injury, poorly controlled diabetes mellitus (sugar diabetes), high levels of cholesterol may cause hardening of the arteries (atherosclerosis) and make it difficult for the blood to get into the penis and cancer of the prostate gland may interfere with the normal nerve and blood vessel reflexes that allow an erection.

Rare causes of impotence include Peyronie disease (a replacement of the blood filled sacs by fibrous scar tissue), a "fracture" of the erect penis, multiple sclerosis, paraplegia and quadriplegia, lead poisoning, Klinefelter syndrome) and Fröhlich syndrome.

Psychological factors may be overcome by not planning sex, but relaxing and waiting until the right circumstances occur spontaneously. Mutual heavy petting and erotic stimulation, but without the expectation of sex, sexual toys, pornography and vacuum pumps to create an erection may be used. Once spontaneous erections

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develop, sex may start again. Numerous medications are also available including:-

- alprostadil (Caverject) injections into the penis
- alprostadil (Muse) pellets may be inserted into the urethra (urine tube in the penis)
- sildenafil (Viagra), tadalafil (Cialis) and vardenafil (Levitra) tablets.

Several other medications are under development (eg. apomorphine).

KLINFELTER SYNDROME

The Klinefelter syndrome (XXY syndrome) is a congenital sexual abnormality that affects one in every 500 males. The chromosomes from the mother and father of these men combine incorrectly with two X chromosomes and one Y being present (XXY) instead of one of each (XY). Patients have very small testes and penis, small breasts develop, they have scanty body hair, and are impotent and sterile. It is diagnosed by chromosomal analysis of blood sample.

Testosterone (male hormone) tablets or injections can be given to improve the body shape and impotence and plastic surgery to remove the breasts is sometimes necessary, but the infertility cannot be corrected and no cure is possible.

NON-SPECIFIC URETHRITIS

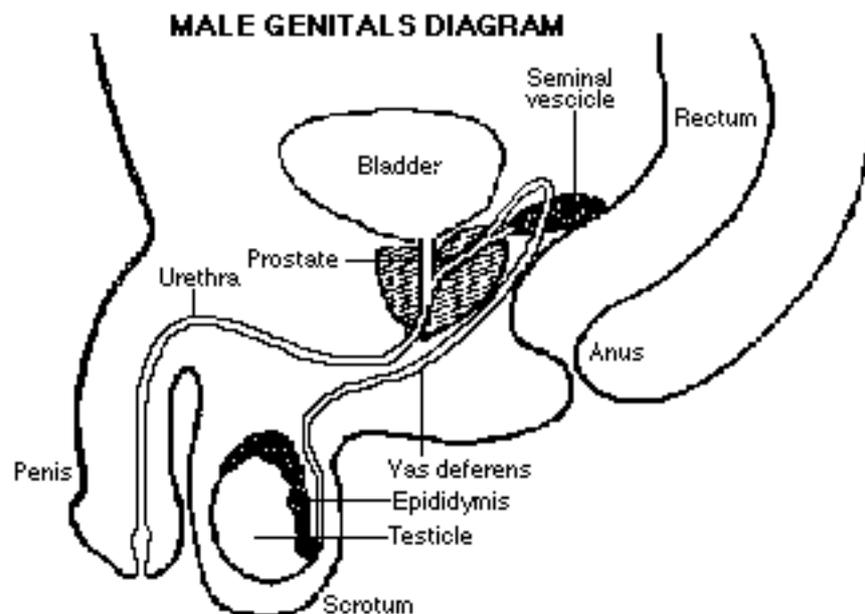
Non-specific urethritis (NSU) is also known as Chlamydial urethritis and non-Gonococcal urethritis (NGU), and is a sexually transmitted disease that is carried by women and infects men. Most (but not all) cases of NSU are caused by a Chlamydial infection, while unidentified bacteria are responsible for the other cases. *Chlamydiae* are a group of organisms that are not bacteria, but act as parasites inside human cells and eventually destroy the cell. They are spread by passing from a man to his female sexual partners, where it remains in the vagina to infect the woman's next sex partner. In homosexuals, the infection may occur around the anus.

Men have a white discharge from the penis, painful passing of urine, but rarely other symptoms, although sometimes the infection may spread from the penis up into the testes or prostate gland. In women there are usually no symptoms, but sometimes the infection may spread to cause salpingitis (infection of the Fallopian tubes).

Chlamydiae may be identified by specific blood and swab tests, but they are not always reliable, and a negative test does not mean that the infection is not present.

Antibiotics such as tetracyclines and macrolides (eg. azithromycin) are used very successfully in treatment, and all sexual contacts should be treated when the infection is discovered.

PROSTATE GLAND



The prostate gland is situated behind the base of the penis. The bladder is above and behind the gland, and the tube that carries urine from the bladder to the outside (the urethra) passes through the centre of the prostate. It is found only in men and there is no female equivalent.

The prostate is about the size of a golf ball and consists of glands, fibrous tissue and muscle. Its primary purpose is to produce a substance that makes up part of the semen a man ejaculates during sexual intercourse.

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This substance is essential for the nutrition of the sperm as they try to fertilise an egg in the woman. Most men are totally unaware of the presence of the prostate unless it causes trouble.

In younger men, the most common cause of disease is infection, when the gland may swell up and become very tender. In older men the disease process is quite different. Up to 20% of all men over 60 may have an enlargement of the prostate which causes symptoms, and a small percentage of these may have cancer of the prostate.

Doctors can often diagnose diseases of the prostate by feeling the gland. This involves putting a gloved finger in the back passage so as to gauge its size and hardness.

PROSTATE GLAND ENLARGED

Unless extraordinarily dextrous, no man can feel his own prostate, as this small organ which sits behind the base of the penis can only be felt by placing a finger through the anus, where the prostate can be felt as a firm lump on the front wall of the rectum (last part of the large bowel).

The prostate is about the size of a golf ball and consists of glands, fibrous tissue and muscle. It produces a substance that makes up part of the semen a man ejaculates during intercourse that is essential for the nutrition of the sperm. If the prostate enlarges (prostatomegaly), the patient will have difficulty in starting the urinary stream, and when it does start, the urine will dribble out onto his shoes, rather than jet onto the porcelain. Up to 20% of all men over 60 have benign enlargement of the prostate gland, which is usually associated with a drop in sexual activity. The absolute cause unknown, but as the gland enlarges, it squeezes the urethra (urine-carrying tube) that passes through it, making it steadily harder to urinate.

There are only three causes for prostate enlargement (prostatomegaly):-

- prostatomegaly (prostate enlargement) is normal with age, and virtually all men over the age of seventy have some degree of this problem.
- prostate cancer is a very slowly progressing cancer that increases in incidence with age. It spreads to bone early, and bone pain is the first symptom in some men.
- prostatitis (infection of the gland), often from a sexually transmitted disease, may cause a temporary swelling and difficulty in passing urine at any age.

With prostate enlargement the man develops increasing difficulty in passing urine, and eventually the urethra becomes completely blocked, causing extreme distress as the pressure of urine in the bladder increases. If back-pressure of urine in the bladder becomes persistent, kidney damage can occur.

In the acute situation, a flexible tube is passed up the urethra through the penis into the bladder to release urine, but if this is unsuccessful a large needle must be pushed through the lower wall of the abdomen into the bladder. In some cases drugs (eg. finasteride, prazosin, terazosin) can be used to shrink the enlarged prostate slightly. Most cases require surgery once symptoms develop.

The operation can vary from simply dilating the urethra, to making a small cut in the prostate to allow it to open up slightly (bladder neck incision), scraping away the part of the prostate constricting the urethra by passing a specially shaped knife up it (transurethral resection of prostate - TURP), or completely removing the gland. Holium laser therapy is being used in some centres to burn away part of the gland.

Treatment almost invariably successful, with no subsequent effect on the general health of the patient, but there is sometimes subsequent sexual dysfunction.

PROSTATE CANCER

Prostate cancer is the commonest cancer in humans, while breast cancer comes a close second.

Prostate or prostatic cancer describes any one of several different types of cancer of the prostate gland, depending on which cells in the gland become cancerous. The cause is unknown, but those who have sex infrequently may be more susceptible. It is rare before 50 years of age, but up to 20% of all men over 60 may have an enlargement of the prostate. The percentage of these men whose enlargement is due to cancer steadily increases with age, with virtually every male over 90 years of age having some degree of prostate cancer.

This is a very slow-growing cancer that may give no symptoms until many years after it has developed. Symptoms usually start with difficulty in passing urine and difficulty in starting the urinary stream. In advanced stages there may be spread of cancer to the bones of the pelvis and back.

Specific blood tests can detect most cases, but it is often diagnosed by feeling the gland using a gloved finger in the back passage. The blood tests are unreliable as there is both a significant false negative and false positive rate. A series of blood tests measuring the PSA (prostate specific antigen) over a number of months, and measuring different subtypes of PSA can give a more reliable reading. Only one in three men with a raised PSA will have prostate cancer, and some men with cancer have a normal PSA.

The diagnosis is confirmed by an ultrasound scan and ultrasound guided biopsy of the gland, which is performed through the anus. The biopsy process itself may have complications including bleeding and infection. Unfortunately, a negative biopsy does not mean that cancer is not present, merely that any cancer that is present

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may have been missed by the biopsy needle.

There are many treatment options for prostate cancer :-

- No treatment - in elderly or very ill patients when the patient is more likely to die with the disease than from the disease. Treatment may have an adverse effect on the man's life.
- Surgery - radical prostatectomy in which the gland is surgically removed. Complications may include impotence (75%+) and urinary incontinence (25% over all, but severe in 3%).
- Radiotherapy - an external beam of radiation is targeted on the prostate from many different directions in order to destroy the cancer. Complications may include irritable bowel and bladder, with the frequent use of one or both.
- Brachytherapy - tiny radioactive particles are injected into the prostate to create radiation, which destroys the cancer. This may be combined with radiotherapy. The complications are the same as radiotherapy.
- Medication - Antiandrogens (eg. nilutamide, bicalutamide) are used to slow the progress of more advanced cases of the disease.
- Orchiectomy (removal of the testes) - this was sometimes performed to remove all testosterone from the man's body, as this hormone stimulates growth of the cancer. It is now a rare procedure.

Many new treatment regimes are being introduced every year including new hormones, new cytotoxics and high intensity focused ultrasound.

If the cancer is localised to the gland itself, the five-year survival rate is over 90%. With local spread, the survival rate drops to about 70%, but with spread to the bone, only 30% of patients survive five years.

PROSTATITIS

Prostatitis is an infection of the prostate gland, which sits behind the base of the penis, by bacteria that may enter the prostate by moving up the urethra (urine tube) from the outside, from a sexually transmitted infection (eg. gonorrhoea), or uncommonly from an infection spreading from other parts of the body.

Pain occurs behind the base of the penis, and there is a discharge from the penis, pain on passing urine, fever and patients pass urine frequently. The infection may spread to the man's sexual partner, in whom it can cause pelvic inflammatory disease.

The diagnosis confirmed by taking a swab from the urethra, and identifying the bacteria present, and treatment requires taking a long course of antibiotics.

Acute case usually settles with treatment, but recurrences are common and a low-grade persistent infection may develop, which is difficult to treat.

REITER SYNDROME

Reiter syndrome (reactive arthritis) is an inflammatory condition involving the eyes, urethra and joints. The cause is unknown, but it is more commonly in young men, and often follows a bacterial infection.

It has the unusual and apparently unconnected symptoms of conjunctivitis (eye inflammation), urethritis (inflammation of the urine tube - the urethra) and arthritis (joint inflammation). Other symptoms that may occur include mouth ulcers, skin sores, inflammation of the foreskin of the penis and a fever. Rarely, the heart becomes inflamed.

Blood tests are not diagnostic, but indicate presence of inflammation, and X-rays show arthritis in the joints of the back only after several attacks.

It heals without treatment after a few days or weeks, but the arthritis tends to last longer and recurrences are common. The disease course can be shortened by anti-inflammatory drugs such as indomethacin.

TERATOMA

A teratoma (or dermoid cyst in the USA) is an uncommon and unusual form of cancer that occurs in the ovaries or testes. As the ovaries are the source of eggs, and the testes of sperm, that are used for fertilisation and growth into new humans, the cells (stem cells) in the ovary and testes, when cancerous may develop into many different types of tissue.

All types of strange tissue may develop in the tumour, including gland tissue, muscle tissue, skin and even teeth.

In women, symptoms are often minimal until the cancer is quite large, or bleeding occurs into it to cause an abdominal lump or pain. Men feel a hard, tender lump in a testicle.

The tumour is diagnosed by x-rays, CT scans and biopsy of the tumour. Surgical removal of the cancer and surrounding tissue is usually all that is necessary, but rarely, an aggressive cancer may be present, that spreads to other parts of the body. The overall cure rate is close to 90%.

TESTICULAR CANCER

MALE GENITOURINARY SYMPTOMS

A number of different types of cancer may develop in the testicles. The types include embryomas, seminomas (most common and least serious), choriocarcinoma, teratomas, and a number of rarer ones. The cause is unknown, but it is a rare form of cancer that develops in one in every 50,000 adult men every year. It is most common in early adult and middle-age.

The man finds a firm lump, hardening, unusual tenderness or gradual enlargement of the testicle. There is often no pain, but unusually some patients develop small breasts due to excess production of female oestrogen by the tumour. The cancer may spread to the lymph nodes in the groin, the lungs and liver.

Some types of cancer can be detected by blood tests, but any hard lump in the scrotum must be investigated by ultrasound, and if necessary surgically biopsied, to determine the exact cause.

Treatment involves removing the affected testicle and nearby lymph nodes, followed by irradiation or cytotoxic drugs depending upon the type of cancer present. Overall the cure rate is over 90%.

TORSION OF THE TESTIS

Torsion of the testis occurs if a testicle, hanging in the scrotum from its network of veins, arteries and nerves, twists horizontally, and its blood supply is cut off.

Severe testicular pain, tenderness, redness and swelling occur. It usually occurs in teenage boys, and is almost unknown over 30 years of age.

Testicular torsion is a medical emergency, and the testis will die unless it is surgically untwisted within about 12 hours. Gangrene and death of the testicle will occur if surgery is delayed, necessitating its removal. Infection of the testes (epididymo-orchitis) can also occur, and may be confused with torsion, but the pain is usually less severe, the patient is febrile and both testes may be involved.

The prognosis depends on how quickly surgery is undertaken, but few reach surgery in time for the testicle to be saved. A man is still able to function normally sexually, and is still fertile, with only one testicle.

URETHRAL SYNDROME

The urethral syndrome is an inflammation of the bladder or urethra (tube leading to the outside from the bladder) without any infection being present. It causes discomfort on passing urine and increased frequency of passing urine. Investigations on the urine are all negative.

It may be caused by minor injury to the urethra during sexual intercourse, bladder tumours, or a prolapse or irritation of the skin immediately around the opening of the urethra.

Treatment involves ceasing sexual activities for a few weeks, taking urinary alkalinisers and sometimes a trial of antibiotics in case a low grade infection is present. Persistent cases need to be further investigated by cystoscopy (looking into the bladder through a fine tube).

URGE SYNDROME

This annoying syndrome affects one in ten adults at some time in their life. The urge syndrome causes patients to pass urine several times a night and more frequently than normal during the day. When the desire to urinate is felt, they cannot hold back, but must go as quickly as possible, and may become incontinent. Bedwetting may develop.

There are several significant diseases that must be excluded as a cause of the urge syndrome. These include diabetes, kidney diseases (eg. glomerulonephritis), bladder infections and tumours, and bladder stones.

Treatment involves treating any identifiable underlying cause, avoiding bladder stimulants (such as coffee, tea and alcohol), restricting fluid intake, and retraining the bladder by progressively longer periods of holding the urine after the urge to pass it is felt. In resistant cases, medications (eg: oxbutynin, propantheline, imipramine) are taken, and rarely surgery may be performed.

CURIOSITY

PENIS SIZE

A lot of rubbish is spoken of about penis size in locker rooms and other areas where men congregate, but the average male erect penis measured along the top is 12.9cm. in length, and 90% of men have an erect penis that is between 9cm. and 17cm. in length. The other 10% are evenly divided between longer and shorter. The longest medically recorded erect penis was 32cm.

TOTALLY, COMPLETELY AND UTTERLY USELESS INFORMATION

Koro is a psychiatric condition found only in Japanese males in which they develop the false belief that their penis is shrinking back inside their body.

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