What do you know about gonorrhoea?

What causes it?

Gonorrhoea is caused by the sexually transmitted bacterium *Neisseria gonorrhoeae*. The incubation period ranges from two to 30 days. The risk of infection differs between the sexes:

- Males: 20% risk after sexual contact with an infected female.
- Females: 60-80% risk after sexual contact with an infected male.

During childbirth an infected woman may transmit gonorrhoea to her newborn and cause ophthalmia neonatorum.

What are the signs and symptoms?

In **males** they are (although some have no symptoms):

- Yellowish penile discharge which may be thick and in large quantities, with painful, frequent urination.
- Inflamed external urethral meatus (indicating the urethritis). If the infection spreads to the prostate (prostatitis), seminal vesicles or epididymis (epididymitis) then pain and fever result.
- Infected testicles giving rise to swelling and localised pain.

In **females** they are (but only up to 50% have symptoms):

- Vaginal discharge and vulval pruritus.
- Lower abdominal pain and right upper quadrant pain resulting from gonococcal perihepatitis (Fitzhugh-Curtis syndrome)[a].
- Vomiting.
- Fever.
- Painful urination (urethritis).
- Pain during intercourse and sometimes post-coital bleeding.
- Disturbance of the menstrual cycle including bleeding between periods.
- Pelvic inflammatory disease resulting from the infection spreading to the uterus, fallopian tubes, and ovaries. This may lead to infertility.
- The cervix may become severely inflamed (cervicitis) with pus.

Untreated gonorrhoea may lead to septic arthritis and bacterial endocarditis.

How is it treated?

You can use a wide range of antibiotics to treat gonorrhoea. These include:

- Amoxicillin 2 g with probenecid 1 g orally.
- Ampicillin 2 to 3 g with probenecid 1 g orally.
- Azithromycin 2 g orally.
- Cefotaxime 500 mg by intramuscular injection.
- Ceftriaxone 125 to 250 mg by intramuscular injection.
- Ciprofloxacin 500 mg orally: **do not use** the fluoroquinolone (and others such as ofloxacin, levofloxacin) in pregnancy.

Tetracycline is not listed because resistance of *Neisseria gonorrhoeae* to this antimicrobial is so great that it is not effective in most parts of the world.

Contact tracing is important so check all sexual partners to prevent spread of the disease and reinfection. At the same time offer screening for other sexually transmitted infections. Where chlamydia is common, give doxycycline or azithromycin so you treat both diseases.

If a woman giving birth has gonorrhoea give erythromycin eye ointment to the baby to prevent blindness.

Two warnings about possible treatment failures

1. Penicillin will not effectively treat rectal gonorrhea. The rectum contains other bacteria that produce β-lactamases that destroy penicillin.
2. Gonorrhea of the throat (in those who engage in oral sex) may be difficult to clear with all treatments. Patients should have a throat swab 72 hours after treatment. Retreatment is needed if the throat swab is still positive. If bacterial culture is not possible then clinical follow-up is necessary.

We thank David Tibbutt for allowing us to base this item on his article in The Uganda Continuing Medical Education Newsletter July - October 2009 Issue 57

[a] Fitzhugh-Curtis syndrome is rare, occurs only in women and may result from chlamydial infection. As well as perihepatitis there may be: fever; infection of the joints of fingers, toes, wrists and ankles; septic arthritis, septic abortion; chorioamnionitis during pregnancy and blindness from conjunctivitis affecting neonates or adults.