Medicine for Managers

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Syphilis

Syphilis is a global disease of unknown origin which is widespread and serious if not treated. Some believe that it was first recorded by Hippocrates in around 400 BC and cite evidence of skeletons with signs of advanced disease. Others say it was a New World disease brought to Europe by Columbus after he returned from voyages to the Americas. However it is probably not exclusively either.

It is a sexually transmitted disease caused by a bacteria called *Treponema pallidum*. Like gonorrhoea it can be transmitted during close bodily contact with an infected individual through some sort of open sore and may occur as the result of vaginal, oral or anal association. It may also be transmitted by drug abusers sharing infected needles. It can cause stillbirth if an infected woman passes the infection to an unborn child.

Syphilis is **not** spread by sharing a toilet, towels, cutlery or crockery because the bacteria cannot survive for a significant length of time outside the body. It is virtually impossible to acquire the infection from a blood transfusion in the United Kingdom because blood is screened for the disease.

The disease has three distinct stages. Between four and ten weeks after the initial infection there is the development of a small, painless ulcerated area called a ***chancre***. Normally there is only one. It appears on the part of the body where the infection was transmitted so, in men it usually appears on the penis and in women it is found on the vulva or in the vagina. However it may also appear round the anus, on the lips, in the mouth or on the fingers. It is usually associated with enlargement of the associated lymph glands. The chancre may resolve in two weeks but it may persist for six weeks or more and is sometimes mistaken for a skin cancer or other lesion. If

Primary syphilis chancre of penis

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the lesion is not diagnosed, the patient may not realise that he or she is infected and the disease moves on to the second stage.

The second stage begins ten to fifteen weeks after the initial infection and a few weeks after the chancre has disappeared. The stage is associated with non-specific symptoms of tiredness, weight loss and generalised lymphadenopathy together with the development of a non-irritating

Rash of secondary syphilis

discrete, pink, flat or slightly raised and sometimes superficially eroded rash commonly affecting the palms or soles. The symptoms, which may be persistent or intermittent, last from a few weeks to several months.

The disease then enters a latent phase. The infected individual shows no symptoms and the period may last for many years. Interestingly the infection can still be passed through sexual intercourse or close physical contact for the first year or two, after which the individual ceases to be infectious.

If the disease remains untreated, it eventually enters a third stage. Tertiary syphilis may develops quite quickly or anything up to fifty years later. The consequences of the tertiary stage are serious and may be life-threatening, resulting in death if untreated. It is not infectious in the tertiary stage.

The disease may affect the **brain and spinal cord** resulting in a slowly progressive loss of mental and physical function. Mood is affected resulting in aggression or placidity, memory loss, confusion and personality changes. Other features may include headaches and dizziness and stroke. Two classic features are **GPI** (Generalised Paralysis of the Insane, now known as General Paresis) which is a chronic dementia and **Tabes Dorsalis** which results from spinal cord damage and leads to difficulty walking, with loss of sensation to the lower limbs. Syphilis may affect the **cardio-vascular system** weakening blood vessels and resulting in aneurysms, heart valve damage and heart failure. Patients with the disease may also develop **Gummas** These are soft inflammatory growths which may grow anywhere in the body. They may develop inside the body and may destroy organs or they may occur on the outside, quite commonly on the leg. Overall the nature of tertiary syphilis is steady mental and physical decline leading to death if untreated.

If syphilis is transmitted from mother to child in pregnancy it may result in

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miscarriage or still birth. Children who survive carry the stigmata of the disease with multiple medical problems.

Treatment of syphilis is by antibiotic. A single dose is often used in the primary and secondary infections. A longer course is needed for tertiary disease. Penicillin or azithromycin are frequently used. All close contact should be avoided following diagnosis until the treatment is complete and the patient receives the all-clear from the doctor. Antibiotic remains effective at eliminating the disease.

Historically syphilis has been spread by the military and itinerant people including sailors. The name *may* have derived from Sipylus, a character in Ovid's Metamorphoses, the first man to contract the disease sent by the God Apollo as a punishment. The Italian physician Fracastoro called it '*the French disease'*, the Dutch called it *'the Spanish disease'*, the Turks called it *'the Christian disease'* and the Tahitians called it *'the British disease'*. In the 1500s it was called the *Great Pox* to distinguish it from Smallpox. Treatments, usually completely ineffective, have been available for hundreds of years. Herbs and fungi were used together with mercury which was highly toxic (hence a night with Venus and a lifetime with Mercury). Arsenic was introduced as an antimicrobial in the early years of the twentieth century but was unpredictably toxic and not 100% effective. The advent of penicillin allowed the disease to be effectively treated and cured.

At Guy's Hospital, where I trained, on the top floor of the old medical block was Thomas Gull ward where syphilitic patients with aortic aneurysms were admitted. The aneurysm would gradually enlarge and a swelling would appear which would reach a great size. Eventually it would rupture through the skin and the patient would exsanguinate. The story is told that, as the swelling got larger the patient's bed would be moved towards the door of the ward. The patient would realise their time was nearly upon them when their bed reached the door and that death was even more imminent when the nurse scattered sawdust round the bed to absorb the blood when the aneurysm burst!

What goes around comes around so, as funding for the NHS becomes ever tighter perhaps we should be placing a new order for sawdust?

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