

# Newsletter

## SEXUALLY TRANSMITTED INFECTIONS (STI)

There are a number of sexually transmitted infections (STI) caused by bacteria and viruses. The bacterial infections are usually successfully treated with antibiotics whereas the viral infections can be more challenging to treat.

STI can be divided into 3 broad categories: those that cause genital ulcers, those that cause penile/vaginal discharge, and other infections. It is important to do appropriate laboratory tests based on the infections that are most likely to be causing specific symptoms. This will help to minimize the cost of laboratory testing.

### Infections that cause genital ulcers

#### Syphilis

Syphilis is caused by infection with the bacterium *Treponema pallidum*. It causes a painless ulcer on the genitalia 2-10 weeks after infection which heals after about 2 months if not treated. The infection is however not cleared. In the absence of treatment, syphilis can cause fever, skin rash and mouth ulcers.

After many years it can affect the brain and heart eventually leading to death. Some individuals may not develop genital ulcers, but may still go on to suffer long term complications. Screening for syphilis early during pregnancy is important as it can be spread from the infected mother to her baby, resulting in severe abnormalities. Syphilis is diagnosed with a blood test and treated with penicillin.

#### Herpes

Infection with herpes simplex virus (HSV) leads to the formation of small blisters on the genitalia 3-7 days after infection. The blisters break to form painful ulcers. The ulcers usually take about 2 weeks to heal.

The body is never able to clear an HSV infection and the blisters may recur from time to time. The severity and frequency of recurrences vary from person to person.

Traditionally, herpes simplex virus type 1 causes cold sores/fever blisters around the mouth, and herpes simplex virus type 2 causes genital herpes. These days both viruses can occur at either site. This makes the interpretation of blood tests for the diagnosis of genital herpes difficult. In order to make a reliable diagnosis of infection, a swab of the ulcer or a urine specimen must be tested for the presence of HSV. It is difficult to diagnose HSV infection in someone who does not have blisters/ulcers. There is no cure for HSV, but episodes of genital herpes can be treated with acyclovir or valacyclovir.



## Infections that cause genital discharge Gonorrhoea

Gonorrhoea is a bacterial infection caused by *Neisseria gonorrhoeae*. It causes symptoms 2-7 days after infection leading to a penile/vaginal discharge and pain on passing urine. Gonorrhoea is often asymptomatic in women but can lead to ectopic pregnancies and infertility. Gonorrhoea is diagnosed by testing for the bacteria in a urine specimen. The infection is treated with antibiotics.

## Chlamydia

*Chlamydia trachomatis* is a bacterial infection that leads to penile/vaginal discharge, pain on passing urine, inflammation of the prostate in men, and inflammation of the cervix and fallopian tubes in women. Chlamydia infection is often asymptomatic in women but can lead to ectopic pregnancies and infertility. Chlamydia is diagnosed by testing for the bacteria in a urine specimen. The infection is treated with antibiotics.

## Hepatitis B

Sexual contact is one way that hepatitis B can be spread. It affects the liver causing hepatitis. The majority of people will clear the infection without any specific treatment. About 10% will not clear the infection and will become chronic carriers. Chronic carriers often do not know they are infected as they may not have any symptoms for many years. Chronic infection can lead to cirrhosis (scarring) of the liver and liver cancer. Infection with hepatitis B is diagnosed with a blood test. Various antiviral treatments are available.

## HIV

People often do not suspect that they are infected as symptoms may only develop after many years.

About half of those infected will develop a flu-like illness with/without a skin rash about 2 weeks after infection. Other symptoms develop as the immune system starts to deteriorate. These are due to a variety of other infections and cancers associated with HIV. An HIV ELISA is the preferred test for the diagnosis of HIV infection. The earliest it can detect infection is approximately 18-21 days after exposure. There is an effective anti-retroviral treatment available for HIV.

## HPV

Human papillomavirus (HPV) is the most common STI worldwide. There are more than 40 different types of HPV that can infect the genital tract. Types 6 and 11 cause genital warts. Cancer of the cervix is caused by infection with HPV. There are 14 types of HPV (referred to as 'high-risk') that are associated with cancer development. Of these, types 16 and 18 are the most important. Testing for infection with HPV is recommended for women over the age of 30 as an important screening tool for preventing cervical cancer. The test is done on a cervical specimen taken in the same way as a pap smear. There is no specific treatment for HPV infection, but there is a vaccine that can prevent infection with types 6, 11, 16 and 18. The vaccine is most effective if received before becoming sexually active.

### Recommended testing

We recommend consulting with your doctor before testing in order to ensure that you are managed appropriately.

- If there are genital ulcers
- Syphilis antibodies on blood
- HSV PCR on urine or swab of ulcers
- If there is a penile or vaginal discharge
- Chlamydia trachomatis PCR on urine
- *Neisseria gonorrhoeae* PCR on urine
- Testing irrespective of symptoms
- Hepatitis B serology on blood
- HIV ELISA on blood
- HPV on a cervical scraping



References:

<http://www.who.int/mediacentre/factsheets/fs110/en/index.html> | <http://www.mayoclinic.com/health/sexually-transmitted-diseases-stds/DS01123/DSECTION=testsand-diagnosis>