



# Human Health & Sex Education

Open Course – V Semester

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# **SEXUALLY TRANSMITTED DISEASES (STD)**

# INTRODUCTION

- Sexually Transmitted Diseases formerly called **venereal diseases** (VD)
- The contagious diseases, transmitted mainly during sexual inter course.
- The commonest STD are *AIDS, gonorrhoea, syphilis, genital herpes* and *pelvic inflammatory diseases*.

# ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

- AIDS is a much dreaded viral disease, with nearly 40-50% mortality rate.
- It is most common among homosexual males, intravenous drug abusers, haemophiliacs, recipients of blood transfusion, etc.
- Causative agent is an RNA virus, called *human immunodeficiency virus* (HIV), which can destroy the immune system of the victim.
- AIDS is a primary disease. It suppresses the immune powers of the victims. So, they become unable to defend against other infections and cancers. Then, an unrelated secondary infection produces the observable symptoms and causes the ultimate death of the patient.

# AIDS

- These symptoms include low-grade fever, coughing, shortness of breath, muscle ache, fatigue, loss of weight, enlarged lymph nodes, brain damage, heavy destruction to white blood corpuscles, etc.
- AIDS has a slow onset, but its damages are rapid.
- Transmission of AIDS mostly occurs through intimate sexual contact, parental transmission, blood transfusion, organ transplantation, artificial insemination, sharing of injection needles, etc.
- The commonest secondary diseases that kill AIDS victims are *Karposi's sarcoma* and a rare type of pneumonia

# AIDS Diagnosis

- ELISA Test & Western Blot Test
- Positive results only 2 to 24 weeks after HIV infection

# Gonorrhoea

- Inflammatory disease of the mucosa of the genital tract
- In male – affects urethra; advanced stages – testicles, seminal vesicle, prostate gland and bladder
- In female- affects urethra, vagina, cervix and uterus
- Causative organism – ***Neisseria gonorrhoeae***

# Gonorrhoea

- The incubation period of the disease is 2-10 days.
- The major symptoms in males include irritation of urethra, frequent and painful urination, pus in urine and semen, abscesses in testicles, etc.
- In females the disease is manifested by yellow vaginal discharge, painful urination, inflammation and abscesses in the vulva, etc.
- Prolonged ill-health, recurring miscarriage, sterility, etc. are some of the complications.



# Gonorrhoea

- Transmission of gonorrhoea occurs mainly through direct sexual contact.
- Occasionally, it may take place through clothing and physical contact also.

# Syphilis

- Syphilis is a contagious STD, more acute and serious than gonorrhoea.
- It is caused by a slender, cork-screw-shaped spirochete, called *Treponema pallidum*.
- The disease is of two kinds, congenital and acquired.

# Syphilis

- Congenital syphilis is the one which is transmitted from a syphilitic mother to a foetus through placenta.
- Acquired syphilis develops later in life
- Acquired syphilis runs through four stages, *primary, secondary, latent and advanced or tertiary*.

# Acquired syphilis – Primary stage

- Primary stage begins nearly three weeks after infection.
- It is marked by the appearance of a small painless sore at the site of infection (usually the penis in male, and the vagina or cervix in female).
- It is called primary chancre.
- Sexual contact at this stage will certainly transmit the disease to the partner.
- The chancre may heal up in about a month.

# Acquired syphilis – Secondary stage & Latent stage

- Secondary stage begins about two months after the initial infection characterized by fever, skin rashes, lesions in mouth and genital Organs, pain in joints, etc.
- Secondary stage is highly contagious, because most of the lesions are crowded with the spirochete.
- Secondary stage lasts for nearly 4-12 weeks.
- Towards its the symptoms almost disappear and the disease ceases to be infectious .
- This 'symptomless period is called the latent (hidden)
- It may last up to 20 years or more.
- During this stage, the spirochete invades various internal organs.

# Acquired syphilis – Advanced stage

- The advanced or tertiary stage is characterised by the degeneration and damage of various internal organs.
- During this stage, lesions called gummas, develop in the cardio-vascular system (cardio-vascular syphilis), central nervous system (neurosyphilis), liver, spleen, skin and bones.
- Neurosyphilis may cause brain damage, mental deterioration, loss of memory, delusions, hallucinations, etc.

# Syphilis

- Transmission of syphilis occurs through sexual intercourse, kissing, contact with a syphilis sore, etc.
- Now-a-days, the incidence of syphilis is on the increase, especially among teenagers.

# Genital herpes

- Genital herpes is a sexually transmitted viral disease, caused by *herpes simplex virus*.
- Unlike syphilis and gonorrhoea, it is almost incurable.
- The disease is characterized by painful blisters on penis in males, and on the vulva and vagina in females.
- The blisters may disappear and appear periodically, but the disease persists.
- There is extraordinarily high rate of recurrence of the disease.



# Genital herpes

- For pregnant women with genital herpes, a Caesarian section will usually prevent complications in the child.
- Complications often lead to damage of central nervous system and death.

# Trichomoniasis or Trichomonal vaginitis

- This is an inflammation of the mucous membrane females and the urethra in males.
- It is caused by the parasitic protozoan ***Trichomonas vaginalis*** which inhabits the tract and also the urinary tract of male and female.
- The disease include vaginal discharge and severe vaginal itch in women, but no specific symptoms in men.
- Sometimes, in women, it may cause leucorrhoea, premature delivery, low birth weight, disposition to HIV infection, etc.

# Human papilloma virus

- Human papilloma virus (HPV) is one of the commonest sexually transmitted diseases (STD).
- Health experts estimate that there are more cases of genital HPV infection than any other STD.
- Papilloma viruses cause warts and also human and animal cancers.
- Warts are usually benign but can become malignant carcinomas.
- Papilloma viruses are also found associated with human penial, uterine, cervical and anal carcinomas and are very likely to be their cause.
- Recently, a strong causal link between certain oral-pharyngeal cancers and HPV has been revealed

# Genital warts

- Genital warts (venereal warts) are the most easily recognized sign of genital HPV infection.
- Many people, however, have a genital HPV infection without genital warts.
- Genital warts are soft, moist, or flesh coloured and appear in the genital area within weeks or months after infection.
- They sometimes appear in clusters that resemble cauliflower-like bumps. They may be raised or flat, small or large.
- Genital warts can show up in women on vulva and cervix, and inside and around the vagina and anus.

In men, genital warts can appear on scrotum or penis.

# Gonococcal Vulvo-Vaginitis

- Vulvovaginitis is an inflammation or infection of vulva and vagina.
- It may be due to various organisms. But, in the large majority of cases among children, the bacterium *Gonococcus* is the exciting factor.
- Vulvovaginitis is common – female childhood either venereally or non-venereally. In female children, up of 13 to 15, vulva and vagina are more susceptible to be *Gonococcus*. Urethra may be affected directly or as a complication.
- The infection may occur at any time from birth to puberty. But, most commonly, it occurs after six to eight years.

# Gonococcal Vulvo-Vaginitis

- The infection may be due to direct contact with infectious agents or an adult or child, but more frequently it is due to contacts with contaminated towel, napkin, closet or tub-bath.
- Epidemics have been reported in children's homes, schools, and hostels.
- The signs and symptoms are scorching pain, frequent urination, red and swollen surface of vulva and vagina, and vaginal discharge

# Socio-economic dimensions of STDs

- Sexually transmitted diseases (STDs) have been inflicting significant morbidity and mortality on mankind over many years.
- Sexually transmitted infections (STIs) are among the commonest causes of illness, with far reaching health, social and economic consequences.
- In addition to their sheer magnitude, STIs are a major public health problem for many reasons

# Socio-economic dimensions of STDs

- The consequences of STIs can be devastating.
- Infants, born with blinding eye infection, women suffering from chronic abdominal pain, ectopic pregnancy and infertility, and men with infertility of such consequences.
- Around 50% of the new infections worldwide are in young people.
- Sexually transmitted infections are a major public problem all over the world.
- Its prevalence rates are apparent higher in developing countries, where treatment of STIs is less accessible.
- In women between 15 and 44 years of age, the morbidity and mortality due to STDs, excluding HIV, are very high.



# DISEASES TRANSMITTED BY BLOOD TRANSFUSION

- Some diseases are transmitted by direct blood-to-blood
- This type of contact occurs during blood transfusion, sharing surgical instruments, syringes and needles, etc.
- AIDS and hepatitis are examples of such diseases

# Hepatitis

- Hepatitis is the liver inflammation, caused by viral infection chemicals, drugs and alcoholism.
- Viral hepatitis is contagious, and rapidly spreading in crowded areas.
- Three major kinds of viral hepatitis have been recognized,
  - (i) acute and infectious hepatitis
  - (ii) serum hepatitis
  - (iii) chronic and active hepatitis.
- The first one is caused by an RNA virus and the other two by DNA viruses.

# Acute hepatitis

- Hepatitis A.
- Is an acute form of viral hepatitis.
- Its transmission occurs through *faecal contamination* (by the passing of the virus from the stools of one person to the mouth of another through food, water, clothings, utensils, etc.).
- The incubation period ranges from 15 to 50 days (usually 30 days).
- The disease may come on suddenly or gradually.
- Its symptoms include jaundice, fever and chill, nausea, diarrhoea, anorexia, etc.
- The disease does not normally cause severe liver damages, and most patients recover in about 4 to 6 weeks.

# Serum hepatitis

- Hepatitis B.
  - Is a serious type of hepatitis.
  - Its symptoms are similar to those of acute hepatitis.
  - Still, it differs from acute in the following respects;
    - (i) it has a long incubation period 100 days or more.
    - (ii) its transmission occurs through the on of contaminated blood, through the use of contaminated needles and transfusion equipment and also through saliva, emen
    - (iii) it is more fatal, the mortality rate ranging from 6 -20%, compared to the 0.1-0.2% for acute hepatitis.
  - The virus of serum hepatitis can remain in the blood stream for many years, making the host a carrier of the disease.
- So, any sample of blood used for transfusion has to be subjected to routine hepatitis test, before it is released for use.

# Chronic and active hepatitis

- This is an inflammation of the liver lasting more than six months.
- Its major causes are viral infection and auto-immune diseases of the liver.
- It is relatively harmless.
- Still, in some cases, it may result in Cirrhosis liver.
- Its transmission occurs through blood transfusion and also by oral contamination.



THANK YOU!