



GENITOURINARY SYSTEM

SUBJECT : Community medicine

LEC NO. : Two

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وَقُلْ رَبِّ زِدْنِي عِلْمًا



Unprotected intercourse



Blood transfusion



Needle reuse



Pregnancy



Sexually Transmitted Diseases

L2

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Chlamydia

❖ Chlamydia is a **common STD** that can cause infection among both **men and women**.

❖ It can **cause permanent damage** to a woman's **reproductive system**.

❖ It may lead to **tubal infertility**.

✱ this is because of the blockage of the ovarian tubes and this cause infertility.

❖ **Pelvic Inflammatory Disease (PID)**

❖ Also cause a potentially **fatal ectopic pregnancy**.

❖ **Reactive arthritis (Reiter's syndrome)**

↳ Any pregnancy outside the uterus

involvement of the eyes and cause conjunctivitis, involvement of the skin with rash on skin & genital tract & urinary tract, involvement of joints.

❖ **Perinatal infection:**

↳ If the mother is infected baby will attract the infection during passage in birth canal

a. **Neonatal inclusion conjunctivitis**

b. **Infant pneumonia** 10-20% of infants of infected mother.

Chlamydia High incidence

- 4 million new cases occur each year.
- SYMPTOMS: fever, weight loss for no reason, swollen glands, fatigue, diarrhea, white spots on the mouth.

❖ FEMALE SYMPTOMS:

- Vaginal discharge (white or grey) or burning with urination.
- Lower abdominal pain.
- Bleeding between menstrual periods.
- Low-grade fever (later symptom)

❖ MALE SYMPTOMS:

- Discharge from the penis and/or burning during urinating.
- Burning and itching around the opening of the penis.
- Pain and swelling in the testicles.
- Low –grade fever (associated with epididymitis –inflammation of the testicles)

Genital herpes simplex:

→ In people having multiple sexual partners

▶ Herpes simplex infection of the **penis , vulva, and rectum** is pathophysiologically identical to herpes infection in other areas.

▶ Genital herpes is primarily a **disease of young adults.**

↳ Who are sexually active

▶ Both antigenic **types 1 & 2** infect the genital area.

▶ Some people with herpes **never develop sores but are still contagious** and **may spread it to others without knowing.**

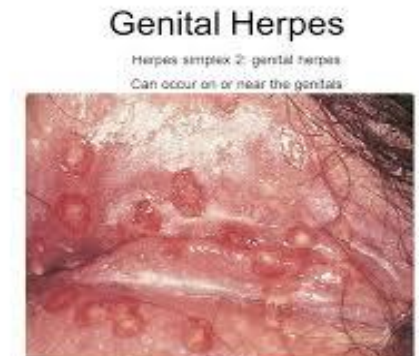
▶ The virus can be cultured for approximately **5 days** from active genital lesions and the **lesions** are almost certainly **infectious during this time.**



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- ▶ Viral infection spreads easily over moist surfaces.
- ▶ Wide areas of the female genitalia may be covered with painful erosions. *Sores or lesions could be blisters or ulcerations
- ▶ Inflammation, edema, and pain may be so extreme that urination is interfered with.
- ▶ Males develop a similar pattern of extensive involvement with edema and possible urinary retention, especially if uncircumcised.
- ▶ HSV1 is more common than HSV2 with rates of both increasing as people age.



- Herpes virus **spreads through skin-to-skin contact**. It is most easily spread when **blisters or sores** are present.
- **Some** people with herpes **never develop symptoms or blisters** but can still **shed the virus**. This means that **they can spread HSV to others without knowing it**. Up to **70%** of herpes is spread this way.
- **Most cases subclinical**.
- Transmission primarily from **subclinical infection**.
- **There is no cure for herpes**.

There is **no cure**, but treatment options for genital herpes can include:

- **Letting the blisters or sores heal on their own**.
- **Antiviral treatment, acyclovir tablet and topical**.

Orally ←

← Creams

- **Complications: neonatal transmission, enhanced HIV** ↗

Because they share the same risk factors

Pregnancy

■ The risk of transmission from mother to baby is highest if the mother becomes infected at around the time of delivery, since insufficient time will have occurred for the generation and transfer of protective maternal antibodies before the birth of the child.

■ To prevent neonatal infections, seronegative women are recommended to avoid unprotected sexual contact with an HSV-1 seropositive partner and conventional sex with a partner having a genital infection during the last trimester of pregnancy.

For monitoring the baby during delivery

When woman has obstructed labor

■ Mothers infected with HSV are advised to avoid procedures that would cause trauma to the infant during birth (e.g., fetal scalp electrodes, forceps, and vacuum extractors) and should lesions be present, to elect caesarean section to reduce exposure of the child to infected secretions in the birth canal.

■ The use of antiviral treatments, such as acyclovir, given from the 36th week of pregnancy, limits HSV recurrence and shedding during childbirth, thereby reducing the need for caesarean section.

■ Acyclovir is the recommended antiviral for herpes suppressive therapy during the last months of pregnancy.

Human Papillomavirus (HPV)

- Very contagious virus.
- Some people never get symptoms.
- HPV is spread through skin-to-skin contact , oral, anal and vaginal sex with an infected partner.
- A person can be infected and pass on the virus without knowing it.
- Some types cause genital warts.



Cauliflower ←

✦ Sometimes the patient have no no wart or no infection and no visible lesion, but they are very contagious and can transmit the infection

- Usually, the warts look like **tiny cauliflowers**, but **sometimes they are flat**.
- The warts may **cause itching, burning and some pain**, but **often don't cause any pain at all**.
- Warts may be **inside the vagina** or on the **cervix**, or in the **rectum or throat**, so it might **not be noticed**.
- They might also be so small that it cannot be seen.
- Others can – in a minority of cases – **lead to cancers of the cervix, vulva, vagina, penis, oropharynx and anus** after **10–15 years**.
- In addition, **HPV 16 and 18** infections are strongly associated with an increased risk of developing **oropharyngeal (throat) cancer**.

- In more developed countries, **cervical screening** using a **Papanicolaou (Pap) test** or **cytology** is used to detect abnormal cells that may develop into cancer.
- If abnormal cells are found, women are invited to have a **colposcopy**, **biopsies** can be taken, abnormal areas can be removed with a **cauterizing loop** or, **by freezing** (cryotherapy).
- **Treating abnormal cells can prevent cervical cancer.**
- **HPV vaccines prevent infection** with HPV & cervical cancer reduced.
- There is **no cure for HPV.**
- There is a **vaccine to prevent HPV available.**
- **Guideline for screening for HPV.**
 - Most important preventive measure » periodic screening

Vaccination Recommendations, (9-valent Gardasil 9)

- HPV vaccine is recommended for routine vaccination at age 11 or 12 years. (Vaccination can be started at age 9.)
- also recommends vaccination for everyone through age 26 years if not adequately vaccinated when younger.
- HPV vaccination is given as a series of either two or three doses, depending on age at initial vaccination.
- Vaccination is not recommended for everyone older than age 26 years.
- HPV vaccination of adults ages 27 through 45 years provides less benefit, because they may already be exposed to HPV.
- HPV vaccination prevents new HPV infections but does not treat existing HPV infections or diseases. HPV vaccine works best when given before any exposure to HPV.


Dosing Schedules

- Two doses of HPV vaccine are recommended for most persons starting the series before their 15th birthday.
- The second dose of HPV vaccine should be given 6 to 12 months after the first dose.
- Adolescents who receive two doses less than 5 months apart will require a third dose of HPV vaccine.
- 3 doses of HPV vaccine are recommended for teens and young adults who start the series at ages 15 through 26 years, and for immunocompromised persons.
- The recommended three-dose schedule is 0, 1–2 and 6 months.
- Three doses are recommended for immunocompromised persons (including those with HIV infection) aged 9 through 26 years.
- HPV vaccine is not recommended for use during pregnancy.

Candidiasis – Yeast Fungus

- Yeast fungus that may or may not be transmitted by sexual intercourse.
- Caused by high doses of antibiotics. It is usually caused by altering the Ph of the vagina.

SYMPTOMS:

- A thick cheesy vaginal discharge
- Severe itching  easily treated by hygiene, frequent wash and sterilization

Parasitic infections

1. Pubic Lice (pediculosis)
2. Trichomoniasis
3. Scabies

Pubic Lice

- Pubic lice are called “**crabs**” because they look like crabs.
- Crabs are frequently the color and size of **small freckles**. These very **small lice** (crabs) usually **attack the sexual (pubic) areas of the body**.
- Found **under arms, eyelashes, moustaches**.
- Spread through **direct physical contact**. **Close body contact with an infected person**.
- SYMPTOMS: A **terrible, persisting itch in the genital, rectal (sexual) area**.
**Common among children in schools » can infect hair*
- It is associated with **low hygiene**.
- Common among **low hygiene and overcrowding**, i.e., **prisoners**.
- Prevention and treatment: **Hygiene , shampoo, lice comb**.



Trichomoniasis

- An estimated 5 million new cases occur each year in women and men.
- Occurs in **vagina** of women so may be **sexually transmitted to men** using **infected washcloths and towels**.
- It is **transmitted to the baby during delivery**.
- It also can **occur in the urethra in men, doesn't have symptoms usually**.

SYMPTOMS:

- Appear within 5 to 28 days of exposure.
- Women usually have a **vaginal discharge**.

FEMALE SYMPTOMS:

- **Itching and burning** at the outside of the **opening of the vagina and vulva**.
- **Painful and frequent urination**
- **Heavy, unpleasant smelling greenish, yellow discharge**

MALE SYMPTOMS:

Usually nothing, or discomfort in urethra, inflamed head of the penis.

Scabies

- Caused by the itch mite *Sarcoptes scabiei*.
- It burrows just under the skin and lays eggs.
- The scabies mite can live for 2-4 days away from the human body; it can be transmitted without sexual contact.
- they can usually be eliminated effectively.
- Treatment often consists of medications that kill scabies mites and their eggs.
- Since scabies is so contagious, doctors will usually recommend treatment for an entire group of people who are in frequent contact with a person who has scabies. Mass treatment
- Common among low hygiene and overcrowding, i.e., prisoners.



Strategies for control of STDs:

The general guidelines for the control of sexually transmitted diseases include action at the level of agent, transmission, and host.

A. Infective agent

Eliminate the reservoir of infection

1. Identification and treatment of the promiscuous female pool is of great importance.
2. Regular medical examination and treatment of known commercial sex workers, inhabitants of brothels, and other places where promiscuous sexual behavior is known to occur.

For the control of HIV / AIDS, voluntary counseling and testing is used as a mean of identifying infected persons who may be guided on how to prevent them from infecting others, and they may be offered available antiretroviral chemotherapy.

B. Transmission

I. Discourage sexual promiscuity

Through sex education, make the community aware of the dangers of sexual promiscuity.

- Encourage stable family life.
- prostitution should be totally abolished, if necessary, by imposing sever penalties.

II. Local protection:

1. The use of the male condom diminishes, but does not eliminate, the risk of infection.
2. Female condoms have also been recently introduced diminish the risk of acquiring sexually transmitted diseases.
3. careful hygiene of the genitals with soap and antiseptic creams immediately after sexual exposure may give partial protection.

C. Host

I. Early diagnosis and treatment

1. Patients

Facilities for the diagnosis and treatment of those diseases must be freely accessible to all infected persons.

If there is no facility for the diagnosis of the STD, they should apply syndrome management.

2. Contacts

- If detecting a case, all contact should be investigated & treated to prevent transmission of infection, this is called contact tracing, contact act as a source of the infection, & early detection & treatment is important.
- In highly promiscuous groups, where sexual activities occur in association with the use of alcohol or drugs, one may use the technique of 'cluster tracing'.
- Apart from seeking a list of sexual exposure with dates, the patient is asked to name friends of sexes whom he feels may profit from investigation for sexually transmitted diseases.

II. Specific prophylaxis

- Specific immunization is not available against sexually transmitted diseases except, venereal wart, HPV & HBV, for genital herpes simplex (several clinical trials have tested vaccines against genital herpes, there is no vaccine currently available to prevent infection.) .

- Only available for HPV and hepatitis B

- Chemoprophylaxis: using antibiotics, this approach can be dangerous for the individual and the community.

1. Chemoprophylaxis may suppress the acute clinical manifestations, but the disease may remain latent and progress silently to late complications.
2. The widespread use of a particular antibiotic may encourage the emergence and dissemination of drug resistance strains.

Syndrome management:

It is one strategy recommended by WHO to deal with patient where have no facilities, specially in developing countries as a syndrome & not as etiological classification.

For example, male patient came with urethral discharge & you are doctor in a village, or army with no facilities. Use the following steps:

1. Management of the (STDs) as syndrome & not as etiological classification. → Depends on presentation of the patient
2. Using flow charts which enable the practitioner to diagnose, treat, & educate with respect to (STDs).
3. It is effective, efficient, accessible & can use by even family, physician, & general practitioner.
4. Drug usually used to cover these diagnosis which is as group of that syndrome i.e. (cover all possible cause of that syndrome).

Types of syndrome:

1. Urethral discharge for male & female.
2. Genital ulcer.
3. Vaginal discharge.
4. Ophthalmia neonatorum.
5. Acute inguinal lymphadenitis.
6. Scrotal swelling.
7. Lower abdominal pain.

Why have we used syndrome management for patient consulting primary health care ?

1. Simple not need well trained.
2. Do not need invasive investigation.
3. Do not need specialist STDs doctor.
4. Can be done by nurses, medical profession.
5. Drug available & simply use.

Examples on syndrome management:

•Male with genital discharge:

1. **Physiological:** crystal, urine, or sexual stimulation.
2. **Pathological:** balanitis, anterior urethritis, secondary to proctitis, or upper UTI. The commonest is anterior Urethritis, either due to :
 - A. gonorrhoea.
 - B. Non -specific infection.
 - C. Trichomonas vaginalis.
 - D. Herpes simplex viruses.
 - E. Secondary to intraurethral infection.

•Female with vaginal discharge:

•**Physiological**: pregnancy, menstrual variation, or sexual stimulation.

•**Pathological**:

- **vulvitis**.

1. **Anterior Urethritis**:

- A. gonorrhoea.
- B. non -specific infection.
- C. trichomonas vaginalis.
- D. secondary to intraurethral infection.
- E. secondary to UTI.

vagina:

- A. candidiasis,
- B. trichomonas vaginalis.
- C. foreign body.

cervix: - cervicitis.

Etiology of genital ulcer:

1. Infection:

- syphilis (rare) but can be transmitted to fetus & can leads to systemic infection (CVS, & neurosyphilis).
- herpes ,lymphogranuloma venerium, chancroids, granuloma inguinali & pyogenic granuloma.

2. Trauma: self infected.

3. Neoplasm: CA.

4. Allergic: fixed drug eruption either due to tetracycline or metheprim.

5. Parasitic infestation: scabies & pediculosis.

6. Unknown: Behcet Disease.

The effective ways of preventing STIs:

1. Abstinence

Sexual abstinence means to abstain from different levels of sexual activity.

2. Delay sexual activity until older age:

- Religious beliefs
- Family and personal values

3. Appropriate use of protective barriers (condoms) .

4. Sexual counselling and education, change personal risky sexual behaviors.

5. Contact tracing.

6. Appropriate management of pregnant women with STDs.



Thank you