



HEMATOPOIETIC & LYMPHATIC SYSTEM

-NACHAT BATCH-

SUBJECT : Health community


LEC NO. : 2/HIV-Aids

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وَقُلْ رَبِّ زِدْنِي عِلْمًا

HIV

a virus that uses RNA as its genomic material. Upon infection with a retrovirus, a cell converts the retroviral RNA into DNA, which in turn is inserted into the DNA of the host cell.

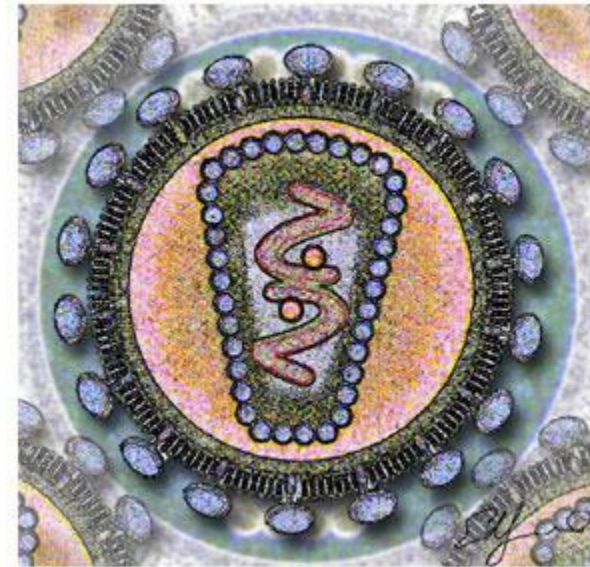
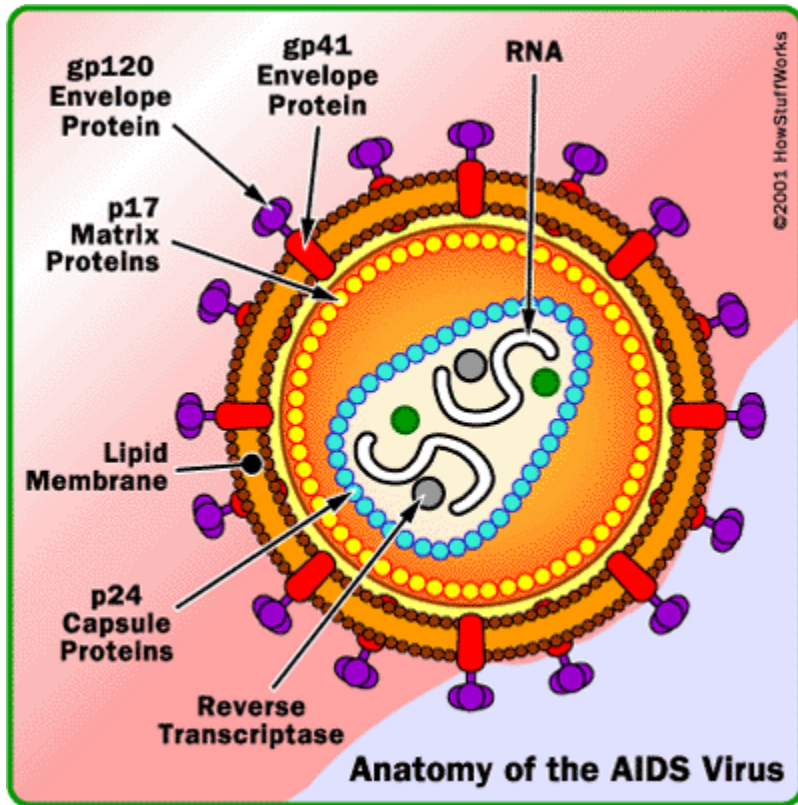


- The human immunodeficiency virus (HIV) is a retrovirus that infects cells of the immune system, destroying or impairing their function.

Decrease people's defense system

- As the infection progresses, the immune system becomes weaker, and the person becomes more susceptible to infections.

Human Immune Deficiency Virus



HIV

- The Human Immunodeficiency Virus (HIV) targets the immune system and weakens people's defense systems against infections and some types of cancer.
- As the virus destroys and impairs the function of immune cells, infected individuals gradually become immunodeficient.
- Immune function is typically measured by CD4 cell count.
laboratory test that measures the number of CD4 T-cells

AIDS

الناس بتخلط بين الـ HIV و الـ AIDS
بالواقع لما الـ HIV يتطور بصير عنا أعراض اشد
خطوره و بصير عنا
Acquired immunodeficiency
syndrome (AIDS)

- The most advanced stage of HIV infection is Acquired Immunodeficiency Syndrome (AIDS), which can take from 2 to 15 years to develop depending on the individual. Immune system
- Antiretroviral drugs can slow down the process even further.
- AIDS has severe clinical manifestations.

Signs and symptoms

Depends on what? .
the stage of infection

- The symptoms of HIV vary depending on the stage of infection.
- Though people living with HIV tend to be most infectious in the first few months, many are unaware of their status until later stages.
- The first few weeks after initial infection, individuals may experience no symptoms or an influenza-like illness including fever, headache, rash or sore throat.

بالبداية يتكون الأعراض بسيطة ...fever /headache /rash من like influenza symptoms
بالتالي هاؤ الشخص ما بقدر يعرف انو عنده HIV

Signs and symptoms

- As the infection progressively weakens the immune system, an individual can develop other signs and symptoms, such as swollen lymph nodes, weight loss, fever, diarrhea and cough.
- Without treatment, they could also develop severe illnesses such as tuberculosis, cryptococcal meningitis, and cancers.

إذا ما تعالج بالantiretroviral drugs ممكن developed

this severe symptoms and diseases

And maybe get infection like TB/meningitis /
cancers

HIV transmission Via body fluids

- HIV can be transmitted via the exchange of a variety of body fluids from infected individuals, such as blood, breast milk, semen and vaginal secretions.
- Individuals رکز هون cannot مش can cannot become infected through ordinary day-to-day contact such as hugging, shaking hands, or sharing personal objects, food or water.

HIV transmission

Usually

HIV is transmitted through unprotected sexual intercourse, transfusion of contaminated blood, sharing of contaminated needles, and between a mother and her infant during pregnancy, childbirth and breastfeeding.

Risk factors

- Behaviors and conditions that put individuals at greater risk of contracting HIV include: Include what ?
- Having unprotected sex
- Having another sexually transmitted infection such as syphilis, herpes, chlamydia, gonorrhea, and bacterial vaginosis هون يكون عنده مرض ثاني انتقل عن طريق ال (sex trasnmited) sex
- Sharing contaminated needles, syringes and other زي مدمنين المخدرات بتشاركو بالإبر و هاض ممكن ينقل HIV

Risk factors

زي في بعض المستشفيات

- Injecting equipment and drug solutions when injecting drugs
- Receiving unsafe injections, blood transfusions, medical procedures that involve unsterile cutting or piercing; and
- Experiencing accidental needle stick injuries, including among health workers.

إذا كان الدم ملوث

إذا كانت الأدوات غير معقمة أثناء الجراحة

اللي يعملو وشم

Global HIV/AIDS statistics in 2022

- 85.6 million people have become infected with HIV since the start of the epidemic.
- 40.4 million people have died from AIDS-related illnesses since the start of the epidemic.

It's started in 1981

reported ممكن هو بدأ قبل هيك بس اول حالة

كانت 1981

In USA

سجلها CDC (central of disease control)

Global HIV/AIDS statistics in 2022

- 39.0 million people globally were living with HIV
- 37.5 million (15 years or older).
- 1.5 million children (0–14 years).
- 53% of all people living with HIV were women and girls.

In females higher than males 😎

Global HIV/AIDS statistics in 2022

In 2022

- 1.3 million people became newly infected with HIV
- 630 000 people died from AIDS-related illnesses
- AIDS-related mortality has declined by 55% among women and girls and by 47% among men and boys since 2010.
- 29.8 million people were accessing antiretroviral therapy In 2022

The Sustainable Development Goals (SDGs).

- Adopted in 2015, the SDGs aim to end the AIDS epidemic by 2030 under SDG Goal 3, which is to “ensure healthy lives and promote well-being for all at all ages.”
هدف بتعلق بالHIV
- The SDGs are the successor to the Millennium Development Goals (MDGs), which included an HIV target under MDG 6: to halt and begin to reverse the spread of HIV/AIDS by 2015 and to achieve universal access to treatment for HIV/AIDS by 2010.

MDGs

وضعوها بال2000 (sep/2000) و كانت الأهداف تبعتها
لل2015

و للspam تبعتها كانت مدتها 15 سنة

95-95-95 targets by 2025

الأهداف العالمية كارقام اللي
تم وضعها و المتعلقة
بالHIV و اللي بتهدف
لتحقيقها by 2025

UNAIDs released in 2020 ambitious targets to be achieved by 2025.

هاض الهدف

- **The first 95% of people living with HIV knowing their HIV status**

و هاض شو صار ب2022

In 2022, nearly four out of five people living with HIV (86%) knew their status.

- **The second 95% of people who know their HIV-positive status are on treatment**

Among people who knew their status in 2022, approximately (89%) were accessing treatment.

- **The third 95% of people on treatment with suppressed viral loads**

High CD4

Among people accessing treatment in 2022, 93% were virally suppressed.

Diagnosis

- Serological tests, such as Rapid diagnostic test RDTs or enzyme immunoassays (EIAs), detect the presence or absence of antibodies to HIV antigen.
- It is important to note that serological tests detect antibodies produced by an individual as part of their immune system to fight off foreign pathogens, rather than direct detection of HIV itself.

Diagnosis

- Most individuals develop antibodies to HIV-1/2 within 28 days and therefore antibodies may not be detectable early after infection, the so-called window period. فتره يكون فيها المريض infective و هو مش عارف حالته و ما حد عارف حالته
- This early period of infection represents the time of greatest infectivity; however, HIV transmission can occur during all stages of the infection.

HIV testing services

الفحص مش اجباري عشان احترام حقوق
الإنسان و هاض بدخل بقاعده ال
autonomy
طبعاً كلنا شوف هاي الحقوق اللي مقطعة
بعضها
شغل فلسفة ع الفاضي

- HIV testing should be voluntary and the right to decline testing should be recognized.
- Mandatory or coerced testing by a health-care provider, authority or by a partner or family member is not acceptable as it undermines good public health practice and infringes on human rights. خمس أسس يجب تطبيقها
- All HIV testing services must include the 5 C's recommended by WHO: informed **Consent**, **Confidentiality**, **Counselling**, **Correct test results** and **Connection** (linkage to care, treatment and other services).

Self-testing

- HIV self-testing is a process whereby a person who wants to know his or her HIV status collects a specimen, performs a test and interprets the test results in private.
- HIV self-testing does not provide a definitive diagnosis; instead, it is an initial test which requires further testing by a health worker.

Prevention

1. Male and female condom use

الثلاث مع بعض

Sexual transmitted diseases

2. Testing and counseling for HIV, TB and STDs.

It is strongly advised that HIV testing services integrate screening for TB and STDs. All individuals diagnosed with HIV who has active TB should urgently use ART.

3. Voluntary medical male circumcision

الطهور بالإسلام
وجدوا انو الطهور بقلل
من خطر الإصابة
بHIV

Prevention

يعني مره متزوجة واحد عنده HIV بإمكانها تاخذ antiretroviral drugs كوقاية

4. Pre-exposure prophylaxis (PrEP) for HIV

هون مثلا طبيب عمل عملية و اكتشف انو
المريض عنده HIV

5. Post-exposure prophylaxis for HIV (PEP)

Within 24 hours to 72 hours
antiretroviral treatment بقدر يأخذ

حتى يحمي نفسه

6. Elimination of mother-to-child transmission of HIV (EMTCT)

برضو الأم بتاخذ نفس ال treatment خلال فترة الحمل و
الإرضاع

7. Harm reduction for injecting drug users

- Using sterile syringes
- HIV testing and counseling
- HIV treatment and care
- Access to condoms
- Management of STIs, tuberculosis and viral hepatitis.

Quiz time

1. What is the primary target of the Human Immunodeficiency Virus (HIV)?
 - a) Liver cells
 - b) Immune system cells
 - c) Nervous system cells
 - d) Red blood cells

2. Which Sustainable Development Goal (SDG) aims to end the AIDS epidemic by 2030?
 - a) SDG Goal 1
 - b) SDG Goal 2
 - c) SDG Goal 3
 - d) SDG Goal 4

3. Which of the following is NOT a recommended method of HIV prevention?
 - a) Male and female condom use
 - b) Pre-exposure prophylaxis (PrEP) for HIV
 - c) Sharing contaminated needles
 - d) Voluntary medical male circumcision

- 4) A 28-year-old sexually active male presents to the clinic with flu-like symptoms, including fever, headache, and sore throat. He reports having unprotected sexual intercourse with multiple partners over the past few months. What should be the initial diagnostic step to investigate his symptoms?
 - a) Conduct a serological test for HIV
 - b) Prescribe antibiotics for possible bacterial infection
 - c) Perform a chest X-ray to rule out tuberculosis
 - d) Order a throat swab culture to detect streptococcal infection

- 5) A 35-year-old pregnant woman attends her antenatal clinic appointment. She discloses a history of intravenous drug use and previous unprotected sexual encounters with a partner of unknown HIV status. What preventive measure should be strongly recommended to reduce the risk of mother-to-child transmission of HIV in this case?
 - a) Initiating antiretroviral therapy (ART) during pregnancy
 - b) Encouraging the use of male and female condoms during sexual intercourse
 - c) Advising against breastfeeding to prevent vertical transmission
 - d) Suggesting voluntary medical male circumcision for the partner

Answer:

- 1)b
- 2)c
- 3)c
- 4)A
- 5)A