



HIV Virus Infection: The Global Scenario

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Abstract

Human Immunodeficiency Virus stands for Human Immunodeficiency virus which weakens the immune system and increases the risk of infection that attacks the body. AIDS stands for Acquired Immune Deficiency Syndrome i.e A: Acquired, not inherited I: Weakens the Immune system, D:Creates a Deficiency of CD4+ cells in the immune system, S: Syndrome, or a group of illnesses taking place at the same time. When the immune system becomes weakened by HIV, the illness progresses to AIDS. Some blood tests, symptoms or certain infections indicate progression of HIV to AIDS. This paper represents a small over all view of transmission, mode of transmission, impact of HIV globally along with Prevention of HIV transmission.

Keywords HIV; AIDS; Transmission; Infection

Introduction

HIV (human immune virus) first discovered in 20th century and can be divided into HIV-1 and HIV-2. Both of the cases it Transmitted through the same routes, associated with similar opportunistic infections. HIV-1 is more common worldwide where as HIV-2 is found in West Africa, Mozambique, and Angola. HIV-2 is less easily transmitted and less pathogenic Duration of HIV-2 infection is shorter and MTCT is relatively rare with HIV-2. Natural History of HIV Infection: Virus can be transmitted during each stage.

- Seroconversion: Infection with HIV, antibodies develop
- Asymptomatic : No signs of HIV, immune system controls virus production
- Symptomatic: Physical signs of HIV infection, some immune suppression
- AIDS : Opportunistic infections, end-stage disease

Transmission of HIV HIV is transmitted by:

Direct contact with infected blood

- Sexual contact: oral, anal, or vaginal
- Direct contact with semen or vaginal and cervical secretions
- HIV-infected mothers to infants during pregnancy, delivery, or breastfeeding

Impact of global HIV

- Negative economic impact on countries
- Overstrained healthcare systems
- Decreasing life expectancy
- Reversal of child survival gains
- Increased numbers of orphans

Mode of transmission of HIV

It is mainly due to sexual reason, IDUs, blood and blood product and also can be perinatal. risk of PTCT Transmission is 14-45% globally.

Prevention of HIV Transmission

Strategies to prevent HIV transmission can be carried out by taking in control some Personal strategies as well as public health strategies. That includes Safe practices: no risk of HIV transmission and simultaneously risk reduction

Public health strategies to prevent HIV transmission

- Screen all blood and blood products
- Follow universal precautions
- Educate in safer sex practices
- Identify and treat STIs/other infections
- Provide referral for treatment of drug dependence

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- Apply the comprehensive PPTCT approach to prevent vertical transmission of HIV

Summary

HIV multiplies inside the CD4⁺ cells, destroying them , As CD4⁺ cell count decreases and viral load increases, the immune defences are weakened. HIV-infected people become vulnerable to opportunistic infections and HIV is a chronic viral infection with no known cure. Without ARV treatment, HIV progresses to symptomatic disease and AIDS. HIV is a global pandemic and the number of people living with HIV continues to increase

worldwide. HIV epidemic is especially severe in resource-constrained setting .The progression from initial infection with HIV to end-stage AIDS varies from person to person and can take more than 10 years. The most common main route of transmission worldwide is heterosexual transmission. Women of childbearing age are at particular risk for acquiring HIV through unprotected sex , HIV-positive women who are pregnant are at risk of passing HIV infection to their newborn. Risk of HIV transmission from mother-to-child can be greatly reduced through effective PMTCT programs.