

Outcomes of Discordant HIV Screening test Results at a Southern Academic Medical Center

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DESCRIPTION

HIV (Human Immunodeficiency Virus) infection remains a significant global health challenge, with millions of people affected worldwide. Despite advances in treatment and prevention, HIV continues to pose substantial social, economic, and public health burdens. In this essay, we will explore the epidemiology, transmission, clinical manifestations, treatment, and prevention strategies of HIV infections. Since its discovery in the 1980s, HIV has spread to become a pandemic, affecting millions of people globally. According to the World Health Organization (WHO), approximately 37.7 million people were living with HIV worldwide in 2020. Sub-Saharan Africa remains the most severely affected region, accounting for the majority of new HIV infections and AIDS-related deaths. HIV is primarily transmitted through contact with certain body fluids of an infected person, such as blood, semen, vaginal fluids, and breast milk. Common modes of transmission include unprotected sexual intercourse, sharing contaminated needles or syringes, and perinatal transmission from mother to child during pregnancy, childbirth, or breastfeeding. Additionally, transmission can occur through blood transfusions or organ transplantation from infected donors, though such cases are now rare due to improved screening measures. HIV infection progresses through various stages, with acute infection, chronic asymptomatic infection, and AIDS (Acquired Immunodeficiency Syndrome) being the major clinical phases. Acute HIV infection may present with flu-like symptoms, while chronic infection may remain asymptomatic for years. Without treatment, HIV gradually weakens the immune system, leading to opportunistic infections and malignancies characteristic of AIDS. Antiretroviral Therapy (ART) has transformed HIV infection from a life-threatening disease to a manageable chronic condition. ART consists of combinations of antiretroviral drugs that suppress viral replication, reduce viral load, and restore immune function. Adherence to ART is essential to

achieve viral suppression and prevent the development of drug resistance. Additionally, Pre Exposure Prophylaxis (PrEP) and Post Exposure Prophylaxis (PEP) are preventive measures recommended for individuals at high risk of HIV acquisition. Despite progress in HIV treatment and prevention, several challenges persist. Access to HIV testing, treatment, and care remains limited in many resource-limited settings, particularly in low- and middle-income countries. Stigma and discrimination against people living with HIV continue to hinder efforts to control the epidemic, leading to reluctance in seeking testing and treatment services. Additionally, the emergence of drugresistant HIV strains and the high cost of antiretroviral drugs pose ongoing challenges to effective HIV management. Efforts to combat HIV infection must focus on scaling up access to comprehensive prevention, testing, treatment, and care services globally.

CONCLUSION

HIV infection remains a complex and multifaceted global health challenge, requiring a comprehensive and coordinated response. While significant progress has been made in HIV prevention, treatment, and care, continued efforts are needed to achieve the goal of ending the HIV epidemic. By addressing barriers to access, reducing stigma, and investing in research and innovation, we can strive towards a future where HIV infections are rare and manageable, and all individuals living with HIV receive the care and support they need to live healthy and fulfilling lives.

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CONFLICT OF INTEREST

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