Landmark Clinical Studies in Infectious Diseases (Human Immunodeficiency Virus)

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Cabotegravir is an HIV integrase strand transfer inhibitor with potent antiviral activity and a long half-life when administered by injection. The LATTE-2 study evaluated long-acting cabotegravir plus rilpivirine for maintenance of HIV-1 viral suppression through 96 weeks. Fostemsavir is a prodrug of temsavir, an attachment inhibitor that binds directly to HIV-1 gp120, blocking initial viral attachment and entering into host CD4 T-cells. Efficacy and safety of fostemsavir in treatment-experienced, HIV-infected subjects, through week 48, are reported.

The Joint United Nations Programme on HIV/AIDS 90-90-90 targets state that 90% of HIV-infected persons know their status, while 90% initiate antiretroviral therapy (ART), and 90% achieve virologic suppression by the year 2020 to end the AIDS epidemic. The World Health Organization has updated the guidelines to recommend ART for all persons living with HIV, and ART initiation should be offered on the same day following HIV confirmation to those ready to start. More studies have been published during these few years to assess whether the same-day HIV testing and ART initiation improve retention and virologic suppression.

Antiretroviral preexposure prophylaxis has been shown to reduce the risk of HIV infection in most studies, but conflicting results have been reported, probably due to challenges of adherence to a daily regimen. Non-daily dosing of oral pre-exposure prophylaxis may provide equivalent coverage of sex events compared with daily dosing. Long-acting injected cabotegravir is well tolerated with an acceptable safety profile for HIV prevention. The recent study among healthy men not at high risk of HIV infection showed that 2 (2%) of 127 men who have sex with men could acquire HIV-1 infection.

Cryptococcal meningitis accounts for more than 100,000 HIV-related deaths per year. Two treatment strategies that could be more sustainable in Africa than the standard of 2 weeks of amphotericin B plus flucytosine have been studies. The results showed that the 1 week of amphotericin B plus flucytosine and the 2 weeks of fluconazole plus flucytosine are effective as induction therapy for cryptococcal meningitis in resource-limited settings.

Keywords: Antiretroviral therapy, Cryptococcosis, HIV, Meningitis, Preexposure prophylaxis