

Prevalence of HIV among Patients with Syphilis Co-Infection and its Treatment

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DESCRIPTION

Around the world, Sexually Transmitted Diseases (STIs) are regarded as one of the main issues with public health. Benefits to the public and to individuals arise from their prevention and control, including a reduction in the risk of HIV transmission. Sexually active individuals are more likely to contract STIs, and the fact that they often go unnoticed helps spread the infection. The most prevalent modes of transmission and social determinants are HIV infection and syphilis, both of which are brought on by the etiologic agent *Treponema pallidum*. HIV-positive individuals who have *T. pallidum* infection have higher viral loads and fewer TCD4+ cells, which can worsen their morbidity and mortality rates.

HIV can also impact how syphilis spreads, how it progresses clinically, how it responds to treatment, and even alter the diagnosis. According to several Brazilian research, co-infection with HIV and syphilis was linked to a number of characteristics, including age, marital status, male gender, low education, having many partners, having STIs, inconsistent condom usage, and Men who have Sex with Men (MSM). Male gender, immigration, low education, age, many partners, irregular condom usage, MSM, illicit drug use, and the prevalence of STIs were among the related characteristics found in international studies. The purpose of this study was to determine the incidence of co-infection between HIV and syphilis in HIV-positive patients at the initiation of Anti-Retroviral Therapy (ART) and to identify risk factors for co-infection.

A sexually transmitted illness known to break down mucosal barriers is syphilis, which is also linked to syphilitic ulcers. HIV infection is more likely in those with syphilis. In the recent past, there was a specific syphilis epidemic among MSM in certain global locations. In some developed nations, there has been evidence of a syphilis outbreak among MSM during the 2000s. Incidence rates of the syphilis among MSMs who are HIV-positive

have been reported to range from 2.9 to 6.2 per 100 individuals in the Western world. From 2000 to 2019, the prevalence of syphilis has been observed to range from 0.9% to 30.9% in several Asian cities. In particular, 2.2%–30% in China, 1.1%–9% in Indonesia, 2.6%–4.46% in Bangladesh, 2.5%–14.1% in Myanmar, 5.5% in Cambodia, 1.5%–4.8% in Nepal, 2.62%–17.5% in India, 1.65%–2.3% in the Philippines, 0.9%–1.3% in Vietnam, and 2.5% in Taiwan have been reported as having this prevalence. There has also been a recent upsurge in Syphilis infection among MSM, which is strongly correlated with the prevalence of HIV.

HIV and syphilis have a complicated reciprocal interaction. HIV transmission is increased by two to five times in cases of syphilitic ulcers because of the prevalent mechanism of infection. Furthermore, syphilis can lower CD4 counts and raise the HIV viral load, which can hasten the course of the disease and result in treatment failure. Clinically, HIV can make it difficult to distinguish between different stages of syphilis, impair response to treatment, and speed up the development of neuro syphilis.

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