What we need to know about the Herpes virus

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Introduction

The Herpes virus has been infecting the human population for millions of years. Humans are the only primate species known to be infected with two distinct herpes simplex viruses: HSV-1 and HSV-2. Human herpes simplex viruses are everywhere, and studies show that with over two-thirds of the human population infected by at least one virus. The virus was first discovered in a chimpanzee.1 The frequency of HSV infection has been measured by testing various populations for the presence of antibody, as both virus and the immune response are thought to persist after infection for the life of the person. In our global village, the Herpes Virus 1(HSV-1) is almost universal, which means, almost everyone carries it and is usually acquired from intimate contact with family in early childhood. After a person’s childhood, the HSV-1 prevalence rates increase minimally with age. Rates of HSV-1 infection are the same for both men and women. In some places including the United States, African Americans and Asians have higher rates of HSV-1 infection than their white counterparts. Most infections are oral, while others are asymptomatic. Some data suggest that in developed countries, acquisition of HSV-1 is delayed from early childhood to adolescence or young adulthood.2

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Epidemiology and Prevalence of HSV

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Unlike the Herpes virus 1 (HSV-1), 15%–80% of people in various populations infected with the Herpes virus 2 (HSV-2) which is marked less frequently. The infection rate varies by country as well as levels of sexual activity. In European country, such as Spain and Asian country such as the Philippines, the HSV-2 prevalence is somewhere around 10%, which is increasing to 20%–30% range for most European countries and the United States as well. Since HSV-2 infections are spread mostly during sexual activity, the risk of HSV-2 reflects a person’s level of sexual activity and the number of sexual partners, and background prevalence of infection in the community. In communities with low rates of infection, the risk of HSV-2 infection reflects more closely sexual activity of the person. However, in communities with high prevalence of infection, demographic rather than behavioral factors reflect HSV-2 risk even more accurately. Just like Human papillomavirus, women are at greater risk of acquiring HSV-2, reflecting both increased biologic susceptibility and pattern of relationships with older men, who are more likely to be HSV-2 seropositive. And as I previously mentioned above, Herpes virus-2 prevalence in the United States is higher among African Americans than among whites and Asians. As a result, there is great disparity in infection rates according to both gender and race. For white women, the risk of HSV-2 increases from about 18% among those with 2–4 lifetime partners to 35% for those with 10 to 49 lifetime partners. On the contrary, for African American women the risk increases steeply even with fewer partners and exceeds 60% for women with more than 4 lifetime partners. Unlike the Black men, for white men, the risk is ∼10% among those who report 2 to 9 lifetime partners and reaches 40% in those with greater than 50 lifetime partners. Among African American men, the risk rises from 35% in those with 2–4 lifetime partners to ∼ 50% in those reporting greater than 50 lifetime partners. The increase in the frequency of HSV-2 antibodies starts in adolescence which reflects the initiation of sexual activity, and levels off in the forties, reflecting cessation of new partner acquisition. In the United States, most people acquire HSV-2 in their twenties with a mean age at presentation of 24 years. In contrast, in Africa, especially in the Southern part of Africa, girls acquire HSV-2 infection in adolescence and more than 60% infected by the age of twenty-one. HSV-1 and HSV-2 types are highly infectious in pregnant women and can spread or transferred from mother to neonate through delivery, which cause neonatal herpes and increase the mortality rate. Neonatal herpes is an uncommon but destructive complication of HSV infection during gestational period. The risk of vertical transmission of HSV from seronegative pregnant women who encounter the virus for the first time in the third trimester of pregnancy is much more than pregnant women previously exposed to HSV. sometimes, the primary maternal infection occurs during the initial stages of pregnant women.2 It is estimated that around 491.5 million people were living with HSV-2 infection in 2016 which is equivalent to 13.2% of the entire world’s population aged 15 to 49 years old. And as stated earlier, the HSV-2 is exclusively sexually transmitted, causing infection in the genital or anal area known as genital herpes. Public health studies have also shown that an estimated 3.7 billion people had HSV-1 infection during the same year which is around 66.6% of the world’s population ranging from age 0 to 49 years old. Unlike the HSV-2, HSV-1 is transmitted or passed from one person to another by oral contact to cause infection in or around the mouth and is known as oral herpes. However, HSV-1 can also be transmitted to the genital area through oral-genital contact – during oral sex – to cause genital herpes. Most HSV-1 infections were oral. However, between 122 million to 192 million people were estimated to have genital HSV-1 infection, which depends on the assumptions used in the estimation model of the study that year. It has been known that most people living with herpes, caused by either HSV-1 or 2, are unaware they have the virus.

Most times, when symptoms occur, oral herpes infection can lead to painful sores around the mouth. As for the genital herpes infection, it can or may cause recurring, often painful, genital sores, which is most often referred to as genital ulcer disease.3

Human papillomavirus (HPV) and Herpesvirus (HSV); Similarities and differences

Human papillomavirus and Herpesvirus are viruses that can be transmitted sexually and orally. Their similarity also includes the fact that both can cause genital lesions and show no symptoms at all. Although there is no cure for both viruses, HPV can disappear from its host without treatment, but HSV will lie dormant in its host for many years.

Prevention and Treatment for Herpes

There is no cure for Herpes. Therefore, people carrying herpes live with it forever. The good thing about it is that the virus is rarely life-threatening for most people who have it, but it's extremely dangerous for pregnant women. During pregnancy, the virus flare-up which increases the pregnant woman risk of premature labor, and her unborn baby can get a deadly infection in the womb. The most common prevention is staying with one sex partner or using condoms when you have multiple sex partners and avoiding oral sex. But even a condom will only protect the area of the body that is cover.4

Reference

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