

Brief Note on Risk of Transmitting HIV during Pregnancy

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DESCRIPTION

HIV can be passed from mother to child during pregnancy, delivery, or breastfeeding, resulting in the baby catching the virus as well. In 2008, vertical transmission accounted for almost 90% of HIV diagnoses in children. The risk of transmission before or during birth is roughly 20% in the absence of therapy, and 35% in those who also breastfeed. This risk is reduced to less than 5% with treatment.

When either the mother or the baby takes antiretrovirals, the risk of transmission is reduced in those who do breastfeed. There is a danger of transmission if blood contaminates food during pre-chewing. If a woman is untreated, two years of breastfeeding exposes her baby to a 17 percent HIV/AIDS risk. The World Health Organization recommends either exclusive breastfeeding or the provision of safe formula in many underdeveloped countries due to the greater risk of death without breastfeeding. All HIV-positive women should be on antiretroviral medication for the rest of their lives.

Adult HIV infections normally go through three stages:

Early, acute stage

Rapid viral replication and infection characterize the early stages of HIV infection. Following an infection, this stage usually lasts 2-4 weeks before it resolves on its own. Symptoms appear in 50-90 percent of adults during this stage of illness. Fever, sore throat, tiredness, swollen lymph nodes, diarrhea, and a rash are common symptoms for women during this period. The rash is maculopapular, which means it is made up of flat and raised skin lesions that occur on the trunk, arms, and legs but not on the palms of the hands or the sole of the feet.

Middle, chronic/latent stage

In patients who are not treated with Antiretroviral Therapy (ART), the intermediate stage of an HIV infection can extend for 7-10 years. The virus is neither latent nor inactive during this time; rather, it is sequestered inside lymph nodes, where it is replicating at low levels. During this time, most women remain asymptomatic, but others may develop persistent fevers,

exhaustion, weight loss, and swollen lymph nodes, a condition known as the AIDS-Related Complex (ARC).

Late, advanced/immunodeficient stage

The HIV virus gradually destroys CD4 T-helper cells in the immune system, resulting in AIDS. A CD4 cell count of less than 200 cells per microliter (which indicates severe immunodeficiency) or the development of an AIDS-specific disease are both indicators of AIDS. Women in this stage are at risk for dangerous, opportunistic infections that the general population either does not contract or contracts only mildly because of their immunocompromised state. In HIV/AIDS patients, these infections cause considerable sickness and death. People with advanced HIV infections are also more likely to acquire neurological symptoms (such as dementia and neuropathy) and cancers (such as Non-B-Cell Hodgkin's Lymphoma, Kaposi's Sarcoma, and HPV-related cancers such as anal, cervical, oral, pharyngeal, penile, and vulvar cancer).

CONCLUSION

The mother's plasma viral load has the greatest impact on the risk of HIV transmission from mother to child. Untreated mothers with a high (HIV RNA greater than 100,000 copies/mL) transmission risk face a transmission risk of more than 50%. The probability of transmission is less than 1% for women with a low viral load (HIV RNA less than 1000 copies/mL). The lower the viral load, the lower the probability of transmission in general. As a result, ART should be used throughout the pregnancy to keep viral load levels as low as feasible and limit the risk of transmission. Pre-exposure prophylaxis for the newborn can be achieved with ART medications that successfully cross the placenta, since they can achieve appropriate ART drug levels in the fetus to avoid viral infection. Finally, it is suggested that ART medications be given to the newborn after birth in order to continue to protect the infant from the virus that may have been present during labor and delivery.

To limit the risk of viral transmission, all pregnant women who test positive for HIV should begin and continue ART therapy,

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Received: 24-Mar-2022, Manuscript No. ATBM-22-17383; Editor assigned: 29-Mar-2022, PreQC No. ATBM-22-17383 (PQ); Reviewed: 14-Apr-2022, QC No. ATBM-22-17383; Revised: 21-Apr-2022, Manuscript No. ATBM-22-17383 (R); Published: 28-Apr-2022, DOI: 10.35248/2379-1764.22.10.354

Citation: Redelmeier K (2022) Brief Note on Risk of Transmitting HIV during Pregnancy. Adv Tech Biol Med. 10:354

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regardless of CD4 counts or viral load. The earlier antiretroviral therapy is started; the more probable the viral load will be lowered by the time the baby is born. Some women are anxious about taking ART early in pregnancy because the first trimester

is when babies are most vulnerable to medication toxicity. However, delaying ART in the beginning may be less effective in preventing infection transmission.