

Reducing Neonatal Death Rate and Preventing Parent-to-Child HIV Transmission

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DESCRIPTION

HIV-positive pregnant women should receive Anti Retroviral Medication (ART) during pregnancy and childbirth to avoid mother-to-child transmission of the virus. ART is an HIV medication cocktail. Taken together, ART can lower the risk of HIV transmission to a new born to less than 5% during pregnancy, birth, and nursing. Without any treatment, there is a 20% to 45% chance that an HIV-positive pregnant woman would pass the virus on to her unborn child. It has been demonstrated that the use of ART and sd NVP/Sy NVP to mother-baby pairings is extremely successful in lowering this transmission to as low as 10% [1].

Due to higher peripheral blood viral loads, increased shedding in the genital tract, and decreased maternal immune responses to contain the virus, mothers with higher HIV-1 viral loads, lower CD4+ T-cell counts, and more advanced disease stages are at an increased risk of transmitting HIV-1 to their infant. At very rare conditions a mother transfer HIV-2 to her unborn baby.

In mother with high viral loads and/or advanced HIV illness, transmission is more likely. Without Antiretroviral Therapy (ART), 15 to 30 per cent of newborns with vertical infections pass away in the first year of life. Multiple worries about the emergence of resistance and side effects obstruct the long-term treatment of children with ART [2,3]. The greatest benefit comes from ART treatment during late pregnancy, labor, and early infancy, while longer ART courses are more beneficial. It is important to weigh many advantages of the breastfeeding against the danger of HIV transmission connected to breast feeding. For the first six months of a baby's life, mothers who are known to be HIV-positive should exclusively breastfeed, beyond that, they should introduce acceptable complementary foods and continue breastfeeding. The World Health Organization (WHO) criteria of clinical HIV status was used, and CD4 cell counts were calculated using flow cytometry [4]. Based on the most recent menstrual cycle, ultrasonography biometry, or both, gestational

age was calculated. Pregnancy week was used to refer to the beginning of treatment in pregnancy. Preterm birth was referred to be birth prior to 37 full weeks of gestation. Infant feeding was divided into three categories which includes nursing, replacement feeding, and mixed. In order to define replacement feeding and nursing, it was assumed that they were used exclusively for the first six months. Mixed replacement/nursing was defined as formula feeding and breast milk switching off throughout the first six months of life or breastfeeding being replaced with formula before those six months had passed [5].

Prematurity, along with other diseases associated to immaturity such respiratory distress syndrome, pulmonary hypoplasia, and intraventricular haemorrhage, was the primary factor in neonatal mortality. This is comparable with the general population, where disorders related to immaturity account for the majority of new born mortality. In a recent NSHPC investigation, PTD in 6073 live-born singleton infants treated with either a boosted PI- or Non-Nucleoside Reverse Transcriptase Inhibitor (NNRTI)-based regimen was examined. There were complex relationships between various ART regimens and PTD, with odds of PTD being significantly higher in women conceiving on ritonavir-boosted lopinavir (LPV/r) compared to NNRTI-based regimens (regardless of maternal CD4+ cell count) and in women conceiving on other boosted PI-based regimens compared to NNRTI-based regimens with a CD4+ cell count below 350 cells/l [6-9].

Preventive measures

ART lowers the amount of the virus in a person's body. People living with HIV who are taking ART and who have no evidence of virus in the blood will not spread the virus to their sexual partners. Pregnant women with HIV should have access to take ART as soon as possible. This protects the health of the mother and will help to prevent HIV from passing to the fetus before birth, or to the baby through breast milk [10].

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CONCLUSION

HIV medications should be taken by pregnant HIV-positive individuals to lower the risk of perinatal HIV transmission. The earlier HIV medications are used, the better they work to stop neonatal HIV transmission. To avoid perinatal transmission, those with HIV who want to get pregnant should start HIV medications before becoming pregnant. To avoid perinatal transmission, HIV-positive pregnant and breastfeeding individuals should take HIV medications throughout their pregnancies, deliveries, and breastfeeding. HIV medications also safeguard the health of the expectant parents.

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