

Abstract

OBJECTIVE:

Our aim was to examine maternal, obstetric, and infant characteristics of mother-to-child transmission of human immunodeficiency virus-1 in Nairobi, Kenya.

STUDY DESIGN:

Proviral human immunodeficiency virus-1 was detected by polymerase chain reaction in peripheral blood samples taken between 6 weeks and 3 months of age from 107 children born to human immunodeficiency virus-1 seropositive women. The association of maternal, infant, and obstetric variables with human immunodeficiency virus-1 transmission was examined.

RESULTS:

The mother-to-child transmission rate was 31% (95% confidence interval 21.6 to 40.2) as defined by the presence of proviral human immunodeficiency virus-1 in the infant. Variables associated with transmission in a univariate analysis included placental inflammation (7/12 in the transmitting group as compared with 2/22 in nontransmitters, $p = 0.006$), low maternal CD4 and high CD8 percentages (21% and 52%, respectively, in transmitting mothers and 32% and 40% in nontransmitting mothers; $p = 0.001$), and the gender of the neonate (20/29 infected neonates were female as compared with 26/65 noninfected children, $p = 0.02$). Sexually transmitted diseases were found more often in transmitting mothers but the differences were not significant. Birth weight and gestational age were not related to vertical transmission of human immunodeficiency virus-1.

CONCLUSION:

Risk factors for mother-to-child transmission of human immunodeficiency virus-1 included chorioamnionitis, an impaired maternal immune status, and female gender.