

Abstract

Factors associated with mother to child transmission of Human Immunodeficiency Virus in Kenya

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Introduction: In Kenya, provision of Early Infant Diagnosis (EID) of HIV using PCR nationwide was commenced in 2006 free of charge.

Objectives: Our objective was to determine the impact antiretroviral therapy has had on infant HIV in Kenya, and to describe the factors associated with transmission of HIV from mothers to infants.

Methodology: This was a cross sectional descriptive study. Dried blood spot samples collected from infants from all over the country were sent to the testing laboratories in KEMRI and tested for HIV using the Abbot M2000SP of the Cobas Ampliprep-Cobas Taqman platforms. All data analysis was done using Stata SE Version 12 for Mac OSX Mountain Lion.

Results: A total of 32,671 infant samples were tested between January 2010 and March 2012. 29,571 (91.5%) infants were HIV negative and 2,666 (8.3%) were HIV positive. The odds of being seropositive were higher in females (OR 1.15, $p=0.0010$) overall, and were also higher than for males in most age categories. The odds of positivity associated with exclusive breastfeeding before 6 months were 0.48 ($p = 0.0000$), exclusive replacement feeding before 6 months 0.77 ($p = 0.0393$), mixed feeding before 6 months 1.88 ($p= 0.0000$), breastfeeding after 6 months 2.14 ($p= 0.0000$), and not breastfeeding after 6 months 1.66 ($p= 0.0000$). The odds of seropositivity were 2.54 ($p=0.0000$) in the absence of maternal prophylaxis and 2.96 ($p= 0.0000$) without infant prophylaxis. All other prophylactic approaches were associated with lower odds of seropositivity. Babies who received no prophylaxis and breastfed beyond six months, whose mothers received no prophylaxis, faced the highest seropositivity odds (OR 2.11, $p = 0.0086$).

Conclusion: The transmission rates of HIV from mother to child in Kenya are low. Regardless of age, female infants are more likely to test HIV positive than their male counterparts. The highest odds of seropositivity are in babies who receive no prophylaxis and breastfeed beyond six months, and whose mothers receive no prophylaxis.

Key words: HIV, Early Infant Diagnosis, HAART

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