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Short Communication

Continuation of Formula Feeding in Prevention of Mother to Child Transmission of HIV Programme in India Despite Option of Lifelong Maternal HAART- is it Still Worthwhile?

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Introduction

In HIV-exposed-infants, formula feed eliminates HIV-transmission but incurs risk of increased morbidity and mortality, whereas breastfeeding has multiple benefits but entails risk of HIV-transmission [1]. Maternal highly active antiretroviral-treatment (HAART) may reduce postnatal-transmission of HIV by reducing content of virus in breast milk [2,3]. The present study was conducted to examine HIV-positivity rates in HIV-exposed-infants who received either exclusive breastfeeding or formula feeding with or without maternal HAART during breastfeeding.

Methods

217 HIV-exposed-infants born from 1 Feb, 2011 to 31 January, 2012 were prospectively included. Lifelong maternal-HAART was initiated at earliest opportunity antenatal when CD4 cell-count <350 cells/µl. HIV-exposed-infants received single-dose-Nevirapine at birth. Infants were categorized on basis of feeding (exclusive breastfeeding, formula-feeding or mixed-feeding) at 6-weeks of age at time of taking specimen for HIV-1DNA-PCR test. The infant HIV-infection and association between postnatal HIV-transmissions, type of infant-feeding and maternal-HAART were calculated among infants.

Results

54(26%) HIV-exposed-infants were breastfed, 148 formula-fed while 15 received mixed-feeding. 8(15%) breastfed infants turned HIV-positive as against 10(7%) formula-fed infants. Amongst mixed- fed infants, 1/3rd turned HIV-positive. The risk of HIV was 5-fold in breastfed and 18-times in mixed-fed infants ($p<0.001$).On further analysis, it was observed that none of breastfed or even mixed fed HIV-exposed-infants turned HIV-positive if mother was on HAART during breast feeding.

Discussion

Until 2009, the World Health Organization advised HIV-positive mothers to avoid breastfeeding if they were able to afford, prepare and store formula milk safely. However, based on further research that exclusive breastfeeding under the cover of maternal antiretroviral treatment can significantly reduce the risk of transmitting HIV to babies through breastfeeding, the 2010 World Health Organization (WHO) guidelines recommended that HIV-positive mothers in resource-limited settings breastfeed infants for at least 1 year while on ART [1,2].

Meta-analysis determining the rates of HIV transmission at 6, 9, and 12 months in infants who breastfed for at least 6 months and whose mothers received ART through at least 6 months postpartum showed pooled 6-month transmission rates of 3.5% and the 12-month rate was 4.23% [3,4]. However, the risk increased after prophylactic ART was stopped. This supports current WHO recommendation initiating lifelong HAART to HIV-positive pregnant and breast-feeding women [5].

The results of the present study show that there is no reason to deny HIV-exposed-infants the benefits of breastfeeding if mother is on HAART. Interestingly, the maternal ART prevented HIV

transmission even in babies who received mixed feeding in the first 6- months, which is not uncommon in India.

Conclusion

In resource limited countries like India, the option of formula feeding to HIV positive women receiving lifelong HAART, even when AFASS criteria is fulfilled, should be withdrawn from the national PMTCT guidelines [6] in light of the findings of the present study. The evidence recommends that HIV-positive mothers should breastfeed.

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