BREAST-FEEDING AND PRIMARY MATERNAL HIV INFECTION : FURTHER EVIDENCE OF TRANSMISSION

(Palasanthiran P, Zeigler JB, Stewart GJ, *et al*. Breast feeding during maternal human immunodeficiency virus infection and risk from mother to infant. *J Inf Dis* 1993; 167 : 441-4).

Summary

Objective : To determine if human immuno deficiency virus (HIV) infection acquired post partum, carries high risk of transmission by breast-feeding alone.

Study Design : Retrospective collation of multi centric data from Australia (1984-1993).

Patients : Only women who breast-fed and who acquired HIV infection post partum (n=11).

Method : Attending physicians provided information on maternal age, mode of acquisition of HIV, year of diagnosis, reason for testing and duration of breast feeding. The diagnosis of HIV infection in mothers and infants was established by demonstration of persistent HIV antibody by ELISA or immunofluorescent antibody assay (IFA) and confirmed by Western Blot (WB), viral cultures of peripheral blood mononuclear cells via co - cultivation in two children and culture of a lymph node biopsy specimen in one. Electron microscopy of breast milk was done in one patient. All but one of the women's sex partner tested negative; one refused testing but he remains well.

Results : Ten women with no other risk factors were infected via blood transfusion post partum. Two of their infants were infected. One woman was HIV antibody negative 5 months post partum. She shared needles for intravenous drugs use and sero converted 6-10 months post partum. Her child was infected. Thus, 3 out of 11 babies at risk acquired infection, providing an estimate of 27% for breast feeding during pregnancy maternal infection (95% confidence interval 6-61%). Children who did not acquire infection remained well at 7-10 years of age and were HIV antibody negative 12 months after weaning.

Conclusion : There is high risk HIV transmission through breast milk.

Comments

The precise role of breast feeding in transmit-

ting HIV from infected mother to infant remains unclear. Attributing infection in an infant to breast feeding becomes more difficult if the mother acquires the virus before delivery. Post partum acquired HIV transmission to infant was reported in 1985 [1]. Van de Perre, *et al* [2] found a 40% HIV transmission rate to infants from mothers with primary heterosexually acquired postnatal infection.

In this study, mothers breast-fed their infants for 2-14 months (mean 6.3 months). Factors that would increase the likelihood of transmission have not been identified in this small cohort. Colostral milk, being richer in macrophages than mature milk, is more likely to be infectious.

Women acquiring HIV post partum form a special group. The study highlights the need to educate HIV positive women about perinatal transmission during breast feeding. It would seem prudent for at risk women to consider bottle feeding their infants. But in parts of the world including India child health may be critically reliant on breast milk. Decision then requires weighing the potential risk of transmission with the benefits gained from breast milk, as is the current recommendation [3]. What remains to be elucidated is the role of passively acquired antibodies in the mother's breast milk since all breast fed infants do not acquire infection! Whether other factors like virus load and cracked nipples in the mother will also influence transmission remains to be determined.

REFERENCES

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3. Arora RP. HIV infection and Obstetric practice. *Medical Journal Armed Forces India* 1994; 50 : 2-3.

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