



Infant feeding practices among HIV positive mothers and its determinants in a tertiary health care centre in India

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ABSTRACT

The observation that mother-to-child transmission of HIV can occur through breastfeeding has resulted in policies that recommend avoidance of breastfeeding by HIV infected women under specific circumstances in developing countries. We aim to estimate the present rate of HIV infected mothers who practice exclusive breast feeding in a tertiary level hospital in India. This cross sectional study examined practices of 82 counseled HIV mothers by using structured and open ended questionnaire. Data analysis was conducted using SPSS 18.0. Our results showed that 58.6% (n=48) of mothers practiced exclusive breast feeding. 24.6% (n=12) of women were concerned about the social repercussions if they did not breast-feed, whereas 16.3% (n=8) stated they could not ensure hygienic food preparation. Breast feeding is the most community accepted feeding practice in India. Due to the lack of hygienic conditions, poor economic status and the risk of social repercussions breast-feeding should be promoted for HIV women.

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Introduction

Exclusive breastfeeding (EBF) from 0 to 6 months of age is recommended by the World Health Organization as the optimal feeding method for infants. This includes infants of human immunodeficiency virus (HIV)-infected women from developing countries. Compared to exclusive breastfeeding (EBF), predominant (PredBF), partial (ParBF) or not breastfeeding (NBF) are associated with a higher mortality risk of infants in general^[1]. Advocates of child care consider breastfeeding to be one of the principal gains to current maternal and child health, regained through long-standing campaigns to protect mother and infant wellbeing. The reason why breastfeeding is believed to be pre-eminent in human nutrition derives from its well-recognized nutritional, immunological, social, psychological, and nurturing benefits, which are especially important in the first 3 months^[2]. Despite such benefits vertical transmission of the HIV virus from mother to child can occur during pregnancy, during delivery or postnatally through breast-milk^[1]. Rates of mother-to-child-transmission (MTCT) range from 5-25% in developed and 13-42% in developing countries. Without specific interventions, the rate of vertical transmission can be around 15-20%^[1].

The vicious cycle of malnutrition, infection and mortality necessitates close attention to nutrition to meet the fourth millennium development goal (MDG4). Pattern of feeding is a significant predictor of child morbidity and mortality^[3-6]. Mixed breastfeeding carries the highest risk of transmission and EBF the lowest^[7-9]. On a population level however, universal coverage with EBF for six months, and continued breastfeeding up to one year may prevent 13% of under-five deaths globally, even in the context of HIV^[10].

The balance between life saving benefits and the risk of transmission through breastfeeding complicates infant feedings in communities affected by HIV^[11-15]. Cognizant of the

problem, WHO, UNICEF, UNAIDS and UNFPA in 2003 developed a guideline in the context of infant feeding by women who are HIV positive. The recommended option for HIV positive women is to avoid BF when replacement feeding (RF) is Acceptable, Feasible, Affordable, Sustainable and Safe (AFASS). Nonetheless, when AFASS criteria cannot be met, mothers are advised to exclusively BF and avoid mixed feedings. Other feeding options recommended are to use heat treated expressed breast milk or wet nursing of the newborn by HIV negative when the AFASS criteria is not possible^[11-17].

Breastfeeding by HIV-1-infected women in more-developed countries has virtually ceased^[18] and in less-developed countries many thousands of seropositive women and women who believe they may be HIV infected are thought to avoid breastfeeding. The cultural diffusion theory raises the possibility that a loss of confidence in breastfeeding will spread to all women^[19].

According to UNICEF estimates on HIV/acquired immunodeficiency virus(AIDS), India has 22,000 to 61,000 HIV pregnant women living with HIV in India. Transmission of HIV infection from mother to child is responsible for nearly all pediatric HIV cases in India^[20].

It is now necessary to focus attention on methods of reducing HIV transmission through breast-feeding. To date, there are only a few studies been conducted in India that examine infant feeding choices of HIV mothers.

Methodology

This cross sectional study examined practices of counseled HIV mothers attending a large tertiary medical centre in Raichur, India. This hospital was purposely sampled as it was accessible to the researcher. Institution ethical clearance was obtained before commencing the study. The study population comprised of all HIV-positive nursing mothers who had undergone Voluntary Confidential Counseling and Testing during pregnancy. The nature of the study was explained to all

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women and written informed consent was obtained. The respondents were interviewed with a structured and open-ended questionnaire with questions related to their feeding decision, household environment, infant feeding plan, socio demographic information, reasons for change in infant feeding plan and test report disclosure to husband. Bivariate comparisons relevant to the study questions were presented using nonparametric statistics. Data analysis was conducted using SPSS, version 18. All open-ended responses were coded by thematic category. Significant response patterns were identified by counting the number of instances a view was expressed, observing thematic patterns in responses to related questions and making connections among these data, the quantitative data collected and previous research^[21].

Results

In our study it was revealed that 58.6% (n=48) of the study population practiced exclusive breast feeding (Table 1). Majority of the mothers chose to breast-feed because they could not afford top milk (n= 25, 52.5%) or because it was suggested by the counselor (n = 21, 43.2%). A substantial percentage of women (n =12, 24.6%) were concerned about the social repercussions if they did not breast-feed, whereas 8(16.3%) stated they could not ensure hygienic food preparation. In the group of women who chose top feeding (n 34, 41.4% of total), the vast majority did so to prevent HIV transmission to their newborn (n = 26, 78%). All of the breast-feeding women knew of the risks of HIV transmission, but they chose not to top feed because they could not afford top milk (n=25, 52.5%) or to prevent family suspicion that they were ill (n= 23, 47.5%). The majority of top feeding mothers knew about proper precautions to ensure hygienic conditions. But none of the mothers were aware of any health-related problems that could occur with top feeding. Most women disclosed their HIV status to their husbands (n=55, 67%). Top feeding mothers (n=29, 84.6%) were significantly more likely to disclose their HIV status to their husbands than breast-feeding mothers (n = 25 (53.7%) ($P < 0.05$)). Out of those 27 (33%) women who did not tell their spouse, 14 (54.7%) did so out of fear. The rest (n=12, 45.3%) avoided disclosing because they did not want to cause any distress to husband. If the women revealed their HIV status to husband, they were very likely to seek their advice on feeding methods.

Discussion

Formula or replacement feeding (RF) for infants of HIV positive mothers is the recommended choice because risks of HIV transmission far outweigh morbidity and mortality resulting from replacement foods in developed countries. However, in the developing world the debate continues regarding the benefits and risks of replacement versus breast-feeding. Infant feeding recommendations for HIV mothers must take into account the local environment and conditions to provide the most accurate information on risks and benefits of breast-feeding and replacement feeding. In the absence of these data, physicians and other hospital staff are faced with deciphering information from other countries and settings, which are entirely different from their population. In the present study, more than half of the mothers (58.6%) practiced breast feeding. Some studies have shown an increased risk of transmission with breast-feeding compared with formula feeding^[22], whereas others have shown no additional risk of breast-feeding^[23]. In Kenya, Mbori-Ngacha et al.^[24] showed equal infant morbidity and mortality in breast-fed and formula-fed infants. It is now widely acknowledged that

any feed other than breast milk may damage the bowel of the infant and facilitate transmission of HIV^[25,26]. The HIV status disclosure in our study group is relatively high (53.7%). These women appear to have greater familial support for their condition than that found in other areas of the world^[27,28]. In our study group the number of HIV mothers choosing to feed breast-milk substitutes appeared higher than reported in other regions of South India (50 vs. 22%) [29]. This may be due to the intense efforts of the counselors.

Only very few studies have documented the prevalence of top milk consumption and some of its negative effects on infant health [30,31].

Recommendation

Top feeds should not be promoted without proper safety data. Due to the lack of hygienic conditions, and the risk of social repercussions breast-feeding should be promoted for HIV women in developing countries like India. More studies should be conducted to identify methods to reduce mother to infant transmission. In this way we can ensure further reductions in HIV transmission without placing the infant at greater risk of morbidity and mortality.

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Table 1. Infant feeding intentions of HIV pregnant women by their demographic and social characteristics

Sl No	Characteristic of respondent	Exclusive Breast Feeding n=48 (58.6%)		Top feeding n=34 (41.4%)		Total no of women (n=82)		P value
		n	%	n	%	n	%	
1	<u>Education status</u>							NS
	a. Primary education or less	31	63.6	23	68.4	54	65.9	
	b. Secondary education or more	17	36.4	11	31.6	28	34.1	
2	<u>Parity</u>							NS
	a. Primiparous	17	36.2	18	52.1	35	42.7	
	b. Multiparous	31	63.8	16	47.3	47	57.3	
3	<u>Family type</u>							NS
	a. Nuclear family	20	40.9	16	46	36	43.9	
	b. Joint family	28	59.1	18	54	46	56.1	
4	<u>Test report disclosure to husband</u>							<0.05
	a. Yes	26	53.7	29	84.6	55	67	
	b. no	22	46.3	5	15.4	27	33	

NS – Not Significant

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