Editorial

Breast Milk, Breast-feeding and HIV Infection – The Pitiable Story of Developing Nations

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Establishment of lactation and breast-feeding is a major physiological event of the puerperium, and there is conclusive evidence of short- and long-term benefits in favor of breast-feeding compared to artificial feeds[1]. It is now part and parcel of antenatal care (ANC) to educate women on the advantages of breast-feeding. The advantages of breastfeeding include providing the baby with balanced nutritional requirements, protection against infection, aids proper neurological development and protection against the development of atopic illnesses. Other benefits are conferment of protection against the development of breast cancer by women who breast-fed their children, contraceptive benefits (lactational amenorrhea method), encourage excellent mother-baby bonding and it is cheap amongst others[1,2].

From the foregoing, it can be clearly appreciated why the "baby friendly initiative" which has the ten cardinal steps to successful breastfeeding was given birth to by a global consensus in 1990 at Florence in Italy following the famous *innocenti declaration*[3]. It is pertinent to note that breastfeeding was the rule in developing and less industrialized nations of the world prior to the advent and popularization of artificial feeds by the developed and industrialized nations. Believing that the Western and more powerful nations of the world are always correct in their assertion, poor nations of the world abandoned their golden culture of breastfeeding for the more expensive and challenging practice of the use of the artificial feeds for their newborn and infants. Part of the challenges the developing nations had to contend with beyond the excruciating effect of cost, were high level of poor hygiene, lack of technical know how to properly sterilize the utensils and feeding apparels as well as lack of clean and safe water. This predisposed to infection in the newborn and infants, with a significant proportion succumbing to diarrheal ailments[2,4].

In the late 80s emerging reports and accumulating evidence showed undoubtedly that breastfeeding was superior to artificial feeds and that indeed, there were numerous benefits of breastfeeding to both mother and baby[5,6]. It was clearly proven that the newborn could exclusively depend solely on breast milk for the first four months of life. The Western world and developed nations then drummed up campaign and spearheaded global advocacy activities in favor of breastfeeding with particular focus on developing nations and poor resource setting. They off course started to teach the poor nations their golden culture that was hastily abandoned for the once thought flamboyant artificial feeds of all sorts produced by the developed nations.

As this turn of events was gaining popularity, the world was hit by the strange illness that has now been fully classified as human immunodeficiency virus infection. Available evidence indicates that breastfeeding is one of the foremost modes of vertical transmission of this disease[7]. Again under the direction of the developed and powerful industrialized nations, the World Health Organization recommended across board that developing nations should continue to breastfeed their newborn and infants in face of HIV positive status[4,5,8,9]. Their argument was that because of ravaging poverty and high level of infection associated with artificial feeding in the developing nations, that the newborn and infants were likely to succumb to diarrheal diseases and infection within the first two years of life, and therefore should be breastfed despite the extremely high risk of becoming infected with HIV infection. Indeed most of the childhood infections with HIV/AIDS that followed the advent of the disease were as a result of this unfair recommendation. Justifiably, in our considered opinion, this was unfair because in developing nations there are rich and affluent communities that should have been noted and in developed nations there are also extremely poor resource settings similar to the situations in developing nations. One would therefore have expected that this generalized recommendation at the outset should have been restrictive and applicable to resource poor settings in both developed and developing nations.

However, scholars and researchers[10,11] from developing nations were quick to document the negative public health implications of this recommendation on their populace and they had to spearhead the advocacy for the modification of this sweeping recommendation on breastfeeding in face of HIV infection. The global response was however in the affirmative to that of the advocates from developing countries and modifications were made to the earlier policy on breastfeeding. The recommendations took cognizance of the factors that are likely to predispose or increase the predisposition to vertical transmission of HIV infection. The recommendations included – no breastfeeding with the sole use of artificial feeds, and where this is not possible then the following were advised – short term exclusive breast-feeding with early weaning and or prolonged breastfeeding with low dose antiretroviral therapy for mother and baby, pasteurization of the breast milk and the use of a wet nurse[12]. Clearly evidence from African studies supports these recommendations – a recent randomized clinical trial of breast-feeding-mixed feeding versus formula feeding in Kenya found that formula feeding prevented 44% of infant infections and was associated with a significantly improved survival. Prolonged breast-feeding increases the risk of a woman giving HIV to her baby by about 14 percent[13]. In the same Kenyan study - At 24 months, 20 percent of formula-fed babies became infected with HIV, compared to 36 percent of breast fed babies[13]. In a South Africa - HIV transmission was 12 percent higher in breast-fed babies than in formula-fed ones at 15 months. Additionally, 36 percent of babies who received mixed feeding were reported infected compared to about 25 percent of those who were exclusively breast-fed and 19.5 percent of formula-fed babies[15].

A major challenge that has to be contended with in no breastfeeding situation is that women who bottle-feed may fear questions about why they don't use their breast milk. Birthing classes and other programs directed at pregnant women and new mothers actively promote breast-feeding. Many HIV-positive women have had to lie or disclose their status to get counselors, teachers, social workers, neighbors, friends and relatives to stop pressuring them to breast-feed. Often these activities take place in a group, which can cause a woman to become concerned about her confidentiality being violated, or about feeling social isolation when everyone else is having a different experience. An HIV-positive woman who breast-feeds and discloses that choice could possibly face a legal threat of having her children removed by authorities. From the foregoing, it is obvious that the decision not to breastfeed is not an easy one and the challenge of likely stigmatization is probably worse in developing countries where interference in marital life from the society is commonplace. Interestingly, the pendulum of evidence is swinging in the direction of the fact that most people irrespective of geographical location who know of an HIV-positive woman's status believe she has made the safest choice for her child when she formula feeds, they may overlook giving her an opportunity to express her anger or sadness about not being able to breast feed her child.

There has been great debate about what women who have HIV, or those who live in high-risk areas, should be told about HIV and breast-feeding. Some argue that HIV-positive women should be given all the information and be encouraged to make the best decision they can based on the realities of their own situations. Others worry that people are getting mixed messages and that the confusion is dangerous. People on all sides of the debate want to do what's best - but there are still disagreements on what that is. However, for developing nations and low resource settings, we advocate that the message should be along the standard and contemporary WHO (2010) recommendation of managing breastfeeding issues of the newborn and infants of HIV positive women as enunciated above.

Ultimately, the only way to end mother-to-child transmission of HIV is to prevent women becoming infected in the first place through education, empowerment and promotion of condoms. All women need access to HIV testing and counseling, but this is especially true for pregnant women and new mothers. Those who test positive face a very difficult decision about how to feed their babies. What they need is accurate information, clear guidance and ongoing support to succeed with their chosen strategies.

In conclusion, breastfeeding continue to remain a major physiological event of the puerperium and there is conclusive evidence of short- and long-term benefits in favor of breast-feeding compared to artificial feeds for the newborn and infants. Existing evidence indicates that breastfeeding is one of the foremost modes of vertical transmission of this HIV disease and that if breastfeeding and feeding options of the newborn is appropriately handled; the chance of vertical transmission is substantially reduced. We therefore advocate that the earlier recommendation that developing countries be encouraged to continue to breast feed in face of a positive HIV status is best confined to the pitiable niche of the archives of history and what the message should be is that HIV-positive women should be given all the information and be encouraged to make the best decision they can based on the realities of their own situations. Therefore, the WHO standard recommendations on breastfeeding should always be the gospel in both developed and developing nations.

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