HIV Transmission and Breast-feeding

Published paper

The high prevalence of HIV infection in many developing countries has given rise to increasing concern about the risk of transmitting the virus through breastfeeding. In a recent review breast feeding is recognised as an important cause of mother to child transmission (MTCT) and accounts for 7-14% of the overall transmission rate. However, so far there have been no changes to policies which advocate that 'breast is best' in the health profession, even where HIV infection rates are known to be high. Continued adherence to the status quo is undoubtedly due to the many perceived physiological and psycho-social advantages of breast-feeding compared to feeding with infant formula milks, as well as awareness of the risks of diarrhoea and associated mortality (which are even more pronounced in emergency situations), where formula feeds are used. Yet there is unease amongst some health professionals and policy makers about this subject, as in areas where HIV infection is highly prevalent, there is a significant risk that breastmilk will be the medium through which the deadly virus is passed. This unease is somewhat reduced by the acknowledged dangers of artificial feeding in unhygienic conditions. The fact is, there is a lack of empirical data which allow comparison of mortality risk between use of formula feeds in unhygienic circumstances with reduction in HIV transmission and associated mortality if breast feeding is stopped. A recent article reviews the current state of knowledge on HIV transmission during pregnancy, delivery and breast-feeding and also looks to future research initiatives with relevance to developing countries which may help establish clearer policies and guidelines for the future.

The article explains how HIV may be transmitted during early pregnancy, at the time of delivery and through breast feeding but that the highest transmission rate appears to be around the time of delivery. Interventions with AZT have shown a reduction from 25% to 8% in the rate of MTCT. The drug was given to women orally during pregnancy, intravenously during labour and then to infants for 6 weeks post partum (the babies were not being breast-fed). The review authors acknowledge that this kind of intervention may not be of relevance to practice in African countries where the drug is expensive and/or unavailable. Also in these countries not all women receive antenatal care or have the opportunity to be HIV tested, and few women deliver in a setting where an intravenous infusion is available. However, the findings of this study, have ignited a major research drive to develop possible interventions against MTCT that are directly relevant to Africa.

Several trials using different antiviral antigens and different dosage schedules are ongoing or planned. It is possible that if most transmission does occur around birth, that any intervention may only be necessary around that time too. Similarly, HIV immunoglobulin is being tested. Many of these trials are underway in different developing countries. It has also been observed that women with low levels of vitamin A have higher rates of MTCT and because vitamin A is known to have important immunoregulatory effects, intervention trials to test the effect of giving the vitamin to pregnant women are underway. The attraction is that vitamin A is cheap, safe, readily available and easy to administer. In a letter in the previous Field Exchange vitamin A provision was highlighted as a potential strategy for reducing transmission through breast feeding.

Trials are also underway comparing breast feeding with formula feeding. These aim to determine quantitatively how important, breast feeding is in MTCT and also to study the balance of risk (death associated with formula feeding in unsafe, unhygienic conditions) and benefit (reduction of HIV transmission) of substituting formula feeding for breast feeding. The author suggests that although it is difficult to consider proposing that women should not breast feed in developing countries it has to be recognised that it is a significant contributor to transmission of a fatal disease and that alternatives do need to be considered - at least for some groups and individuals in certain settings.

Mother to child transmission of HIV infection: the reality and the promise, Tropical Doctor, 1997, 27, 220-222