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HIV/AIDS Quality of Care Initiative
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PREVENTING PARENT TO CHILD TRANSMISSION OF HIV

BACKGROUND INFORMATION

Up to 80% of HIV infected women are of child bearing age. Mother to child transmission (MTCT) is responsible for 5 – 10% of new HIV infections each year in developing countries. MTCT remains the main mode of HIV infection in children.

The introduction of antiretrovirals (ARVs) has dramatically reduced transmission among non-breastfeeding mothers in developing countries.

Emphasis on the provision of high quality antenatal and voluntary counseling and testing (VCT) services must be seen as prerequisites for the introduction of any MTCT ARV initiative.

TRANSMISSION OF HIV FROM MOTHER TO CHILD

Rates of transmission have been estimated to vary from 14 - 42% depending on the region studied and factors like breast-feeding practices. The Sub-Saharan Africa region tending to have higher rates of transmission.

Transmission can occur during pregnancy (intrauterine), during labour and delivery (intrapartum) or after delivery through breast-feeding (post partum)

In the absence of breastfeeding, intrauterine transmission accounts for 25 – 40% of infection and 60 – 75% occurs during delivery and labour.

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Among women who breast-feed, 20 – 25% of perinatal infections are believed to be intrauterine, 60 – 70% intrapartum or very early breast-feeding and 10 – 15% later post partum transmission through breast feeding.

In a randomized control trial with formula feeding versus breastfeeding, approximately 44% of HIV infection was attributed to breastfeeding.

FACTORS AFFECTING HIV TRANSMISSION

1. Viral Factors

Transmission is increased by high maternal viraemia with high viral load as in advanced disease and at seroconversion. More than 50% of women with viral loads more that 5000 RNA at delivery have transmitted to their babies but there are no lower limits below which transmission does not occur.

The viral load in cervical/ vaginal secretions may be a more accurate predictor of transmission but needs further studies.

2. Maternal Risk Factors

- Advanced clinical disease
- Advanced immunosupression
- Recent infection
- Placental barrier integrity e.g. chorioamnionitis
- Behavioral factors like maternal smoking, high rates of unprotected sex and illicit drug use
- Maternal sexually transmitted infection

3. Obstetric Factors

- Duration of rupture of membrane especially if more than 4 hours.
- Mode of delivery – Vaginal delivery has higher transmission than caesarian delivery.
- The use of instruments during delivery or produres like scalp electrodes may increase transmission.

There is an annual 4-5% seroconverison rate in HIV negative women and these should be taught safe sex methods to reduce transmission during lactation.

Other Options

Elective caesarian section delivery has been demonstrated to reduce transmission but is known to have a higher rate of complication in the mother. Emergency caesarian section after onset of labour does not have a significant reduction in transmission.

The role of chlohexidine vaginal cleansing during labour and delivery has not been useful and is not recommended. Use of vitamin A in pregnancy has been controversial, results of the local Zvitambo trial are awaited with interest.

Post natal care of the mother due to the higher rate of peuperial problems in HIV positive women, the mother should be followed up and screened for infection and ongoing problems like cervical dysplasia. Detection of opportunistic infections and treatment with ARVs should be offered if affordable and available.

Follow up of Infant

Infants should be followed up and offered prophylaxis with cotrimoxazole to reduce PCP from 6 weeks of age till more than a year old. Definitive antibody tests are reliable in asymptomatic infants older than 18 months.

In some rural areas there have been major problems in follow up of infants born to mothers on the MTCT prevention programmes with high levels of less to follow up.

Conclusion

Prevention of MTCT is a team effort. Effort that starts before pregnancy and also should involve the community to be fully effective.