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HIV INFECTION IN PREGNANCY

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Sentinel surveys of the antenatal population of South Africa show varying rates of infection in the 9 provinces, (range 12.4 - 36.5%).¹ In general, it appears that there is a levelling-off of the epidemic. The two most important issues to address in pregnant women infected with the virus are reduction of mother-to-child transmission, and the preservation of maternal health. Considerable advances have been made in both these areas in the past few years, with the use of antiretroviral (ARV) agents forming the cornerstone of management. There is clear evidence that maintaining maternal health not only benefits the mother, but also reduces the chance of vertical transmission and improves long-term child survival.²

Mother-to-child transmission

Without intervention, about a third of babies born to infected mothers in developing countries will also be infected with the HI virus.³ The majority of infections are thought to occur during the intrapartum period, while postpartum infections can be completely abolished by avoidance of breast-feeding. The main determinant of mother-to-child transmission is the viral load, which is a reflection of maternal health. The risk of vertical transmission can further be reduced by a combination of medications and modified obstetric practices, which include avoidance of invasive procedures,

screening and prompt treatment of sexually transmitted infections during the antenatal period. Where possible, delivery should be by a planned caesarean section, performed before rupture of membranes, bearing in mind that HIV-infected women are at increased risk of postpartum infective morbidity. Caesarean section has been shown to reduce the risk of vertical transmission,³ even in the presence of ARV use. In most instances, HIV-infected mothers will undergo normal delivery, and attempts should be made to make it as safe as possible. This involves delaying the duration of artificial rupture of membranes, vaginal cleansing as well as avoidance of routine episiotomies and instrumental deliveries. The risk associated with breast-feeding is quite substantial, and depends on the duration of nursing, as well as the general condition of the mother, and that of the nipples. Mothers must be counselled about this, and the alternatives, including the risks for increased infant mortality from diarrhoeal diseases and childhood infections in those babies who are not breast-fed.

The use of medication for the reduction of mother-to-child transmission is one of the first success stories of the use of ARV therapy. Where possible, zidovudine (AZT) as monotherapy should be used for this purpose, following the PACTG 076 protocol, which was shown to reduce the chances of transmission by 67%.⁴ Because of its complexity and demand on advanced infrastructure, it is not possible to implement this protocol in poor countries, where the magnitude of the problem of HIV infection in pregnancy is often more than 10-fold that of the Western world. Other modified regimens have been implemented in some parts of the world, including Africa, with slightly reduced efficacy,

which is compromised by breast-feeding. In South Africa, nevirapine, a non-nucleoside reverse transcriptase inhibitor, has been chosen for its ease of administration, rapid onset of action, and long half-life. A single dose of 200 mg is taken by mothers in labour, and the infant is given a single dose of 2 mg/kg body weight within 24 - 72 hours of birth. It has been shown to reduce the risk related to intrapartum transmission by 47%.⁵ This, together with alternative infant feeding by means of formula, can go a long way in reducing the cases of paediatric HIV.

Maternal health

Despite the majority of HIV-infected mothers being 'apparently well' during pregnancy, AIDS has emerged as the leading cause of maternal deaths in South Africa over the past 5 - 6 years.⁶ Every HIV-infected mother should be assessed clinically, and offered evaluation of her immune reserves by means of a CD4 count at least once during the pregnancy. This will guide management in terms of screening for and preventing opportunistic infections and, where possible, offering access to highly active antiretroviral therapy (HAART). Micronutrient supplementation by means of iron, folic acid and multivitamins should be offered, in order to improve the general health of the mother, as well as improving perinatal outcome. Most mothers experience deterioration in health around the peripartum period, mainly due to infectious complications, and measures to prevent this should be taken, such as use of prophylactic antibiotics.

In conclusion, pregnancy in HIV-infected women should be planned for the time when the mother's health is optimal, bearing in mind that with all the best available interventions, vertical

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transmission cannot be completely prevented. Therefore, routine care of women in the reproductive age group should include contraception to prevent unplanned pregnancies, as well as voluntary counselling and testing before planning a pregnancy.

References available on request.