Perinatal HIV infection in the UK and Ireland: Does maternal seroconversion during breastfeeding play a role?

Pat A Tookey and Janet Masters
National Study of HIV in Pregnancy and Childhood
MRC Centre for Epidemiology for Child Health, UCL Institute of Child Health, London

Background
- There is high uptake of antenatal HIV testing in the UK and Ireland (>90% overall since 2004). About 8400 diagnosed women gave birth 2000-2008, and 99% of their infants are not infected.¹ There are currently about 1400 births a year to diagnosed women.
- The mothers of most HIV-infected children diagnosed in recent years were not aware of their HIV status during pregnancy.
- From an audit of perinatal infections (English births 2002-2005),² it emerged that at least 11 (20%) of 54 undiagnosed mothers were HIV-negative at antenatal testing, while at least 19/54 women (35%) had declined antenatal testing.
- This has led to considerable debate about the potential benefits of a second routine HIV test in later pregnancy, to identify women who seroconvert in pregnancy, so they can be offered interventions to prevent MTCT and advised not to breastfeed.
- Women who seroconvert postnatally, while breastfeeding, are also at high risk of transmitting infection, and this is likely to account for a proportion of paediatric infections.

Aim
- To describe mode of infant feeding and age at HIV diagnosis among HIV-infected children born 2000-2008 to undiagnosed women in the UK and Ireland.

Methods
- Comprehensive surveillance of obstetric and paediatric HIV in the UK and Ireland has been carried out through the National Study of HIV in Pregnancy and Childhood (NSHPC) for ~20 years.³
- Information is collected on (a) pregnancies in women diagnosed with HIV before pregnancy, or antenatally, (b) their infants, and (c) all HIV-infected infants/children, regardless of maternal diagnosis.
- Timing and circumstances of maternal and infant/child diagnosis, as well as demographic and breastfeeding details are available.
- HIV-infected children born in the UK and Ireland 2000-2008, to mothers who were not diagnosed until at least 4 weeks after their baby’s birth, were included in this review of data.

HIV infected children born to undiagnosed women

- By March 2009, 201 children born in the UK or Ireland 2000-2008, whose mothers had not been diagnosed with HIV before delivery, or in association with antenatal care, were diagnosed and reported to the NSHPC.
- 70% were of black African origin, 9% white, 21% mixed/other.
- 20 of these children (10%) are known to have died.

Breastfeeding
- Data were available for 157 (78%) of the 201 children. 26 (17%) were reported not to have been breastfed.
- Among 131 (83%) known to have been breastfed, duration was available for 98: median duration was 14 weeks (IQR 8-28), 32/98 (33%) were breastfed for 6 months or more prior to diagnosis.

Timing of child’s HIV diagnosis

- Age at diagnosis is shown in the table. 54% were diagnosed in the first year of life, including 17% before 3 months. Another 31% were diagnosed before their 3rd birthday, and 15% later. These proportions will change as the cohort ages and older children are diagnosed.

Antenatal testing and timing of maternal infection

- Information about timing of maternal infection or antenatal testing is not routinely requested for children born to undiagnosed women, but is sometimes provided. 20 women (10%) were reported to have had a negative antenatal test, but timing of seroconversion was unclear. Their children were diagnosed at 2-53 months (median 8 months).

References