

Poster presentation

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A Ukraine birth cohort of children with vertically acquired HIV infection

Saboura Mahdavi^{*1}, Claire Thorne¹, Ruslan Malyuta², Igor Semenenko² and Tatyana Pilipenko²

Address: ¹UCL Institute of Child Health, London, UK and ²PPAI, Odessa, Ukraine

* Corresponding author

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Background

HIV prevalence in Ukraine is estimated at 1.6%, with women comprising around half of the HIV-infected population, the vast majority of childbearing age. MTCT rates declined to 7–10% in 2007 following implementation of a national prevention of MTCT (PMTCT) programme in 2000, which to date has been based on single dose NVP (sdNVP) and/or short-course zidovudine. Little information is available on the natural and treated history of HIV infection in children living in Eastern Europe.

Methods

Within the European Collaborative Study, HIV-infected pregnant women and their infants were enrolled in 6 cities since 2000. Data on HIV-infected children followed from birth to December 2008 were analyzed from this ongoing study.

Results

There were a total of 162 infected children (47% female, 52% male), with average age at last follow-up of 19.1 months (IQR 9.1–44.0). A quarter had low birth weight, 19% ($n = 31$) were preterm and 25% delivered by Caesarean Section; 37% ($n = 60$) of mothers had an injecting drug use history. Most ($n = 160$) infants were bottlefed; four were breastfed briefly. Most (147, 91%) children were infected despite PMTCT prophylaxis (mostly single dose NVP, 62%). Ninety-two children had ≥ 1 CD4 counts; based on nadir CD4 count to date, half ($n = 49$) were classified in CDC immunological stage I, with 34%

($n = 31$) and 13% ($n = 12$) in CDC stage II and III, respectively. Forty-one percent ($n = 66$) of children had started highly active antiretroviral treatment (HAART) by most recent follow-up, at a median CD4 count of 1340 cells/mm³; of those with viral load measurements, 15.5% ($n = 13/84$) on treatment had achieved an undetectable viral load to date. Seventy-seven (48%) received PCP prophylaxis (mainly cotrimoxazole) and 8 children received TB prophylaxis. Overall, 3% of children were ever anaemic, with median haemoglobin of 11.5 gm/dl (range, 3.9–23.2 gm/dl). Twenty-two (14%) children had died by last follow-up, with a median age at death of 14.5 months (range, 1–47 months); nearly half (10, 45%) had developed AIDS before their death. Of the children who died, only one had been started on HAART (and had received cotrimoxazole). The most common causes of death were pneumonia ($n = 5$) and sepsis ($n = 5$). Overall, 7% ($n = 11$) children developed AIDS during follow-up. From survival analysis, estimated AIDS-free survival rates were 94%, 90% and 87% for children at age six, twelve and eighteen months, respectively. Survival analysis indicated a significantly improved survival rate among children born in 2004–2008 compared with those born earlier ($P = 0.0002$). The mothers of nine infected children were known to have died.

Conclusion

Less than half of our cohort of infected children had received HAART and/or PCP prophylaxis. However, the

improvements in AIDS-free survival in more recent years reflect the scale-up of paediatric treatment in Ukraine.

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