
Landmark Study Shows that Early HIV Testing and Antiretroviral Treatment dramatically reduces deaths in babies with HIV

Embargo: 24:00 South African time, Wednesday 19 November 2008

Johannesburg 20 November 2008

Testing infants at risk of HIV as soon as possible, and treating those infected with the virus immediately, dramatically enhances their chances of survival and reduces the likelihood of devastating disease progression in their early life.

A landmark South African study, led by Dr Avy Violari and Prof. Mark Cotton and conducted in Soweto and Cape Town, has shown that administering antiretroviral therapy (ART) to infants immediately after diagnosis, rather than waiting for their CD4 counts to drop or other symptoms to prompt treatment, reduced their chance of dying by 76%. It also reduced the chance of their disease progressing measurably by 75%. The findings were so conclusive that after review of the preliminary data, all the babies in the trial were re-assessed for ART.

At the onset of the trial, 377 HIV-positive infants were enrolled aged between six and 12 weeks. These were a special group of children as most of them had contracted HIV despite measures taken to avoid mother-to-child transmission and they were also found to be well when the diagnosis of HIV was established. They were randomly allocated to one of three arms in the study, called the Children with HIV Early Antiretroviral Therapy (CHER) Trial.

One arm received treatment in line with then current WHO guidelines. This means the babies were only treated with ART when their CD4 count fell (below 25% for infants, below 20% for toddlers – over 12 months old) or other clinical symptoms emerged. Of this group, 66% had received ART by the time of their 40 week follow-up. The other two arms received early ART: half of the children until the age of one and the other half until the age of two. The trial is still ongoing and final results as to which of these two groups does better long-term will further inform the treatment of infants with HIV.

The results from the study, conducted as part of the CIPRA-SA collaborative research programme, are published in this week's issue of the *New England Journal of Medicine*. The trial is sponsored by the National Institute of Allergy and Infectious Diseases (NIAID), part of the United States National Institutes of Health; and also supported by the Departments of Health of Gauteng and the Western Cape, South Africa; and GlaxoSmithKline plc (UK).

The study is being conducted at the Perinatal HIV Research Unit of the University of Witwatersrand in Soweto, and at the Children's Infectious Diseases Clinical Research Unit of Tygerberg Children's Hospital and Stellenbosch University, in collaboration with the Medical Research Council Clinical Trials Unit, London, UK

Dr Avy Violari, from the Perinatal HIV Research Unit at the University of Witwatersrand, Johannesburg, adds: "HIV attacks the developing immune system of infected infants extremely quickly. We did not expect to see differences so soon between the infants receiving early treatment and those in the group where treatment started only when immunity was

falling or symptoms developed. Our results reinforce the view that there are no reliable predictors for small infants as to how their disease is progressing. CD4 counts do not tell us with enough accuracy if babies under a year of age are becoming sick."

Preliminary results of CHER, released in July 2007, helped influence the World Health Organization (WHO) to change its guidelines for treating HIV-infected infants. The new guidelines, issued in April 2008, strongly recommend starting ART in children under age 1 year immediately after HIV diagnosis, regardless of their state of health. Guidelines governing the treatment of infants with HIV have been altered to reflect the recommendations of the CHER trial both in Europe and in the United States.

Professor Cotton, from the Children's Infectious Diseases Clinical Research Unit said "We are delighted that our study in South Africa has led to changes in WHO guidelines and that immediate treatment is now recommended wherever possible. It is to be hoped that this will save countless babies across the world, especially in low-income countries where mother-to-child transmission is still common. However, in order to start ART early, it is important to undertake HIV viral diagnosis very early in life which does require a programme with both manpower and resources"

"The results reinforce the need for effective programmes to prevent mother-to-child transmission of HIV, and to scale up widespread access to early diagnosis of infected infants, and provision of immediate treatment for those infected", said Prof James McIntyre, leader of the CIPRA-SA collaboration. "This study demonstrates how successful collaborative research can be in South Africa, with local researchers answering an important question in partnership with international colleagues, and support from international funders and provincial health departments. We look forward to the full results of the trial to see how these children fare long term."

Ends

For a copy of the paper or an interview with Dr Avy Violari, or Dr Mark Cotton, please contact Helgard Marais, CIPRA-SA coordinator at the PHRU, Telephone +27 11 989 9710. e-mail: maraisch@hivsa.com

Notes to Editors:

- Reference: A Violari, M Cotton, DM Gibb AG Babiker, J Steyn, SA Madhi, P Jean-Philippe and JA McIntyre for the CHER Study Team. Early antiretroviral therapy reduces mortality in HIV-infected infants: evidence from the CHER trial. *New England Journal of Medicine* 2008; 359: 2233-44.
- The "Children with HIV Early Antiretroviral Therapy" (CHER) study is the largest Phase III randomized clinical trial to study strategies of giving antiretroviral therapy in very young infants, including the best time to begin ART in infants. Launched in South Africa in July 2005, CHER is sponsored by the National Institute of Allergy and Infectious Diseases (NIAID) (www.niaid.nih.gov), part of the National Institutes of Health, USA. GlaxoSmithKline plc (United Kingdom) and the Departments of Health of Gauteng and the Western Cape, South Africa provided drugs.
- The study was conducted at the Perinatal HIV Research Unit of the University of the Witwatersrand in Soweto (www.phru.co.za) and at the Children's Infectious Diseases Clinical Research Unit of Tygerberg Children's Hospital and Stellenbosch University, (www.kidcru.org.za), in collaboration with researchers at the Medical Research Council Clinical Trials Unit, London, UK, as part of the CIPRA-SA collaboration (www.cipra-sa.com).
- The CIPRA-SA collaboration is one of the largest international NIH funded HIV research efforts, including researchers from the Universities of the Witwatersrand, Stellenbosch and Cape Town and the National Health Laboratory Services.