

INFECTIOUS DISEASES IN CHILDREN®

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Mortality rate reduced in Romanian children with HIV

Children with HIV living in resource-limited areas were successfully treated with HAART, showing a reduction in the mortality rate from 15% to 3%.

by Tara Grassia
Staff Writer

The annual mortality rate among children with HIV has dropped from 15% to 3% in one of the largest groups of children treated with highly active antiretroviral therapy (HAART) in any single health care center worldwide, according to clinicians at Baylor College of Medicine, Houston.

Due to the initiation and implementation of HAART, more Romanian children are continuing HIV/AIDS therapies and surviving



Mark W. Kline, MD, in Romania.

longer with fewer opportunistic infections. In addition, normal body growth velocities have been observed among treated children, and marked decreases have occurred in rates of hospitalization and mortality.

Consider the setting

"This is perhaps the first time that it has been demonstrated that HIV-positive children can be successfully treated with antiretroviral therapy in resource-limited settings, with outcomes comparable to those we have seen in U.S. pediatric antiretroviral clinical trials," said **Mark W. Kline, MD**, program director for the Baylor International Pediatric AIDS Initiative (BIPAI).

Kline said that Eastern Europe has the fastest-growing HIV/AIDS epidemic in the world, and "Romania is at its epicenter."

Through the end of 2002, Romania reported 9,936 pediatric HIV/AIDS

cases, representing more than one-half of all European pediatric cases. Romanian children account for 80% of the total HIV/AIDS cases in the country, according to the study by Kline and colleagues.

Many of these children lack access to proper treatment and much-needed care.

However, since 1996, BIPAI, Infectious Diseases Hospital Constanta and the Romanian Ministry of Health and Family have worked collaboratively on a comprehensive program of pediatric HIV/AIDS care and treatment to address the pediatric HIV crisis in Romania, and success has been found, according to Kline.

HAART is helping

An average of 600 outpatient visits are recorded each month at the Romanian-American Children's Center, Constanta County, a facility that

HIV-positive children were receiving HAART at the center of Constanta, with 90% of children tolerating and continuing treatment after a follow-up period of approximately 67 weeks. A marked decrease has been observed in the annual rate of mortality among treated children, from 15% to 3%. Clinicians did not believe any of the 14 deaths were related to HAART. Most deaths occurred among children with advanced HIV, and nine occurred within the first 12 weeks of HAART.

At the inception of therapy, 56% and 65% of children had weights and heights, respectively, that indicated severe growth failure. After at least six months on HAART, these same children experienced restoration of normal height and weight growth. Daily hospital admissions declined from 30 in 2001 to four in 2003, according to Kline.

Only 35 children had plasma HIV RNA concentration measures both at baseline and after at least 12 weeks of HAART, 20 of whom had plasma HIV RNA concentrations less than 400 copies/mL. The average change



Mark W. Kline, MD, examines a Romanian child.

provides children "with comprehensive care and treatment," Kline said. Routine laboratory studies are performed at the Infectious Diseases Hospital Constanta; CD4 lymphocyte measurements are done on site at the center, and plasma HIV RNA measurements are performed at Baylor's Center for AIDS Research International Core Laboratory in Bucharest.

As of August 2003, a total of 452

in CD4 lymphocyte count for 173 children who had both a baseline count and at least one follow-up count was +284 cells/mL, according to the article.

"These children are not just surviving, but thriving," Kline said.

Follow the leader

"Unfortunately, children in the world's resource-limited countries are

often the last to receive health care," said **Jeff Richardson**, executive director of the Abbott Laboratories Fund's Step Forward program.

However, he stated that the BIPAI Romania program, which Step Forward funds, exemplifies how programs aimed to treat children in these resource-poor settings should be replicated and can succeed.

"Ideally, these findings will act as a catalyst to increase the number of programs caring for and treating HIV-positive children in the developing

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world," Richardson said in a release.

HIV/AIDS therapy for adults and children is limited in the world's poor countries by not only a lack of financial resources, but also by a lack of infrastructure and human capacity for providing HIV/AIDS care and treatment, Kline and colleagues noted.

"The comprehensive program we implemented in Romania has been developed deliberately, with careful consideration of the most efficient use of limited resources," added Kline, also chief of retrovirology at Texas Children's Hospital in Houston. "These findings confirm that our Romanian model can be replicated worldwide to provide care and treatment for children living with HIV/AIDS."

The researchers attributed the success of this program to a well-trained multidisciplinary staff, motivated children and caregivers, attention to medication adherence and a commitment to comprehensive HIV/AIDS care and treatment, including home and palliative care, psychosocial support and community education.

The study was published in *The Pediatric Infectious Disease Journal*. **IDC**

For more information:

Kline MW, Matusa RF, Copaciu L, et al. Comprehensive pediatric HIV care and treatment in Constanta, Romania: implementation of a program of highly active antiretroviral therapy in a resource-poor setting. *Pediatr Infect Dis J*. 2004;23(8):695-700.