

Extended infant antiretroviral prophylaxis reduces HIV risk during breastfeeding

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In many resource-poor countries, infants born to mothers with HIV receive a single dose of nevirapine (NVP) and a one-week dose of zidovudine (ZDV) to prevent transmission of HIV from the mother to her newborn. The results of a randomized trial led by researchers at the Johns Hopkins Bloomberg School of Public Health and the University of Malawi College of Medicine found that extending the routine antiretroviral regimen can significantly reduce the risk of mother-to-child HIV transmission. The study is available in the June 4 online edition of *New England Journal of Medicine* and will appear in the June 10 print edition.

The Malawi trial, known as PEPI (post-exposure prophylaxis of infants), followed 3,016 infants born to HIV-positive mothers. The infants and mothers were followed for 2 years. All infants received the standard care of a single dose of NVP and a one-week dose of ZDV to prevent HIV infection. One group received an additional 14-week prophylaxis with NVP, while another received 14-week regimens of both NVP and ZDV.

Throughout the trial, the children who received the extended prophylactic regimens had consistently lower rates of HIV infection compared to children who received the standard care. At 9 months, 5.2 percent of infants receiving extended NVP, and 6.4 percent of infants receiving extended NVP and ZDV contracted HIV, compared to 10.6 percent of infants receiving the standard of care regimen. The frequency at which the mothers breastfed their children was similar between all three treatment groups.

"We know that breastfeeding in the first 6 months of life is extremely important for the child's health and survival, especially in resource poor countries. However, women with HIV face a difficult choice because they are also putting the child at risk for HIV," said Taha E. Taha, MD, PhD, senior author of the study and professor in the Bloomberg School's Department of Epidemiology. "Our findings clearly show that extended drug regimens can significantly reduce the risk of HIV transmission from breastfeeding."

According to the researchers, the proportion of infants experiencing adverse events from the medications was similar in all groups. However, infants who received extended NVP and ZDV more commonly experienced neutropenia, which is a decrease in certain types of white blood cells.

Source: Johns Hopkins University

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