Mother-to-Child HIV Transmission Is Best Prevented With 3 Drugs

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Taking a triple-antiretroviral (ARV) regimen is best for preventing mother-to-child transmission (MTCT) during pregnancy, rather than taking one drug during pregnancy, another during labor and two more after giving birth. Researchers in the ongoing PROMISE study came to these conclusions, which were reported during an interim review of the study data by an independent data and safety monitoring board (DSMB).

PROMISE began in 2010 and has enrolled more than 3,500 HIV-positive pregnant or post-partum women in India, Malawi, South Africa, Tanzania, Uganda, Zambia, and Zimbabwe who did not meet national criteria for receiving ARV treatment, plus more than 3,200 of these women's infants who were exposed to HIV.

These new findings come from a part of the study that was looking to determine which method is safer and more effective at preventing MTCT of HIV before and during delivery: A) having women take Retrovir (AZT, zidovudine) as early as 14 weeks into the pregnancy, one dose of Viramune (nevirapine) during labor, and two weeks of Truvada (tenofovir/emtricitabine) following delivery; or B) having women take one of two triple-ARV regimens as early as 14 weeks into the pregnancy.

When the DSMB made its review, more than 3,500 women in the study who had good immune health had been randomly assigned to receive either Option A, as the World Health Organization calls it, or one of two ARV combinations: Epivir (lamivudine), Retrovir and Norvir (ritonavir)–boosted Kaletra (lopinavir); or Truvada and Norvir–boosted Kaletra.

The women who took the triple-ARV combination regimens during pregnancy had significantly lower rates of MTCT during pregnancy or delivery when compared with those who took Option A. A total of 0.5 percent of the infants born to mothers who took the Epivir-based combination and 0.6 percent of those born to mothers who took the Truvada-based combination became HIV-positive. This is compared with 1.8 percent of the infants born to mothers who took Option A.

The Epivir-based triple-drug regimen proved the safest. The women on this option experienced fewer severe adverse pregnancy outcomes than those taking Truvada. Furthermore, there were fewer deaths among babies born to mothers taking Epivir than to those taking Truvada or who were assigned to Option A.

On the other hand, adverse pregnancy outcomes of a lesser severity were more common among babies born to mothers taking triple-drug combination therapy than those on Option A.

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