HIV Treatment at Conception Reduces Maternal HIV Transmission

March 26, 2010

HIV-positive pregnant women who were taking antiretroviral (ARV) treatment at the time of conception were far less likely to pass the virus to their babies than women who started ARV treatment after becoming pregnant, according to a study published online March 23 in the *Journal of Acquired Immune Deficiency Syndromes (JAIDS)*. Moreover, the earlier a woman started ARVs during pregnancy the less likely maternal HIV transmission became.

Though ARV therapy has significantly reduced the risk of mother-to-child HIV transmission (MTCT) in the United States, rates of MTCT remain high in many resource poor countries. Offering Retrovir (zidovudine) or Viramune (nevirapine) to the mother during labor and to the child immediately after birth reduces maternal transmission risk, but earlier use of ARV drugs in pregnant women is recommended whenever feasible to reduce rates even further.

The French Perinatal Cohort reported earlier this year that expecting HIV-positive women should maintain an undetectable viral load throughout pregnancy. Similar findings were reported in the March 23 *JAIDS* study, which was conducted in South Africa.

The study, reported by Risa Hoffman, MD, MPH, from the University of California in Los Angeles and her colleagues, followed 1,142 HIV-positive women during pregnancy at an antenatal clinic in Johannesburg. The average age of the women in the study was 30, and the average CD4 count was just 161. In all, 147 women were taking ARVs at the time of conception, while 968 women began taking ARV therapy after becoming pregnant, usually 10 weeks before delivery.

The rate of transmission in women who started ARVs before becoming pregnant was about eight times lower than in women who started treatment after becoming pregnant. In fact, only one woman who conceived while on ARVs transmitted HIV to her newborn. Among women who started ARVs after becoming pregnant, the rate of transmission was 5.7 percent. However, with each additional week of ARVs taken before delivery, the transmission rate dropped by 8 percent.

Hoffman and her colleagues concluded: “Widespread testing of women is needed to identify those with HIV infection before pregnancy and allow for optimal maternal health and prevention of infant transmission.”