Pregnancy may slow -- not accelerate -- progression to AIDS

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A new study may help put to rest fears that pregnancy accelerates progression to full-blown AIDS in women with HIV receiving antiretroviral therapy. The study, published in the October 1st issue of the Journal of Infectious Diseases and now available online, revealed that pregnancy may, in fact, slow disease progression in these women.

Before the advent of highly active antiretroviral therapy (HAART), many women with HIV infection or AIDS were told that becoming pregnant would be unwise because there was thought to be a 25 percent risk of transmitting the virus to the child and that the effects of pregnancy on disease progression were unclear. It is now clear that the use of HAART in pregnancy can reduce the HIV transmission to the newborn to approximately 1 percent, but the effects of pregnancy on the HIV-infected woman remain unknown.

To determine the effects of pregnancy on HIV disease progression in the HAART era, Timothy R. Sterling, MD, and colleagues at Vanderbilt University performed an observational study of HIV-infected women between 1997 and 2004. Disease progression was defined as experiencing an AIDS-defining event such as Kaposi's sarcoma, Pneumocystis carinii pneumonia, or Candida fungal infection of the esophagus; or death. Of the 759 women studied, 71 percent (540) were receiving HAART. Eighteen percent (139) of women studied had one or more pregnancy during this study.

Based on the results of studies conducted before HAART, researchers

had expected there might be no difference in HIV disease progression between pregnant and non-pregnant women. What Sterling and colleagues found was that women who became pregnant actually had a lower risk of HIV disease progression and were healthier than women who did not become pregnant. Women experienced a lower risk of disease progression both before and after pregnancy. This may be a result of the healthier immune status of women who become pregnant and/or a beneficial interaction between pregnancy and HAART.

Although the pregnant women in the study were younger than the non-pregnant women, had higher initial CD4+ lymphocyte counts (white blood cells that are attacked by HIV), and a smaller amount of HIV RNA in their plasma, their risk of disease progression remained lower even after factoring in these differences. Nor did it matter that the pregnant women also were more likely to receive HAART and more likely to attend clinic appointments.

Additionally, women with multiple pregnancies during follow-up tended to have a lower risk of disease progression than did women with only one pregnancy. Sterling notes, “This apparent dose-response relationship supports a possible protective effect of pregnancy on disease progression. Pregnancy is associated with a complex set of immunological changes during the gestation period, which may provide additional benefit to the mother’s health.”

In an accompanying editorial, Kathryn Anastos, MD, of the Albert Einstein College of Medicine emphasized that although understanding of this complexity is not complete,

Dr. Sterling’s study gives hope that correlative studies of the immune response to pregnancy and the influence of pregnancy on HIV disease may help to provide the needed information.

Dr. Anastos suggested that this information may be of particular significance to women in resource-limited communities, who generally bear more children than do those in higher-resource communities. She noted that "women can now have greater confidence that in addition to protecting their children from [mother-to-child transmission of HIV] with HAART, their own health will not be compromised by pregnancy, which would place their children at long-term risk…the findings by Sterling and coworkers suggest that at least for HIV disease progression, the odds may be in their favor."

Fast facts:

1) Women who became pregnant had a lower risk of HIV disease progression and were healthier than women who did not become pregnant.
2) Women with multiple pregnancies during follow-up tended to have a lower risk of disease progression than women with one pregnancy.
3) Currently, nearly all mother-to-child transmission can be prevented by the administration of appropriate HAART regimens during pregnancy and delivery, with postnatal treatment for the infant.

Source: Infectious Diseases Society of America