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## Risk Factors for HIV Fetal Transmission

## Gina Pugliese, RN, MS; Martin S. Favero, PhD Medical News Editors

A substantial portion of perinatally acquired HIV-1 infections occur at or near delivery, suggesting that obstetrical factors may have an important influence on transmission. Dr. Sheldon Landesman of the State University of New York Health Science Center at Brooklyn and colleagues recently studied the relationship of such factors to perinatal transmission of HIV-1.<sup>1</sup> The Women and Infants Transmission Study is a prospective, observational study of HIV-1 infected women at institutions in New York City, Chicago, Massachusetts, and San Juan, Puerto Rico, who were enrolled during pregnancy and followed with their infants for 3 years after delivery. This study followed 525 women who delivered live infants whose HIV status was known.

Among the mothers with mem-

branes that ruptured more than 4 hours before delivery, the rate of transmission of HIV-1 to the infants was 25%, as compared with 14% among mothers with membranes that ruptured 4 hours or less before delivery. In a multivariate analysis, the presence of ruptured membranes for more than 4 hours nearly doubled the risk of transmission regardless of the mode of delivery. Other maternal factors independently associated with transmission were illicit drug use during pregnancy, low antenatal CD4+ lymphocyte count, and birth weight <2.500 grams.

The authors concluded that the risk of HIV transmission from mother to infant increases when the fetal membranes rupture more than 4 hours before delivery. Translating this information into clinical practice will be difficult, the authors note. The current care of pregnant women infected with HIV-1 includes zidovudine therapy to reduce the risk of

transmission of HIV, and there is no evidence that transmission could be reduced further by combining zidovudine with shortening of the duration of ruptured membranes.

In an accompanying editorial, Dr. Daniel Landers and Dr. Richard Sweet from Magee Women's Hospital in Pittsburgh note that these data suggest that exposure to HIV in cervicovaginal secretions increases the risk of infection, but other factors also may be implicated, such as the viral load in the plasma.<sup>2</sup>

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