Mixed Findings on Male Circumcision and HIV

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BOSTON — Male circumcision does not reduce the risk of HIV transmission from HIV-positive men to their female partners, but it does offer some protection to HIV-negative men and their female partners against the acquisition of genital infections associated with the spread of HIV, according to data presented at the 15th Conference on Retroviruses and Opportunistic Infections.

Heralded as "an HIV intervention that can really work," male circumcision has previously been shown to reduce heterosexual acquisition of HIV in men, said Dr. Maria Wawer, a family health researcher at Johns Hopkins University, Baltimore, and cofounder of the Rakai (Uganda) Health Sciences Program—one of the largest HIV research, prevention, and care programs in Africa.

To determine whether the earlier findings would also hold true with respect to rates of heterosexual transmission of the virus by HIV-positive men to their wives, Dr. Wawer and colleagues randomized more than 1,000 HIV-positive men to immediate or delayed (by 24 months) circumcision and asked the 770 men in the study who were married to invite their wives to participate. A total of 566 wives enrolled, of whom 245 were HIV negative. The investigators' intent-to-treat analysis was based on 165 HIV-discordant couples, including 94 in the male circumcision arm and 71 in the control arm.

The men in the study were examined postoperatively if they underwent circumcision and then at 1, 6, 12, and 24 months, and the women were seen at 6, 12, and 24 months. At follow-up, the cumulative incidence of HIV in wives of circumcised men was actually higher than that observed in the wives of the noncircumcised men, at 13.8 per 100 person-years compared with 9.6 per 100 person-years, respectively.

Although the difference between the two groups was not statistically significant and could be a product of chance, "we were not seeing a trend toward protection that we would have expected and hoped for," Dr. Wawer said.

The researchers did observe that in both arms of the study, the incidence of HIV was highest in the first 6 months of follow-up and, in the circumcision arm specifically, the excess transmissions during this period occurred in couples who resumed intercourse more than 5 days before the circumcision wound was certified as fully healed, Dr. Wawer said.

"We're still analyzing the data, but it appears that after 6 months there is a trend toward protection in the circumcision group." This finding, she noted, stresses the importance of waiting to have sex until the circumcision wound is fully healed to minimize the risk of HIV transmission.

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Reporting on another of the Rakai studies that looked at the efficacy of male circumcision in the prevention of herpes simplex virus type 2 (HSV-2) among HSV-2– and HIV-negative men, Dr. Aaron Tobian, also of Johns Hopkins, noted that the relative risk of HSV-2 acquisition among the 1,400 men randomized to immediate circumcision was 7.6%, compared with 10.1% in the 1,387 men randomized to delayed circumcision.

In a nested study comprising 825 wives of men in the circumcision arm and 783 wives of men in the control arm who were followed for 1 year, the respective rates of symptomatic genitourinary disease in the intervention and control arms were 12.5% and 16.8%. The respective prevalence rates of trichomoniasis were 5.9% vs. 11.2%, and rates of bacterial vaginosis were 40.3% and 50.6%. Severe bacterial vaginosis was observed in 2.0% of the intervention wives and 6.5% of the control wives, Dr. Tobian said.

"HSV-2 infections, genital ulcer disease, and bacterial vaginosis are all cofactors for HIV infection," he said.

By reducing the occurrence of these cofactors, "male circumcision offers some protection against HIV in these women," he asserted. ■

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Wisconsin Starts SCID Screening In Newborns

PHILADELPHIA — A neonatal screening test for severe combined immunodeficiency was added to Wisconsin's newborn screening panel Jan. 1, making it the first state to screen newborns for the disease.

Although the start-up cost for automating the test was high—requiring installation of $500,000 worth of equipment—and running the test will cost Wisconsin about another $400,000 each year, the anticipated saving in medical costs for treating a single infant who develops complications from severe combined immunodeficiency (SCID) is about $2 million, Dr. William J. Grossman said at the annual meeting of the American Academy of Allergy, Asthma, and Immunology.

Screening for SCID also marks the first time that newborn screening has used a polymerase chain reaction–based (PCR-based) test. This step will likely pave the way for the eventual introduction of several more PCR-based tests into newborn screening, Dr. Grossman, a pediatrician at Children's Hospital of Wisconsin in Milwaukee, said in an interview.

Availability of an inexpensive, PCR-based screening test for SCID led to its being highlighted as a priority for newborn screening last year by the SCID Newborn Screening Working Group (J. Allergy Clin. Immunol. 2007;120:760-8). The group cited the clinical importance of intervening before an infant develops a first infection because of SCID, and the efficacy of treatment by stem-cell transplantation. The survival rate of infants with SCID who are not diagnosed or treated until after they are 3.5 months old is about 66%. That rate is about 96% if diagnosis and treatment occur before infants reach 3.5 months.

Pilot newborn screening done in Wisconsin last year identified a TREC (T-cell receptor-rearrangement excision circles) number of less than 75 per dried blood spot as a signal of SCID. The incidence of newborns who fell into this category was 0.02%. Pilot testing showed that this screen was able to pick up all four true positive SCID specimens that were introduced into the screened specimens. Specimens that screen positive are followed by a flow cytometry test to directly quantify T-cell numbers and confirm the SCID diagnosis.

—Mitchel L. Zoler