Male circumcision: HSV-2 and HPV

Male circumcision reduces the acquisition of herpes simplex virus type 2 (HSV-2) and the prevalence of human papillomavirus (HPV) infection, reports a new study. These new data complement previous research indicating that circumcision reduces the risk of acquiring HIV, and suggest that this procedure might have further public health benefits in the prevention of viral sexually transmitted infections (STIs).

Randomized trials and observational studies have reported substantial decreases in the incidence of HIV infection in males who have undergone circumcision. Some observational studies have suggested that circumcision may also prevent HSV-2 and HPV infection, as well as syphilis, but results have been conflicting. “The potential efficacy of male circumcision for STI prevention can only be determined through randomized trials,” says Aaron Tobian, of Johns Hopkins University, lead author of the paper.

The investigators obtained data for men enrolled in two parallel clinical trials in Rakai, Uganda. These trials have successfully proved that male circumcision helps to prevent HIV infection. Of 3,393 men (aged

15–49 years) who tested negative for HIV and HSV-2 on enrollment, 1,684 were randomly assigned to receive immediate circumcision and 1,709 had circumcision delayed for 24 months (control group). A subgroup of 697 men from both groups underwent genotyping to detect HPV infection at baseline and 24 months. All participants were tested for HSV-2 and syphilis infection.

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Tobian and colleagues observed a significant reduction in the cumulative probability of HSV-2 infection among men who received immediate circumcision (7.8%) compared with those in the control group (10.3%). In the subgroup of patients tested for HPV infection, high-risk HPV genotypes were detected in 18.0% of circumcised men compared with 27.9% of uncircumcised men. At 24 months, syphilis was detected in 50 men in the intervention group and 45 men in the

control group. Overall, the researchers calculated that circumcision reduced HSV-2 acquisition by 25%, decreased the prevalence of HPV by 35%, but had no effect on the incidence of syphilis.

Keratinization of the skin after circumcision prevents epithelial infection, the researchers explain. “This new research confirms the substantial health benefits of male circumcision, including reduced acquisition of HIV, genital herpes, HPV and genital ulcer disease,” says study co-investigator Thomas Quinn. “The cumulative scientific evidence supporting the public health value of medically supervised male circumcision is now overwhelming.”

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