Vaginal Inflammation Lowers Effectiveness of HIV-Preventing Gel

An analysis of a previous study of a tenofovir-based vaginal gel found that women with vaginal inflammation were less protected.

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South African women in a trial of a tenofovir-based vaginal gel were less protected against HIV if they had vaginal inflammation. In other words, as a form of HIV prevention, the gel may be compromised not only by poor adherence to the product but also by biological factors specific to individual women.

Publishing their findings in Nature Medicine, researchers conducted an analysis of 774 female participants in the placebo-controlled CAPRISA 004 trial of the 1 percent tenofovir gel. The investigators looked at concentrations of nine types of proteins known as cytokines, which spur inflammation in the body, in vaginal specimens taken at 2,139 of the women's clinic visits over a two-and-a-half-year period.

The women without genital inflammation contracted HIV at respective rate of 2.3 and 5.4 cases per 100 cumulative years of life among those who received the tenofovir gel and those who received the placebo. Among those with genital inflammation, the respective HIV diagnosis rate among those receiving the tenofovir gel and the placebo was 6.8 and 7.0 cases per 100 cumulative years.

Looking at the women who used the gel for at least half of all sex acts, the investigators found that the gel reduced the risk of HIV by 75 percent among those without genital inflammation, while there was no evidence that the gel provided any protection to the women with genital inflammation.

The researchers concluded that reducing vaginal inflammation might help prevent acquisition of HIV among women.

To read a press release about the study, click here.

To read the study abstract, click here.

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