Hormonal Contraceptives, BV Up HSV-2 Shedding

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BETHESDA, MD. — The use of hormonal contraception is among the factors associated with increased viral shedding among women with genital herpes simplex virus type-2 infections, Sharon L. Hillier, Ph.D., said at a conference on vulvovaginal diseases.

Women who have recently been infected with HSV-2 and those with bacterial vaginosis (BV) have also been found to have greater viral shedding, said Dr. Hillier, director, reproductive infectious disease research, Magee-Womens Hospital, Pittsburgh. Shedding decreases over time after the primary episode.

Other women at risk for increased shedding include younger, pregnant, or the immunocompromised, and especially those who are HIV infected, she added.

The data on whether hormonal contraceptives are associated with increased shedding in this population have been mixed, she said, citing one study finding an association and two others, which found no such association.

But a study published in May that followed 330 HSV-2 seropositive women at 4-month intervals for 1 year, for a total of 956 visits, found a twofold increased risk of shedding among hormonal contraceptive users. At each visit, vaginal swab specimens were collected and tested for BV, yeast, group B streptococcus, and HSV-2 DNA, according to Thomas L. Cherpes, M.D., and associates at the University of Pittsburgh (Clin. Infect. Dis. 2005;40:1422-8).

A total of 95% of the women did not know they had herpes, noted Dr. Hillier, one of the study's authors and professor of obstetrics, gynecology, and reproductive sciences and of molecular genetics and biochemistry at the university.

Like other investigators, they found shedding increased threefold in those who were infected in the previous 4 months. That indicates once a woman has seroconverted, she is likely to infect her partner in the months following seroconversion.

The risk of shedding was 2.3 times greater among those with BV. Noting that women with BV have been found to have

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proinflammatory changes in the cytokine milieu, which normalize with treatment, Dr. Hillier said that "the hypothesis is that the altered flora that occur in women with BV actually cause this proinflammatory state in which herpes is more likely to reactivate." She and her associates are beginning a study to examine the impact of BV treatment on HSV-2 viral shedding.

A surprising finding was that heavy colonization with group B streptococci (GBS) increased the shedding risk by twofold,

"for reasons we're still trying to figure out," Dr. Hillier said at the conference, sponsored by the American Society for Colposcopy and Cervical Pathology.

The increased risks of shedding associated with recent infection, BV, GBS colonization, and hormonal contraception were all statistically significant.

Like BV, hormonal contraception is another potentially modifiable risk factor for shedding, although she said she would not recommend that anyone stop taking

hormonal contraceptive.

Women with BV are also more susceptible to acquiring HSV-2, Dr. Hillier said. There is biologic plausibility for this link, since the loss of the acidic environment produced by the lactobacillus (normal vaginal flora) in women with BV may create a more permissive environment for HSV-2, she said. Moreover, hydrogen peroxide—producing lactobacilli have antiviral activity, which may serve as a first line of defense against viral infection.

