

# HSV-2 Shedding Upped by Some Contraceptives

*Genital tract shedding of the virus was not associated with vaginal intercourse, new partner, or douching.*

BY MICHELE G. SULLIVAN  
Mid-Atlantic Bureau

Bacterial vaginosis, high-density group B streptococcus colonization, and the use of hormonal contraceptives each is independently associated with an increased risk of genital tract shedding of herpes simplex virus type 2, Thomas L. Chernes, M.D., and his colleagues at the University of Pittsburgh reported.

These increased risks could be key factors in HSV-2 transmission.

"Because hormonal contraceptives are used by more than 100 million women worldwide, and because bacterial vaginosis and vaginal GBS colonization are two of the most common genital tract conditions present among women of reproductive age, even modest associations between these variables and genital tract shedding of HSV-2 would result in substantial attributable risks for transmission of the virus," Dr. Chernes and his col-

leagues reported (*Clin. Infect. Dis.* 2005;40:1422-8).

The researchers followed 330 HSV-2-positive women for a year. The women were aged 18-30 years; 65% were black.

Every 4 months, the investigators collected behavioral data, vaginal swabs and smears, and a blood sample from each woman.

In the multivariate analysis, genital tract shedding was associated with recent HSV-2 seroconversion (OR 3), high-density group B streptococcus colonization (OR 2.2), bacterial vaginosis (OR 1.9), and the use of either depot medroxyprogesterone acetate or oral contraceptives (OR 1.8).

Genital tract shedding was not associated with vaginal intercourse, new sexual partner, or douching.

**‘Even modest associations between these variables and genital tract shedding of HSV-2 would result in substantial attributable risks for transmission of the virus.’**

The association with bacterial vaginosis and high-density GBS colonization was somewhat of a surprise, the researchers said.

"A number of recent studies have demonstrated that [bacterial vaginosis] is associated with significant alterations in the concentrations of several immunomodulatory cytokines, compared with the concentrations of these cytokines associated with normal vaginal flora," they reported.

Oral contraceptives may influence shedding by different means, the researchers said.

Suppression of estrogen and progesterone may alter the T cell-mediated immune response, and thereby increase shedding.

Additionally, women who use oral contraceptives can have larger areas of cervical ectopy.

"This extension of the single-layered columnar epithelium onto the ectocervix

may facilitate genital tract shedding," the researchers said.

However, since the increased risk was the same for both oral and injectable hormonal contraceptives, and cervical ectopy is more commonly associated with the oral form, it may not be the predominate mechanism responsible for increased viral shedding, they said.

Previous studies on the subject have reached varying conclusions, Katherine LaGuardia, M.D., medical affairs director for Ortho Women's Health, Ortho-McNeil Pharmaceutical, Inc., said in an interview.

"This study really doesn't shed any new light on this issue," she said. "The definitive study, which would control for both sexual behavior and hormonal contraception, has yet to be done."

However, she said, it's important to continue stressing to women that no hormonal contraceptive method protects against sexually transmitted infection. "Although safe and effective when used as labeled, these methods don't protect against infection," Dr. LaGuardia said. "Using a condom along with hormonal methods offers the best protection against both pregnancy and STIs, including HIV." ■

## Valacyclovir Cheapest Way To Prevent Neonatal Herpes

BY SHARON WORCESTER  
Southeast Bureau

CHARLESTON, S.C. — Oral valacyclovir was the most economically favorable treatment choice for the prevention of intrapartum herpes transmission in a recent analysis.

The clinical outcomes and costs of the three strategies, including oral valacyclovir, oral acyclovir, and no prophylaxis, were compared using a decision analysis model in a hypothetical cohort of 1 million women with recurrent herpes infection.

All strategies included cesarean section for patients with active lesions during labor, Monique G. Lin, M.D., of the University of Alabama, Birmingham, and her colleagues reported in a poster at the annual meeting of the Infectious Diseases Society for Obstetrics and Gynecology.

The valacyclovir model included 500 mg given twice daily beginning at 36 weeks' gestation.

The oral acyclovir model included 200 mg given four times daily beginning at 36 weeks' gestation.

The investigators used the literature and "local sources" to determine baseline costs.

Dr. Lin and her associates based their analysis on current treatment strategies that employ polymerase chain reaction, viral culture, and high-dose intravenous acyclovir for treatment of affected neonates.

Using this model, the researchers showed that the total costs in the hypothetical cohort were \$9.94 billion for valacyclovir, \$9.93 billion for acyclovir, and \$13.7 billion for no prophylaxis.

The number of cases of neonatal death or moderate to severe neonatal morbidity associated with each treatment in this model was 1,911 with valacyclovir, 2,111 with acyclovir, and 8,240 with no prophylaxis.

The number of cases prevented by using valacyclovir prophylaxis was 6,239, and the number prevented by using acyclovir prophylaxis was 6,129.

The cost per case prevented was \$1.57 million for valacyclovir prophylaxis and \$1.62 million for acyclovir prophylaxis, Dr. Lin and her investigators found in their analysis. ■

**The cost per case prevented was \$1.57 million for valacyclovir prophylaxis and \$1.62 million for acyclovir prophylaxis, the investigators found.**

## Valacyclovir Proves Safe for the Long-Term Suppression of HSV-2

BY SHARON WORCESTER  
Southeast Bureau

CHARLESTON, S.C. — Once-daily treatment with valacyclovir for the suppression of genital herpes caused by herpes simplex virus type-2 was well-tolerated for up to 20 months in a recent study.

Previously, data were available only for up to 12 months of daily valacyclovir use, Zane A. Brown, M.D., of the University of Washington, Seattle, and his colleagues reported in a poster at the annual meeting of the Infectious Diseases Society for Obstetrics and Gynecology.

For the current study, which was supported by GlaxoSmithKline Inc., 1,484 serodiscordant, heterosexual, monogamous couples were enrolled, and the seropositive partner was randomized to receive either placebo or 500 mg/day of valacyclovir for 8 months.

The results of this double-blind phase, which were previously reported by the investigators, showed that the treatment significantly reduced the risk of genital herpes transmission.

Following the double-blind phase, 1,018 of the 1,484 participants treated in the double-blind phase entered an open-label suppression phase of the study, which provided 12 months of suppressive therapy with 500 mg/day of valacyclovir. Patients in this phase were evaluated every three months for laboratory values and adverse events.

More than 85% of participants who completed the entire 20 months of treatment were at least 80% compliant with the study medication.



During the double-blind and open-label phases, the nature and incidence of adverse events were similar in the 519 participants originally assigned to receive valacyclovir (treatment group) and the 499 originally assigned to receive placebo.

Common adverse events included headache, nasopharyngitis, and upper respiratory tract infection.

Serious adverse events were reported infrequently and were similar in frequency in the treatment group (5% incidence rate) and the placebo group (3% incidence rate).

Only one serious adverse event (gastritis in one patient) during the entire 20-month study was considered by the investigators to be possibly attributable to valacyclovir, and it occurred during the open-label portion of the study.

Adverse events leading to treatment discontinuation occurred in fewer than 1% of those in the treatment group, and in 1% of those in the placebo group; clinically significant laboratory abnormalities occurred in 6% of patients in both groups.

No deaths occurred during the study periods. Despite a prior lack of data on the safety of valacyclovir for the suppression of genital herpes caused by HSV-2 when used for longer than 12 months, some physicians prescribe such therapy for longer periods, the investigators noted.

These findings suggest that treatment with valacyclovir is as safe for up to 20 months as it is with 8-12 months of suppressive therapy, they concluded. ■

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DR. BROWN