BELIEVE MIDWIFERY SERVICES

TITLE: HERPES SIMPLEX VIRUS: TRANSMISSION, DIAGNOSIS, AND CONSIDERATIONS IN PREGNANCY MANAGEMENT

EFFECTIVE DATE: December, 2008

POLICY STATEMENT: Genital herpes simplex virus (HSV) is the most common sexually transmitted infection among the adult female population of the United States. The greatest risk of disease in the newborn comes with late-pregnancy acquisition of genital infection in a previously unexposed woman; recurrent infections are rarely associated with disseminated neonatal disease in immune-competent women. Both detection of women at risk of infection and prevention of viral shedding near time of birth can contribute to improved outcomes.

BLOOD BORNE PATHOGEN EXPOSURE CATEGORY: I (Involves exposure to blood, body fluids, or tissues)

FUNCTION: Care of Clients

POINTS OF EMPHASIS:
Factors that affect a woman’s risk of infection before pregnancy include ethnicity, poverty, cocaine abuse, earlier onset of sexual activity, number of lifetime partners, sexual behavior, and the presence of bacterial vaginosis. Higher rates of HSV among both men and women with advancing age during adulthood have been reported; related factors include the persistence of virus over time and changing sexual relationships.

In general, initial outbreaks of HSV-1 in the genital area will be severe, but recurrent outbreaks and shedding are less frequent than with HSV-2 and rarely occur more than 1 year after diagnosis. Among 7046 pregnant women without previous evidence of infection, Brown et al found a conversion rate of approximately 2% during pregnancy, although only one-third of those who seroconverted became symptomatic. The timing of transmission during pregnancy had a direct bearing on risk to the fetus and neonate. Neonatal infection with HSV is almost exclusively limited to late exposure in mothers without previous antibody acquisition.

Viral shedding occurs not only during the period of active outbreaks but also when no symptoms are present. It has been reported that asymptomatic genital shedding episodes account for about one-third of all viral shedding in women with a history of genital herpes, and that one-half of that shedding occurs more than 7 days from a clinical outbreak. Recent infection and frequent symptomatic recurrences are associated with greater frequency of subclinical shedding.

There is a strong likelihood that persons infected with HSV may not be aware of their diagnosis. Data indicates that only 20% of those infected with genital herpes have typical lesions, another 60% have atypical lesions, and 20% are completely asymptomatic. Data also has demonstrated that more than half of those affected have either extragenital lesions (buttocks, thigh, anus, or fingers) or atypical genital lesions (single ulcers, erosion, crusting, fissure edema, or erythema).

PROCEDURE:

Transmission

1. Due to the lack of awareness some clients may have regarding their own HSV infection and the common atypical presentation, clinicians dealing with genital complaints of unexplained etiology should strongly consider testing for HSV in order to identify those at risk for unintentional transmission of the virus.

2. ACOG currently recommends the use of suppressive therapy to decrease transmission in discordant couples.
CDC Recommendation for Oral Treatment of Initial and Recurrent Genital Herpes Outbreaks (2008)

**Diagnosis**

3. Women may experience only prodromal symptoms, such as burning or tingling; have single ulcers, fissures, or erosion; or experience erythema or edema as the primary symptom. It has been suggested that HSV-2 be considered the cause of any such symptoms below the waist until the diagnosis is excluded.

4. Available tests for herpes include both culture and PCR-DNA testing for viral shedding, and the use of blood tests to screen for previous exposure. Confirmation of current infection requires direct detection of the virus with culture or PCR testing at the time of clinical diagnosis. Type-specific serology testing in the absence of symptoms establishes previous exposure and antibody response.
   a. Cultures are most accurate early in the sequence of clinical outbreaks. Fluid collected from intact blisters will grow out in culture more than 90% of the time. By the time the lesion has crusted over, only about 25% of cultures will be positive.
   b. When PCR testing is available, its use should be considered in preference to cultures, because it is more sensitive. PCR will also confirm viral shedding whether or not lesions are present.
   c. When using serology to confirm a clinical HSV diagnosis, the most common glycoprotein-G type specific tests are highly accurate. Serology cannot date the onset of infection or identify the locus of shedding. However, information regarding whether one is infected with HSV-1 or HSV-2 can prove useful in discussing risks for recurrence.

**Treatment**

5. Primary genital HSV infections require a more prolonged course of treatment, because antibodies that will help reduce the clinical symptoms have not developed. A 10-day course of oral antiviral medication is recommended. In most severe cases, hospital admission for parenteral treatment may be required.

6. Recurrent infections are treated with a shorter course. (See above table for treatment regimens.)

7. When an individual has frequent recurrences of genital herpes (>6 episodes/yr), long-term suppression can be considered both to reduce the individual’s physical symptoms and to decrease the risk of transmission to a sexual partner.

**HSV During Pregnancy**

Counseling

1. During pregnancy, new HSV infections carry greater risks for both mother and child than does recurrent shedding, whether or not symptoms are present; counseling should reflect this fact. Women need to understand that even if they have rare or no clinical recurrences, there is a small risk of intrapartum transmission, which is decreased but not completely eradicated with third trimester suppression using antiviral medications, and cesarean birth when symptoms are present.

2. The woman who already has antibodies to both HSV-1 and HSV-2 at the onset of pregnancy has the least risk of perinatal transmission.

3. Those most at risk for mother-to-child transmission are women who are previously uninfected and are in sero-discordant relationships. New-onset HSV infection late in pregnancy carries a 30% to 50% risk of neonatal infection, while early pregnancy infection carries a risk of less than 1%. Therefore, it is vital that the practitioner ascertain the mother’s risk for HSV throughout pregnancy.
   a. When primary HSV infection occurs during late pregnancy, there is not adequate time for antibodies to develop and suppress viral replication before labor.
b. Transmission of HSV from mother to fetus during pregnancy is uncommon; about 85% of perinatal transmission occurs during the intrapartum period.
c. During pregnancy, a partner’s history of oral herpes has been associated with the risk that a seronegative woman would acquire HSV-1, and having a new partner within 12 months was associated with HIV-2 infection has been associated with preterm birth.

4. The consequences of a neonatal infection range from localized symptoms to encephalitis to disseminated disease, which carries a mortality rate in excess of 50%, even with treatment. Survivors are often left with significant neurologic deficits, blindness, seizures, and learning disabilities.

5. Neonatal infection with HSV can also occur in the setting of recurrent HSV. Symptom recurrence producing viral shedding at labor onset is associated with up to 3% risk of neonatal herpes. Asymptomatic viral shedding in recurrent disease at term has not been associated with neonatal disease.

Interventions

6. Suppressive therapy during the last month of pregnancy reduces the likelihood of viral shedding at term. Studies have reported reductions in neonatal infection when acyclovir or valacyclovir are given beginning at 36 weeks’ gestation.

7. When lesions are present or prodromal symptoms occur at the onset of labor, both the CDC and ACOG continue to recommend cesarean birth to minimize the risk of viral exposure to the infant, even if suppressive therapy has been used.

8. Cesarean birth before ruptured membranes virtually eliminates the risk of intrapartum transmission to the infant.

9. Avoid amniotomy in an HSV woman whenever possible.

10. Active management should be considered in women with HSV when membranes have ruptured before the onset of labor.

REFERENCES:

Originated: December, 2008

CDC Recommendations for the Prevention of Neonatal Herpes

1. Inform both pregnant woman and their partners of the risks associated with neonatal herpes during the prenatal history, and inquire about HSV status in either partner.

2. Offer screening to undiagnosed women whose partners have HSV.

3. Women diagnosed by serology without clinical history should receive the same information as women who have had symptomatic HSV.

4. Avoid sexual contact between an uninfected woman and her infected partner during the third trimester. This includes oral-genital activities when the partner has HSV-1.

5. Consider suppression at 36 weeks’ gestation with an appropriate antiviral. Suppression is not recommended for women with positive serology and no history of clinical infection. There is no recommendation about partner suppression.

6. Inspect the perineum, vagina, and cervix at the onset of labor for any lesions, and inquire about symptoms the woman associates with prodromal HSV.

7. Offer cesarean birth at the onset of labor to women with visible lesions or prodromal symptoms.