

Herpes and Pregnancy

Neonatal herpes simplex virus infection in relation to asymptomatic maternal infection at the time of labor

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Abstract

BACKGROUND AND METHODS. To define the risk factors associated with neonatal acquisition of herpes simplex virus (HSV) infection, we prospectively obtained HSV cultures from the cervix and external genitalia of 15,923 pregnant women in early labor who were without symptoms or signs of genital HSV infection. Follow-up of the women with positive cultures for HSV and their HSV-exposed infants included serologic tests and serial cultures for HSV. **RESULTS.** HSV was isolated from 56 of the women (0.35 percent), 18 of whom (35 percent) had serologic evidence of a recently acquired, subclinical first episode of genital HSV infection, and 34 of whom (65 percent) had reactivation of HSV. Neonatal HSV developed in 6 of 18 infants (33 percent) born to the women with a first episode of genital HSV, and in 1 of 34 infants (3 percent) born to the women with reactivation of HSV (P less than 0.01); neonatal HSV also occurred in three of the infants born to the 15,867 women with negative cultures. Neonatal HSV-2 occurred in 1 of 4 infants born to mothers seronegative at delivery for both HSV-1 and HSV-2, in 4 of 12 infants exposed to HSV-2 whose mothers had only HSV-1 antibodies at delivery, and in none of the infants born to 31 women who were HSV-2-seropositive. An increased risk of neonatal HSV was associated with exposure to viral shedding from the cervix and the use of fetal-scalp electrodes. **CONCLUSIONS:** Of the asymptomatic women who shed HSV in early labor, about a third have recently acquired genital HSV, and their infants are 10 times more likely to have neonatal HSV than those of women with asymptomatic reactivation of HSV. The presence of maternal antibodies specific to HSV-2 but not HSV-1 appears to reduce the neonatal transmission of HSV-2. Further studies are necessary to determine whether screening and prophylactic treatment are warranted for infants of HSV-2-seronegative mothers who shed HSV-1 or HSV-2 in early labor.