

Abstracts of current literature on epidemiology, diagnosis, and treatment

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MOTHER-TO-INFANT TRANSMISSION OF HERPES SIMPLEX VIRUS

To evaluate the risk factors for the transmission of herpes simplex virus (HSV) from mother to infant, women in labor had genital HSV viral cultures obtained and serum samples saved for retrospective analysis of HSV-1 and HSV-2 serologic status. The study took place from 1982 through 1999; a total of 58,362 pregnant women were included in the study cohort, of whom 40,023 had genital HSV cultures obtained and 31,663 had serum samples tested for HSV. Of those in whom cultures were obtained, HSV was isolated from 202 (0.5%); neonatal transmission of HSV occurred in 10 (5%) of them. Neonatal HSV infection occurred in 1.2% of cesarean deliveries, compared with 7.7% of vaginal deliveries. The rate of transmission of HSV from mother to infant was higher when HSV-1 was isolated at delivery (31.3%), compared with HSV-2 (2.7%), and the risk remained significantly elevated after adjustment for newly acquired infection. Other risk factors for neonatal HSV included first-episode infection, HSV isolation from the cervix, HSV-1 versus HSV-2 isolation at the time of labor, invasive monitoring, premature delivery, and young maternal age. Neonatal infection rates per 100,000 live births were 54 among HSV-seronegative women, 26 among women who were HSV-1-seropositive only, and 22 among all HSV-2-seropositive women. The high rate among HSV-seronegative women reflects the high efficiency of HSV transmission from women with primary HSV whose infants lack type-specific transplacental antibodies. The authors concluded that cesarean delivery protects against neonatal transmission of HSV and suggested that neonatal HSV infection rates may be reduced by preventing maternal acquisition of genital HSV-1 and HSV-2 infection near term.

Brown ZA, Wald A, Morrow RA, et al. Effect of serologic status and cesarean delivery on transmission rates of herpes simplex virus from mother to infant. JAMA 2003;289:203-9.

HIV-1, HEPATITIS B VIRUS, AND RISK FOR LIVER-RELATED MORTALITY

To investigate the inter-relation of HIV-1 and hepatitis B virus (HBV) infection with liver-related mortality, the Multicenter AIDS Cohort Study classified 5293 men who had sex with men according to their HIV-1 antibody status and their hepatitis-B surface antigen (HBsAg) status. HIV-1 antibody status was ascertained semiannually, and HBsAg status was ascertained at baseline. Mortality rates were estimated in terms of person-years. Of 326 (6%) men who were HBsAg positive, 213 (65%) were HIV-1 positive. Of the 4967 HBsAg-negative men, 2346 (47%) were infected with HIV-1. The liver-related mortality rate was

1.1 per 1000 person-years and was higher in men with HIV-1 and HBsAg (14.2 per 1000 person-years) than in those with only HIV-1 infection (1.7 per 1000 person-years, $P < 0.001$) or only HBsAg (0.8 per 1000 person-years, $P < 0.001$). In men with HIV-1, deaths related to liver disease rose from 2.5 per 1000 person-years before 1996 to 4.0 per 1000 person-years after 1996, when highly active antiretroviral therapy was introduced. Study results showed that coinfecting men were more than 8 times as likely to die from liver disease than those infected with HIV-1 alone and almost 19 times as likely to die from liver disease than those infected with HBV alone.

Thio CL, Seaberg EC, Skolasky R Jr, et al. HIV-1, hepatitis B virus, and risk of liver-related mortality in the Multicenter Cohort Study (MACS). Lancet 2002;360:1921-6.

HERPES SIMPLEX VIRUS TYPE 2 AS A RISK FOR HIV ACQUISITION

The association between HSV-2 seropositivity and subsequent risk for HIV acquisition among men who have sex with men was examined in a nested case-control study. The study enrolled 116 case subjects who seroconverted to HIV during follow-up and 342 control subjects who remained HIV-seronegative. Subjects were followed for 18 months with visits at 6-month intervals and interviews regarding risk behaviors and symptoms of sexually transmitted diseases. Among subjects who were HSV-2-seronegative at baseline, 5 (7.4%) of 68 case subjects and 9 (3.8%) of 236 control subjects acquired HSV-2 during follow-up. Thus, 46% of case subjects were HSV-2-seropositive before HIV seroconversion, compared with 34% of control subjects before their last visits ($P = 0.03$). Prior HSV-2 seropositivity was found to be associated with a 1.8-fold increased risk for HIV seroconversion; having more than 12 sexual partners in the previous year and lack of reported herpes outbreaks in the past 12 months were also independently associated with HIV acquisition. Researchers concluded that HSV-2 infection increases the risk of HIV acquisition, independent of other sexual risk factors, underscoring the need to evaluate HSV-2 suppression with antiviral therapy as an HIV prevention strategy among men who have sex with men.

Renzi C, Douglas JM Jr, Foster M, et al. Herpes simplex virus type 2 infection as a risk factor for human immunodeficiency virus acquisition in men who have sex with men. J Infect Dis 2003;187:19-25.

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