

## Abstracts of current literature on epidemiology, diagnosis, and treatment

Series Editor: Jihad Slim, MD

### EVIDENCE FOR PROBABLE SEXUAL TRANSMISSION OF THE HEPATITIS G VIRUS

A cross-sectional epidemiology study evaluated the role of sexual activity and sexually transmitted diseases (STDs) in the transmission of hepatitis G virus (HGV/GBV-C) by comparing persons at high risk for acquiring an STD (subjects currently seeking treatment for an existing STD) with those at low risk (subjects who had never been treated for an STD). A total of 1005 study volunteers between age 18 and 40 years were recruited; of these volunteers, 944 were included in the STD (n = 453) and non-STD (n = 491) study groups. Clinical staff attempted to obtain a blood sample from each subject on enrollment in the study. Each subject provided the following information: age, sex, ethnic group, and whether he or she had used injection drugs, exchanged money or drugs for sex, or received blood products. Study results showed statistically significant differences between the STD group and the non-STD group in the prevalence of exposure to HGV/GBV-C, hepatitis B virus, and hepatitis C virus. The prevalence of HGV/GBV-C was 11.3% in the STD group and 4.9% in the non-STD group, on the basis of polymerase chain reaction (PCR) results alone. The prevalence was 36.6% in the STD group, compared with 8.8% in the non-STD group, when results of PCR and enzyme-linked immunosorbent assay were combined. Researchers concluded that sexual activity and, possibly, the presence of an STD increases the risk for HGV/GBV-C transmission.

*Frey SE, Homan SM, Sokol-Anderson M, et al. Evidence for probable sexual transmission of the hepatitis G virus. Clin Infect Dis 2002;34:1033-8.*

### SEROPREVALENCE OF HERPES SIMPLEX VIRUS, TYPES 1 AND 2

Data collected by the National Health and Nutrition Examination Survey III, conducted from 1988 to 1994, were used to analyze the seroprevalence of and coinfection with herpes simplex virus type 1 (HSV-1) and type 2 (HSV-2) in the United States and to explore evidence for possible protection by prior HSV-1 infection against infection with HSV-2. Serum samples obtained from subjects age 12 years and older were tested for antibodies to HSV-1 and HSV-2 using a type-specific immunodot assay. Overall, 27.1% of subjects were seronegative for HSV-1 and HSV-2, 51.0% were seropositive for HSV-1 only, and 5.3% were seropositive for HSV-2 only; 16.6% of subjects were coinfecting with HSV-1 and HSV-2. When the seroprevalence of HSV-2 was compared in persons with and without HSV-1 antibody, it was found to be higher in persons who were seroposi-

tive for HSV-1 than in those who were seronegative. Approximately 76% of persons who had HSV-2 antibody also had HSV-1 antibody. Persons infected with HSV-2 only reported a history of genital herpes more frequently (16.2%) than did persons who were coinfecting with HSV-1 and HSV-2 (5.9%). Researchers concluded that the seroprevalence of HSV-1 and age at infection may influence the epidemiology of clinical genital herpes in the United States, even if prior HSV-1 infection does not prevent HSV-2 infection.

*Xu F, Schillinger JA, Sternberg MR, et al. Seroprevalence and coinfection with herpes simplex virus type 1 and type 2 in the United States, 1988-1994. J Infect Dis 2002;185:1019-24.*

### ERYTHROMYCIN-RESISTANT GROUP A STREPTOCOCCI IN CHILDREN

A longitudinal study conducted from October 1998 to May 2001 examined the epidemiology of infections with group A streptococci in children between age 5 and 13 years at a school in Pittsburgh, PA. Throat swabs were obtained from each child for culture twice monthly and with each new respiratory tract illness contracted during each school year. Screening for resistance to erythromycin and clindamycin was initially performed using the Kirby-Bauer disk-diffusion test. The minimal inhibitory concentration of resistant isolates was determined by the E test. During year 3 of the study (October 2000 to May 2001), a total of 1794 cultures were obtained from 100 children, of which 318 isolates (18%) from 60 children were positive for group A streptococci. Of these isolates, 153 (48%) were resistant to erythromycin. None was resistant to clindamycin. A double-disk diffusion test indicated the presence of the M phenotype of erythromycin resistance. Molecular typing indicated that the outbreak was caused by a single strain of group A streptococci. Of 100 randomly selected isolates of group A streptococci obtained from the community between April and June 2001, 38% were resistant to erythromycin. Through this study, researchers detected the emergence of erythromycin resistance in pharyngeal isolates of group A streptococci; this clonal outbreak also affected the wider community.

*Martin JM, Green M, Barbadora KA, Wald ER. Erythromycin-resistant group A streptococci in schoolchildren in Pittsburgh. N Engl J Med 2002;346:1200-6.*

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