

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

Series Editor: Jihad Slim, MD

### HEPATITIS C VIRUS INFECTION-RELATED MORBIDITY AND MORTALITY AMONG PATIENTS WITH HIV INFECTION

A study was conducted to characterize the effect of hepatitis C virus (HCV) infection and assess the factors that might promote the progression of HCV-related chronic liver disease in patients with HIV infection. The study groups consisted of patients followed at the AIDS unit and the Substance Dependence Clinic of the Veterans Affairs Medical Center (Houston, TX) from January 1994 through May 1998 (mean duration of follow-up, 2 years and 10 months). Morbidity and mortality were compared among 166 patients coinfecting with HIV and HCV, 263 patients with HIV infection alone, and 60 patients with HCV infection alone. No differences in HIV loads and CD4 cell counts were observed between the HIV and HIV/HCV groups. Alanine aminotransferase levels were higher (52 U/L vs 35 U/L) and albumin levels were lower (3.5 g/dL vs 3.8 g/dL) among coinfecting patients than they were among patients with HIV alone. Approximately 10% of the patients with HIV/HCV coinfection developed decompensated liver disease. No liver decompensation occurred in patients without coinfection. During the study period, 19 of the coinfecting patients, 18 of the patients with HIV infection alone, and none of the patients with HCV infection alone died. Forty-seven percent of the deaths in the coinfecting group were caused by liver disease. All 18 deaths in the HIV-only group were caused by complications related to HIV infection. The researchers concluded that HCV infection causes increased morbidity and mortality in patients with HIV infection.

*Monga HK, Rodriguez-Barradas MC, Breaux K, et al. Hepatitis C virus infection-related morbidity and mortality among patients with human immunodeficiency virus infection. Clin Infect Dis 2001;33:240-7.*

### MONOTHERAPY MAY BE SUBOPTIMAL FOR SEVERE BACTEREMIC PNEUMOCOCCAL PNEUMONIA

A retrospective case analysis was conducted to test the hypothesis that the use of a combination of effective antibiotic agents as empiric therapy is superior to the use of a single effective antibiotic agent in patients with bacteremic pneumococcal community-acquired pneumonia (CAP). Data were studied from the medical records of adult patients who were admitted to hospitals within the Methodist Healthcare System (Memphis, TN) between January 1, 1996 and July 31, 2000 with a diagnosis of CAP and pneumococcal bacteremia (N = 225). Empiric antibiotic therapy was defined as any antibiotic therapy administered within the first 24 hours after presentation to the hospital. Based on culture and sensitivity results, empiric antibiotic therapy was classified as single effective therapy (SET), dual effective therapy (DET), and more than DET (MET). Ninety-nine patients were classified as receiving SET, 102 as receiving DET, and 24 as receiving MET.

Compared with the other groups, patients who received MET had statistically significantly more severe pneumonia as measured by the Pneumonia Severity Index score and greater predicted mortality. However, mortality within the SET group was significantly higher than it was within the DET group, even when the DET and MET groups were combined. All deaths occurred in patients with a Pneumonia Severity Index score higher than 90, and the predicted mortality-adjusted odds ratio for death with SET in this subgroup was 5.5. The researchers concluded that because SET is associated with a significantly greater risk of death than is DET, monotherapy may be suboptimal for patients with severe bacteremic pneumococcal pneumonia who have Pneumonia Severity Index scores higher than 90.

*Waterer GW, Somes GW, Wunderink RG. Monotherapy may be suboptimal for severe bacteremic pneumococcal pneumonia. Arch Intern Med 2001;161:1837-42.*

### EFFECTS OF NUCLEOSIDE REVERSE-TRANSCRIPTASE INHIBITORS ON CHROMOSOMES AND SEMEN QUALITY IN MEN WITH HIV INFECTION

A prospective study was conducted to investigate the effects of 8 antiretroviral regimens that included at least 2 nucleoside reverse-transcriptase inhibitors on lymphocyte and sperm chromosomes and semen quality in men (n = 26) beginning therapy for HIV infection. The men provided blood and semen samples before treatment and 3 times after beginning treatment with one of the regimens (at approximately 4, 6 to 8, and 12 weeks). No significant effects on cytogenetic parameters, semen volume, or sperm concentration were detected. However, there were significant treatment-related improvements in sperm motility, viability, and morphology. The improvement in sperm motility was most pronounced among men with a CD4 cell count at study entry of greater than 200 cells/mm<sup>3</sup>. The improvements in viability and morphology were most pronounced among men with a CD4 cell count at study entry of less than 200 cells/mm<sup>3</sup>. The researchers concluded that nucleoside reverse-transcriptase inhibitors administered by way of recommended protocols do not induce chromosomal changes in lymphocytes or sperm but may produce improvements in semen quality.

*Robbins WA, Witt KL, Haseman JK, et al. Antiretroviral therapy effects on genetic and morphologic end points in lymphocytes and sperm of men with human immunodeficiency virus infection. J Infect Dis 2001; 184:127-35.*

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