

Infectious Diseases Update

Abstracts of current literature on epidemiology, diagnosis, and treatment

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OUTCOMES IN PATIENTS PREVIOUSLY TREATED FOR LYME DISEASE

A population-based, retrospective cohort study assessed musculoskeletal and neurologic status of patients who had been diagnosed with and treated for Lyme disease ($n = 186$) and control patients without Lyme disease ($n = 167$) to determine the long-term outcomes of previously infected patients. The mean time from infection to assessment was 6 years. All patients were interviewed to obtain a medical history and underwent psychometric testing, serologic testing, and a physical examination. Overall, patients with previous Lyme disease reported more symptoms than control patients (5.7 symptoms versus 3.2 symptoms, respectively). In forward stepwise logistic regressions to adjust for age and sex, patients with previous Lyme disease demonstrated a higher prevalence of memory impairment, joint pain, and fatigue, and worse functional status on pain subscales compared with control patients. However, on physical examination, patients with previous Lyme disease had no increased prevalence of musculoskeletal or neurologic abnormalities compared with control patients. Additionally, the neurocognitive performance of patients with previous Lyme disease was similar to control patients. The study concluded that musculoskeletal and neurologic outcomes of patients with Lyme disease appear favorable; however, evidence suggests that impairment of long-term functional status is possible.

Shadick NA, Phillips CB, Sangha O, et al: Musculoskeletal and neurologic outcomes in patients with previously treated Lyme disease. Ann Intern Med 1999;131:919-926.

FOLLOW-UP OF HEPATITIS VIRUS INFECTION

A retrospective cohort study analyzed serum specimens obtained from military recruits between 1948 and 1955 and frozen for approximately 45 years to determine liver-related morbidity and mortality in hepatitis C virus (HCV)-positive and HCV-negative individuals. A person's serum specimens were analyzed if a corresponding social security number was available with which investigators could obtain morbidity and mortality information; the study included 8568 such individuals. Recombinant immunoblot assay confirmed anti-HCV reactivity in 17 (0.2%) persons. In terms of morbidity, eight HCV-positive individuals (47%) and 3566 HCV-negative individuals (42%) had at least one hospitalization, outpatient visit, or disease-related compensation award; one HCV-positive person had a liver-related diagnosis, and no HCV-positive persons had been diagnosed with or treated for liver cancer. The mortality rate for the entire cohort through December 1996 was 26% (2233 of 8568). Among HCV-positive individuals, death from all causes was 41% compared with 26% in the HCV-negative group. Cause of death data were available for 1896 of the

2233 persons who died. Of seven HCV-positive individuals who died, one person died of unknown causes and was discounted, and one person (16.7%) died of liver disease; the remaining five persons died of causes unrelated to liver disease. Of 1890 HCV-negative individuals who died, 119 (6.3%) died of liver disease. The study concluded that death from all causes was somewhat higher and liver-related deaths occurred slightly more frequently among HCV-positive individuals than among HCV-negative persons. Further studies are needed to determine factors associated with progressive liver disease and to define predictors of outcome in cases of chronic HCV infection.

Seeff LB, Miller RN, Rabkin CS, et al: 45-Year follow-up of hepatitis C virus infection in healthy young adults. Ann Intern Med 2000; 132:105-111.

INFLUENZA VACCINATION OF HEALTH CARE WORKERS AND EFFECTS ON MORTALITY IN ELDERLY LONG-TERM CARE PATIENTS

A randomized, controlled, parallel-group study was performed to determine whether influenza vaccination of health care workers lowers mortality and the frequency of influenza infection in elderly patients in long-term care hospitals. Routine vaccination of health care workers was randomly offered to long-term care geriatric hospitals. Of 1217 health care workers in the vaccination-offered hospitals, 620 (50.9%) received vaccinations compared with 4.8% of the health care workers in the no-vaccine hospitals. The uncorrected mortality among 1437 patients in the study was 102 (13.6%) of 749 patients in the vaccine hospitals compared with 154 (22.4%) of 688 patients in the no-vaccine hospitals. No significant differences between the groups were noted in the proportions of nose and throat samples that were positive for influenza infection, although a higher rate of influenza infection was noted in the no-vaccine hospitals. The study concluded that influenza vaccination among health care workers was associated with a decrease in mortality among patients. Researchers suggest that a potential important factor in obtaining maximum protective effects of vaccination is a good match between the vaccine and the prevailing influenza viruses during a particular influenza season.

Carman WF, Elder AG, Wallace LA, et al: Effects of influenza vaccination of health-care workers on mortality of elderly people in long-term care: a randomised controlled trial. Lancet 2000;355:93-97.

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