Abstracts of current literature on epidemiology, diagnosis, and treatment

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RISK OF DECREASING TREATMENT OPTIONS IN HIV-INFECTED PATIENTS ON PARTIALLY SUPPRESSIVE ANTIRETROVIRAL THERAPY

In order to determine the risk of decreasing future treatment options in treatment-experienced HIV patients who have limited therapeutic options for complete viral suppression and who remain on a partially suppressive treatment regimen, researchers enrolled patients from an ongoing clinic-based prospective cohort study to assess drug resistance. Patients (N = 106) were included if they received a stable treatment regimen for at least 120 days, had a plasma HIV RNA load that exceeded 500 copies/mL, had at least 1 resistance mutation, and had at least 1 follow-up visit. Phenotypic and genotypic resistance testing was performed every 4 months. The estimated risk of developing at least 1 new nucleoside analogue and at least 1 new protease inhibitor mutation at 1 year was 23% and 18%, respectively. Thirty percent of patients lost the phenotypic equivalent of 1 susceptible drug at 1 year. Having fewer total mutations at baseline was a significant predictor of developing a new nucleoside analogue mutation ($P = 0.01$). The probability that an existing mutation would become undetectable using population-based sequencing was 32%. Nonresistance codons had a higher rate of change than codons with known drug resistance. HIV patients who continue with a partially suppressive drug regimen are at risk of losing future treatment options; patients with few baseline mutations are at the highest risk. Given the variation of resistance mutations over time, the results of any single resistance are not likely to be representative of all mutations selected by a given treatment regimen.

Hatano H, Hunt P, Weidler J, et al. Rate of viral evolution and risk of losing future drug options in heavily pretreated, HIV-infected patients who continue to receive a stable, partially suppressive treatment regimen. Clin Infect Dis 2006;43:1329–35.

SEROPREVALENCE OF CYTOMEGALOVIRUS INFECTION IN THE UNITED STATES, 1988–1994

In order to determine cytomegalovirus (CMV) prevalence in a representative sample of the US population and therefore estimate the prevalence among pregnant women, the authors tested for CMV-specific IgG serum samples from participants aged 6 years or older (N = 21,639) enrolled in the third National Health and Nutrition Examination Survey (1988–1994). The overall age-adjusted CMV prevalence was 58.9%. CMV seroprevalence in women of childbearing age (15–44 yr) was 58.3%. CMV seroprevalence steadily increased from 36.3% in patients between 6 and 11 years of age to 90.8% in those aged 80 years and older. Age-adjusted CMV seroprevalence varied substantially by race/ethnicity: 51.2% in non-Hispanic white persons, 75.8% in non-Hispanic black persons, and 81.7% in Mexican Americans. These differences persisted when adjusted for demographic risk factors. Racial/ethnic disparities were significantly pronounced among women: between adolescence (ages 10–14 years) and early adulthood (ages 20–24 years), CMV seroprevalence increased by 38% for non-Hispanic black persons; 7% for non-Hispanic white persons, and less than 1% for Mexican Americans. The estimated number of US women experiencing primary CMV infection each year is 340,000 non-Hispanic white persons, 130,000 non-Hispanic black persons, and 50,000 Mexican-American persons. Programs preventing CMV infection are required given the high number of women at risk and the significance of congenital disease.

Staras SA, Dollard SC, Radford KW, et al. Seroprevalence of cytomegalovirus infection in the United States, 1988–1994. Clin Infect Dis 2006;43:1143–51.

PROTON PUMP INHIBITOR USE AND CLOSTRIDIUM DIFFICILE DISEASE IN HOSPITALIZED PATIENTS

Between April 2002 and March 2005, investigators conducted a population-based, nested case-control study using patient records contained in multiple linked health care databases in Ontario, Canada, to examine the association between proton pump inhibitor (PPI) use and the risk of *Clostridium difficile*–associated disease (CDAD) in elderly patients. Patients were included if they were at least 66 years old and had been hospitalized for CDAD within 60 days of receiving outpatient antibiotic therapy. Patients with CDAD (n = 1389) were each matched with 10 control patients without CDAD (n = 12,303) on the basis of age, sex, and details of antibiotic use (antibiotic class, timing, and number of antibiotics used). PPI use by all study participants was categorized as current (within 90 days), recent (91–180 days), or remote (181–365 days). Conditional logistic regression was used to estimate the odds ratio for the association between outpatient PPI use and risk of hospitalization for CDAD. Patients hospitalized for CDAD were no more likely than control subjects to have received a PPI in the preceding 90 days (adjusted odds ratio, 0.9 [95% confidence interval, 0.8–1.1]). Likewise, an association between hospitalization for CDAD and more remote use of PPIs was not found. PPI use is not a risk factor for hospitalization with CDAD among community-dwelling older patients.

Lowe DO, Mamdani MM, Kopp A, et al. Proton pump inhibitors and hospitalization for Clostridium difficile*-associated disease: a population-based study. Clin Infect Dis 2006;43:1272–6.*

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