

Infectious Diseases Update

Abstracts of current literature on epidemiology, diagnosis, and treatment

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RECOMBINANT HUMAN ACTIVATED PROTEIN C FOR PATIENTS WITH SEVERE SEPSIS

A randomized, double-blinded, placebo-controlled, multicenter trial was conducted to assess whether treatment with recombinant human activated protein C (drotrecogin alfa activated) would reduce the mortality rate among patients with severe sepsis. Included in the study were patients (N = 1690) with systemic inflammation and organ failure due to acute infection. Individuals were assigned to receive an intravenous infusion of either placebo (n = 840) or drotrecogin alfa activated (24 µg/kg body weight per hour; n = 850) for 96 hours and were followed for 28 days or until death of any cause. At baseline, the demographic characteristics and severity of disease were similar among all participants. After 28 days, 30.8% of the placebo group and 24.7% of the drotrecogin alfa activated group had died. On the basis of the prospectively defined primary analysis, treatment with drotrecogin alfa activated was associated with a reduction in the relative risk of death of 19.4% and an absolute reduction in the risk of death of 6.1%. The incidence of serious bleeding was higher in the drotrecogin alfa activated group than in the placebo group (3.5% vs 2.0%). The researchers concluded that treatment with drotrecogin alfa activated significantly reduces mortality among patients with severe sepsis and may be associated with an increased risk of bleeding.

Bernard GR, Vincent JL, Laterre PF, et al. Efficacy and safety of recombinant human activated protein C for severe sepsis. *N Engl J Med* 2001;344:699-708.

PLASMA HIV-1 RNA LEVELS AND PROGRESSION TO AIDS

A prospective cohort study was conducted to assess the association between initial viral load and the rate of progression to AIDS in women and men. From 1988 through 1998, the viral load and the CD4+ lymphocyte count of 156 male and 46 female injection-drug users, who were followed after HIV-1 seroconversion, were measured approximately every 6 months. The median initial viral load after seroconversion was 15,103 copies of HIV-1 RNA/mL in women and 50,766 copies/mL in men. The median initial CD4+ lymphocyte count did not differ significantly according to sex. HIV infection progressed to AIDS in 15 women (median initial viral load: 17,149 copies/mL) and 29 men (median initial viral load: 77,822 copies/mL). For each increase in 1 log in the viral load (on a base 10 scale), the hazard ratio for progression to AIDS was 1.43 among the women and 1.55 among the men. With the use of a cutoff value of greater than 20,000 copies/mL, as recommended by one set of current guidelines (or greater than 30,000 copies/mL, as recommended by another set), more men than women would have been eli-

gible for antiretroviral therapy. However, there was no significant difference in the proportions of men and women who would have been eligible for therapy solely on the basis of an initial CD4+ lymphocyte count of less than 500/mm³ (28% of the women and 31% of the men during the first year after seroconversion). The researchers concluded that the cutoff values in the current guidelines should be reassessed in the light of the equal risk of disease progression for men and women and their equal eligibility for therapy if the CD4+ lymphocyte count is the criterion. Treatment guidelines that are based on the viral load, rather than the CD4+ lymphocyte count, will lead to differences in eligibility for antiretroviral treatment according to sex.

Sterling TR, Vlahov D, Astemborski J, et al. Initial plasma HIV-1 RNA levels and progression to AIDS in women and men. *N Engl J Med* 2001;344:720-5.

IMPROVEMENT OF ATROPHIC GASTRITIS AND INTESTINAL METAPLASIA WITH HELICOBACTER PYLORI ERADICATION

A single-blind, uncontrolled, prospective trial was conducted to determine whether *Helicobacter pylori* eradication is associated with improvement in glandular atrophy and intestinal metaplasia after at least 1 year. Consecutive patients (N = 163) with dyspepsia and *H. pylori* infection received a 1-week course of a proton-pump inhibitor and antibiotic therapy. Endoscopic examination with antral and corporal biopsy was performed before treatment and at 1 to 3 and 12 to 15 months after treatment. Gastritis, atrophy, and metaplasia were graded according to the updated Sydney System. Inflammation and mean neutrophil activity had decreased by 1 to 3 months in the 115 patients in whom *H. pylori* was eradicated, and both glandular atrophy in the corpus and intestinal metaplasia in the antrum had decreased by 12 to 15 months. Glandular atrophy in the corpus improved in 34 (89%) of 38 patients with atrophy before treatment. Intestinal metaplasia in the antrum improved in 28 (61%) of 46 patients who had metaplasia at baseline. No significant histologic changes were observed in the 48 patients in whom eradication was unsuccessful. The researchers concluded that in the year after *H. pylori* eradication, precancerous lesions improved in most patients.

Ohkusa T, Fujiki K, Takashimizu I, et al. Improvement in atrophic gastritis and intestinal metaplasia in patients in whom *Helicobacter pylori* was eradicated. *Ann Intern Med* 2001;134:380-6.

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