Abstracts of current literature on epidemiology, diagnosis, and treatment

Series Editor: Jihad Slim, MD

COMPARISON OF 3-DRUG ANTIRETROVIRAL REGIMENS FOR INITIAL HIV-1 THERAPY

To determine the ideal sequencing of antiretroviral therapy (ART) for treating patients with HIV-1, researchers compared several ART combinations in a multicenter, randomized, partially double-blind trial involving 4-drug regimens and sequential 3-drug regimens; this report focused on the 3-drug regimens. The trial employed a 2 × 3 factorial design. The first comparison was the order in which the combination of nucleoside analogues were administered, and the second comparison was between the drugs combined with the nucleoside analogues. The primary endpoint was the length of time to the failure of the second 3-drug regimen. Patients were ART naive. Patients taking the 3-drug regimens (n = 620) were in 4 treatment groups: group 1—didanosine (ddI), stavudine (D4T), and efavirenz (EFV) followed by zidovudine (ZDV), lamivudine (3TC), and nelfinavir (NFV); group 2—ddI, D4T, and NFV followed by ZDV, 3TC, and EFV; group 3—ZDV, 3TC, and EFV followed by ddI, D4T, and NFV; and group 4—ZDV, 3TC, and NFV followed by ddI, D4T, and EFV. Initial therapy with EFV with ZDV and 3TC (but not EFV with ddI and D4T) appeared to delay the failure of the second regimen, as compared with initial therapy with NFV (hazard ratio [HR], 0.71 [95% CI, 0.48–1.06]), as well as significantly delay the second virologic failure (HR, 0.56 [95% CI, 0.29–1.09]) and the first virologic failure (HR, 0.39). Initial therapy with ZDV and 3TC with EFV (but not ZDV and 3TC with NFV) appeared to delay the failure of the second regimen, as compared with initial therapy with ddI and D4T (HR, 0.68), and significantly delayed both the first and second virologic failures (HR for first virologic failure, 0.39; HR for second virologic failure, 0.47) as well as delaying the failure of the first regimen (HR, 0.35). Initial use of ZDV, 3TC, and EFV achieved viral suppression in least amount of time. The combination of ZDV, 3TC, and EFV is superior to other ART regimens used in this study.

Robbins GK, De Gruttola V, Shafer RW, et al. Comparison of sequential three-drug regimens as initial therapy for HIV-1 infection. N Engl J Med 2003;349:2293–303.

MUPIROCIN PROPHYLAXIS TO PREVENT STAPHYLOCOCCUS AUREUS INFECTION IN DIALYSIS PATIENTS

The authors performed an English-language literature review to determine the efficacy of mupirocin therapy in reducing the rate of *Staphylococcus aureus* infection among patients receiving either hemodialysis (HD) or peritoneal dialysis (PD). Included studies were either randomized controlled trials or cohort studies; had cohorts consisting of adults requiring HD or PD; administered mupirocin to the treatment group and placebo/no therapy to the control group; and assessed the difference in number of *S. aureus* infections between mupirocin-treated and -untreated patients as the primary outcome. Mupirocin therapy reduced *S. aureus* infection rates by 68% among all dialysis patients (95% confidence interval [CI], 57%–76%). Risk reductions were 80% (95% CI, 65%–89%) among HD patients and 63% (95% CI, 50%–73%) among PD patients. Data were then further stratified by type of infection. Among HD patients, *S. aureus* bacteremia was reduced by 78%. Among PD patients, peritonitis and exit-site infections were reduced by 66% and 62%, respectively. Mupirocin therapy substantially lowers the rate of *S. aureus* infection in the dialysis patients.

Tacconelli E, Carmeli Y, Aizer A, et al. Mupirocin prophylaxis to prevent Staphylococcus aureus *infection in patients undergoing dialysis: a meta-analysis. Clin Infect Dis 2003;37:1629–38.*

MORTALITY ASSESSMENT OF PATIENTS WITH COMMUNITY-ACQUIRED PNEUMONIA

Investigators followed a cohort of patients with community-acquired pneumonia (CAP) in order to describe mortality of CAP with long-term follow-up, compare the long-term mortality of CAP with age-matched control subjects, and identify the risk factors associated with long-term mortality in CAP patients. Of the 1555 patients enrolled, 1419 survived longer than 90 days, with a mean follow-up period of 5.9 years. There was significantly higher mortality among pneumonia patients versus age-matched control subjects. Factors significantly associated with long-term mortality were age stratified by decade (HR, 1.3 [95% CI, 1.2–1.4]), do-not-resuscitate orders at presentation (HR, 1.7 [95% CI, 1.2–2.4]), pleural effusion on presenting radiograph (HR, 1.4 [95% CI, 1.1–1.8]), glucocorticoid use (HR, 1.5 [95% CI, 1.2–1.9]), nursing home residence (HR, 1.5 [95% CI, 1.1–2.1]), completed high school education or less (HR, 1.6 [95% CI, 1.2–2.1]), male sex (HR, 1.5 [95% CI, 1.2–1.8]), preexisting comorbidities (Charlson comorbidity score 0: HR, 1.0; score 1–2: HR, 2.1 [95% CI, 1.5–2.7]; score 3–4: HR, 3.1 [95% CI, 2.3–4.3]; score ≥ 5: HR, 6.3 [95% CI, 4.5–8.9]), and lack of feverishness at presentation (HR, 0.7 [95% CI, 0.6–0.9]). CAP patients have significantly higher long-term mortality than do age-matched patients.

Mortensen EM, Kapoor WN, Chang CH, Fine MJ. Assessment of mortality after long-term follow-up of patients with community-acquired pneumonia. Clin Infect Dis 2003;37:1617–24.

Dr. Slim is an assistant professor of medicine, Seton Hall University, South Orange, NJ. Abstracts written by Rita E. Gould, Hospital Physician.