Abstracts of current literature on epidemiology, diagnosis, and treatment

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TIME FROM HIV-1 SEROCONVERSION TO AIDS AND DEATH

An international collaboration assessed the effect of age at seroconversion and exposure category on HIV-1 progression before widespread use of highly-active antiretroviral therapy. Data for 13,030 patients were available for analysis of mortality and survival, whereas data for 12,736 patients were available for analysis of AIDS incidence. Both mortality and AIDS incidence increased with time since seroconversion and age at seroconversion. The annual mortality rates per 1000 person-years adjusted for age at seroconversion and study were 25 per 1000 person-years if less than 5 years since seroconversion, 83 per 1000 person-years for 5 to 9 years since seroconversion, and 155 per 1000 person-years if at least 10 years since seroconversion; for AIDS incidence, the corresponding rates were 36 per 1000 person-years, 96 per 1000 person-years, and 128 per 1000 person-years, respectively. Median survival ranged from 12.5 years for patients age 15 to 24 years at seroconversion to 4 years for patients age 65 years or greater at seroconversion; the corresponding time to AIDS incidence ranged from 11 years to 5 years. Overall mortality rates in the five exposure categories (ie, sex between men, hemophilia, injection drug users, sex between men and women, transfusion) did not differ significantly. The study concluded that age at seroconversion is an important risk factor for mortality and AIDS incidence in all exposure categories, and because of recent advances in antiretroviral therapy, continued monitoring of disease progression and mortality in seroconverters is important.

Collaborative Group on AIDS Incubation and HIV Survival: Time from HIV-1 seroconversion to AIDS and death before widespread use of highly-active antiretroviral therapy: a collaborative re-analysis. Lancet *2000;355:1131–1137.*

INVASIVE AND NONINVASIVE MANAGEMENT STRATEGIES FOR SUSPECTED VENTILATOR-ASSOCIATED PNEUMONIA

A multicenter, randomized, uncontrolled trial evaluated the clinical outcomes and antibiotic use associated with invasive management strategies and clinical, noninvasive management strategies for suspected ventilator-associated pneumonia. Patients (n = 413) with suspected ventilator-associated pneumonia were randomized to receive clinical management or invasive management. Clinical management was based on clinical evaluation and results of immediate microscopic examination of Gram-stained endotracheal aspirates in addition to treatment guidelines of the American Thoracic Society. Invasive management was based on results of direct microscopic examination of bronchoscopic protected specimen brush samples or bronchoalveolar lavage samples. At 14 days, 33 of 204 (16.2%) patients in the invasive management arm had died compared with 54 of 209 (25.8%) patients in the clinical management arm. The mean number of antibiotic-free days at 14 days was 5.0 ± 5.1 in the invasive management arm compared with 2.2 ± 3.5 in the clinical management arm. Mean Sepsis-related Organ Failure Assessment scores were significantly lower in the invasive management arm than in the clinical management arm at days 3 and 7; however, no significant differences in mortality or organ failure were noted between management arms at 28 days. The study concluded that in the management of patients with suspected ventilator-associated pneumonia, an invasive strategy based on quantitative bronchoscopic specimen cultures improves early survival and results in decreased antibiotic use and fewer early organ failures.

Fagon J, Chastre J, Wolff M, et al: Invasive and noninvasive strategies for management of suspected ventilator-associated pneumonia. Ann Intern Med *2000;132:621–630.*

PREDICTORS OF VIROLOGIC RESPONSE IN HIV-POSITIVE PATIENTS

A prospective multicenter cohort study was conducted to determine predictors of virologic success in unselected HIV-positive patients (n = 1469) who started highly-active antiretroviral therapy (baseline) and predictors of failure after success was achieved. Baseline was defined as the date a patient first started a protease inhibitor (PI) or a nonnucleoside reverse transcriptase inhibitor in combination with two or more nucleosides, and median follow-up was 16 months. In Kaplan-Meier analysis, 60.4% of evaluable patients achieved plasma HIV-1 RNA levels below 500 copies/mL at 6 months; a rebound in plasma HIV-1 RNA levels greater than 1000 copies/mL occurred in 35.9% of patients who were available for additional follow-up. The study concluded that independent predictors of virologic success were lower baseline plasma HIV-1 RNA levels, higher baseline CD4+ counts, the initiation of three or more new antiretroviral drugs, and the initial choice of a HAART regimen that included a PI other than saquinavir hard gel.

Paredes R, Mocroft A, Kirk O, et al: Predictors of virological success and ensuing failure in HIV-positive patients starting highly active antiretroviral therapy in Europe. Arch Intern Med *2000;160:1123–1132.*

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