

## MORTALITY, CD4 CELL COUNT DECLINE, AND DEPRESSIVE SYMPTOMS AMONG HIV-SEROPOSITIVE WOMEN

A prospective, longitudinal cohort study was conducted to determine the association between depressive symptoms and HIV-related mortality and decline in CD4 lymphocyte counts among women with HIV. The study's duration was from April 1993 through January 1995, with follow-up through March 2000; participants consisted of 765 HIV-seropositive women aged 16 to 55 years. HIV-related mortality and CD4 cell count slope decline were measured among women with limited or no depressive symptoms, intermittent depressive symptoms, or chronic depressive symptoms. Depressive symptoms were measured by using the self-report Center for Epidemiologic Studies Depression Scale. In multivariate analyses controlling for clinical, treatment, and other factors, women with chronic depressive symptoms were 2 times more likely to die than were women with limited or no depressive symptoms. Among women with CD4 cell counts less than  $200 \times 10^6/L$ , HIV-related mortality rates were 54% for those with chronic depressive symptoms and 48% for those with intermittent depressive symptoms, compared with 21% for those with limited or no depressive symptoms. Also, chronic depressive symptoms were associated with a significantly greater decline in CD4 cell counts after controlling for other variables in the model. The researchers concluded that depressive symptoms among women with HIV are associated with HIV disease progression (controlling for clinical, substance use, and sociodemographic characteristics) and that adequate diagnosis and treatment of depression among women with HIV should be an important aspect of their care.

*Ickovics JR, Hamburger ME, Vlahov D, et al. Mortality, CD4 cell count decline, and depressive symptoms among HIV-seropositive women: longitudinal analysis from the HIV Epidemiology Research Study. JAMA 2001;285:1466-74.*

## PROBABILITY OF HIV-1 TRANSMISSION PER COITAL ACT AMONG MONOGAMOUS, HETEROSEXUAL, HIV-1-DISCORDANT COUPLES

A study was conducted to calculate the probability of HIV-1 transmission per coital act in a Ugandan population and to estimate the effect of various factors thought to influence infectivity. Monogamous couples (N = 174), in which one partner was HIV-1 positive, were retrospectively identified from a population cohort in Rakai, Uganda. The frequency of intercourse and reliability of reporting within couples were assessed prospectively. HIV-1 seroconversion was determined in the uninfected partners, and HIV-1 viral load was measured in infected partners.

The mean frequency of intercourse was 8.9 acts per month, which declined with increasing age and higher HIV-1 viral loads. Members of couples reported similar frequencies of intercourse. The overall probability of transmission per coital act, unadjusted for covariates, was 0.0011. Transmission probabilities increased from 0.0001 per act at viral loads of less than 1700 copies/mL to 0.0023 per act at 38,500 copies/mL (or more) and were 0.0041 with genital ulceration versus 0.0011 without. Transmission probabilities per act did not differ significantly by HIV-1 subtypes A and D, sex, sexually transmitted diseases, or symptoms of discharge or dysuria in the HIV-1 positive partner. The researchers concluded that higher viral load and genital ulceration were the main determinants of HIV-1 transmission per coital act.

*Gray RH, Wawer MJ, Brookmeyer R, et al. Probability of HIV-1 transmission per coital act in monogamous, heterosexual, HIV-1-discordant couples in Rakai, Uganda. Lancet 2001;357:1149-53.*

## RISK FACTORS FOR ACQUISITION OF LEVOFLOXACIN-RESISTANT STREPTOCOCCUS PNEUMONIAE

A case-control study was conducted to identify the risk factors associated with infection or colonization with *Streptococcus pneumoniae* strains resistant to levofloxacin. Twenty-seven case patients, ie, those with levofloxacin-resistant strains of *S. pneumoniae* (LRSP), were compared with 54 control patients characterized as having levofloxacin-susceptible strains. All patients were studied during hospitalization. According to univariate analysis, risk factors that were significantly associated with LRSP colonization or infection included an older age (median age, 75 years for case patients versus 72.5 years for controls), residence in a nursing home, history of recent and multiple hospitalizations, prior exposure to fluoroquinolones and  $\beta$ -lactams, presence of chronic obstructive pulmonary disease (COPD), and nosocomial origin of the bacteria. A logistic regression model showed that presence of COPD, nosocomial origin of the bacteria, residence in a nursing home, and exposure to fluoroquinolones were independently associated with LRSP infection or colonization. Data showed that the majority of the case patients (63%) had COPD. The researchers concluded that elderly patients with COPD are the main reservoir of LRSP.

*Ho PL, Tse WS, Tsang KW, et al. Risk factors for acquisition of levofloxacin-resistant Streptococcus pneumoniae: a case-control study. Clin Infect Dis 2001;32:701-7.*

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