

AIDS Update

Abstracts of current literature on epidemiology, diagnosis, and treatment

Series Editor: Jihad Slim, MD

SHORT-COURSE PROPHYLAXIS AGAINST TUBERCULOSIS

A decision analysis compared the benefits, risks, and cost-effectiveness of short-course prophylaxis regimens with isoniazid prophylaxis in hypothetical HIV-infected patients with CD4 cell counts ≤ 200 cells/mm³ and positive results on tuberculin skin tests. Six short-course prophylaxis regimens were compared with no prophylaxis and with a 12-month isoniazid regimen. Outcome measures included expected 5-year survival rate, lifetime incidence of tuberculosis, life expectancy, and the cost to extend life by one quality-adjusted life-year (QALY). Relevant data was taken from six clinical trials. Patients receiving no prophylaxis had an expected 5-year survival rate of 54.2%, an average life expectancy of 7.79 years, and an incidence of tuberculosis of 381 cases per 1000 cohort patients. Cost of tuberculosis diagnosis and treatment was \$3709 per patient and the quality-adjusted life expectancy was 3.09 QALYs. When compared with no prophylaxis, the 12-month isoniazid regimen was significantly more effective, increasing expected 5-year survival rates by 9%, life expectancy by 0.73 years (8.7 months), and quality-adjusted life expectancy by 5%. The 12-month regimen also decreased lifetime incidence of tuberculosis by 27% and reduced medical care costs by 40%. In terms of 5-year survival rate, life expectancy, incidence of tuberculosis, and quality-adjusted life expectancy, all short-course regimens proved effective when compared with no prophylaxis. The study concluded that HIV-infected patients with CD4 cell counts ≤ 200 cells/mm³ and positive results on tuberculin skin tests benefit from taking the 12-month isoniazid regimen; some short-course prophylaxis regimens are also adequate. Finally, prophylaxis proved cost-effective; all regimens saved medical dollars by preventing active tuberculosis.

Rose DN: Short-course prophylaxis against tuberculosis in HIV-infected persons: a decision and cost-effectiveness analysis. Ann Intern Med 1998;129:779-786.

HERPES SIMPLEX VIRUS TYPE 2 REACTIVATIONS AMONG HIV PATIENTS

A prospective cohort study evaluated frequency, location, and duration of subclinical and clinical herpes simplex virus (HSV) reactivation in HSV-2 seropositive homosexually active men. Patients ($n = 81$) were both HIV-positive ($n = 68$) and HIV-negative ($n = 13$); the HIV-negative patients were at increased risk for HIV-1 infection. Patients collected and submitted viral cultures from oral and genital sites (oropharynx, penile shaft, urethra, and rectum) for 60 days. Study endpoints included total, subclinical, and clinical HSV shedding rates for each anatomic site and overall. At the study's

conclusion, 46% of the HIV-positive men and 31% of the HIV-negative men had reported anogenital lesions (eg, HSV-2 reactivation) during follow-up. HSV-2 was isolated on 405 of 4167 days that cultures were collected from HIV-positive patients and on 24 of 766 days in HIV-negative patients. The rectal area was the most frequent site of HSV-2 shedding for both HIV-positive and HIV-negative patients. In terms of clinical shedding rate, there was no difference between HIV-positive and HIV-negative men, but subclinical shedding rates were higher for HIV-positive men. The study concluded that a low CD4 cell count was significantly associated with both total and subclinical anogenital HSV-2 shedding.

Schacker T, Zeh J, Hu H, et al: Frequency of symptomatic and asymptomatic herpes simplex virus type 2 reactivations among human immunodeficiency virus-infected men. J Infect Dis 1998;178:1616-1622.

GENITAL ULCERS AND HIV COINFECTION

In 10 cities in the United States, sexually transmitted disease clinic patients ($n = 516$) were examined to determine the specific etiology of their genital ulcers. An evaluation of HIV prevalence in these ulcer patients was also completed. Only patients with open sores were eligible. A multiplex polymerase chain reaction assay was used to detect *Haemophilus ducreyi*, *Treponema pallidum*, and herpes simplex virus (HSV) in the ulcer specimens. *H. ducreyi* was detected in ulcer patients in Memphis, TN, and Chicago, IL; *T. pallidum* was detected in ulcer patients in every city except Los Angeles, CA. HSV was detected in more than 50% of the ulcer specimens in nine of the 10 cities included in the study. HIV serologic testing was conducted in 510 of the genital ulcer patients within the study and HIV infection was detected in 6% of this test group. HIV infection was most common in ulcer patients positive for HSV. The study concluded that a periodic assessment of an area's prevalent, ulcer-causing pathogens may be useful to clinicians when establishing or modifying local treatment protocols. In addition, patients with genital ulcers are at increased risk for HIV infection and should be treated appropriately to prevent HIV transmission.

Mertz KJ, Trees D, Levine WC, et al: Etiology of genital ulcers and prevalence of human immunodeficiency virus coinfection in 10 U.S. cities. J Infect Dis 1998;178:1795-1798.

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