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References


A Simple Algorithm for the Diagnosis of AIDS-Associated Genitourinary Tuberculosis

To the Editor—As has been shown in surveys in Canada, the United Kingdom, and the United States, genitourinary tuberculosis (TB) is a common form of nonpulmonary TB, accounting for 27% (range, 14%–41%) of the extrapulmonary TB cases [1]. Among patients with AIDS, the incidence of genitourinary TB may be even higher. In an autopsy study in India, 24 of 35 kidneys from patients who died of AIDS showed evidence of infection, including 17 cases of TB [2]. In a similar study in Mexico City, renal disease was demonstrable in 87 (63%) of 138 autopsies performed on patients with AIDS; infection was the cause of the renal disease in 36 cases, with 19 being due to Mycobacterium tuberculosis [3]. However, no data of the prevalence of genitourinary TB in living patients with AIDS can be found in the literature. TB of the urinary tract is very common among our patients with AIDS in our hospital, we applied a simple algorithm based on the absence of positive results of culture on routine media for patients with AIDS and pyuria, albuminuria, or hematuria in the urine examination. Patients with a diagnosis of pulmonary or extrapulmonary TB were excluded from this study. Of 88 patients classified as having AIDS category C [5] and being hospitalized between September 2003 and December 2004, 22 patients with sterile pyuria, albuminuria, or hematuria had a urine examination and received a diagnosis of TB of the urinary tract. Three overnight urine samples that were neutralized with bicarbonate were obtained from each patient. The samples were centrifuged, and a slide was prepared for Ziehl-Neelsen staining, and, posterior to decontamination with 2% NaOH, the samples were inoculated on 2 L-J slants. Urine samples for 6 patients (27%) were positive for acid-fast bacteria (2 by smear examination and culture and 4 by culture only). All isolates were identified as M. tuberculosis using standard techniques. The patients—5 men and 1 woman—had a mean age of 39.1 years (SD, ± 6.2 years). Albuminuria was the most common laboratory abnormality (5 of 6 patients), followed by pyuria (4 of 6 patients) and hematuria (3 of 6 patients). None of the patients had positive skin test results. One patient had an abnormal chest radiograph, but no pulmonary TB was diagnosed on processing of 3 sputum samples. In addition, another patient received a diagnosis of lymph node TB when his urine examination became positive for M. tuberculosis 4 weeks later. We conclude that genitourinary TB is very common among our patients with AIDS and that an algorithm based on a simple urine examination has a very high predictive value for the diagnosis of genitourinary TB and should be included in the differential diagnosis of patients with AIDS and sterile pyuria, albuminuria, or hematuria.
Cytomegalovirus Disease in HIV Infection: Twenty Years of a Regional Population’s Experience

To the Editor—More than 50% of the adult population worldwide is latently infected with human cytomegalovirus (CMV) [1]. Individuals with human immunodeficiency virus (HIV) infection and CD4+ cell counts \(< 100 \text{ cells/mm}^3\) are at significant risk for CMV reactivation leading to invasive disease [1, 2]. Our objectives were to characterize the incidence, clinical features, and outcome of CMV disease in a geographically defined, HIV-infected population between 1984 and 2005. The study period was divided into the pre-HAART era (1984–1996) and the HAART era (1997–2005).

Data for a total of 2655 adults (CMV seropositivity rate, 93%) with 9417 person-years of HIV follow-up care (3452 person-years during the pre-HAART era and 5965 person-years during the HAART era) were reviewed. A total of 169 patients developed CMV disease (143 patients during the pre-HAART era and 26 patients during the HAART era). In 166 patients, disease was attributable to reactivation of latent CMV infection, whereas in 3 patients, disease developed following documented CMV seroconversion. CMV disease was seen in 92% of patients with CD4+ cell counts \(< 100 \text{ cells/mm}^3\) (median CD4+ cell count, 16 cells/mm3).

The introduction of HAART, which has increased the mean CD4+ cell count of our population (mean CD4+ cell count in the pre-HAART era, 390 cells/mm3; mean CD4+ cell count in the HAART era, 432 cells/mm3; \(P < .001\), by analysis of variance), has reduced the proportion of pa...

Figure 1. Annual incidence of cytomegalovirus (CMV) disease among the southern Alberta population of HIV-infected individuals, 1987–2005. The introduction of HAART was immediately followed by a drastic decrease in the incidence of CMV disease among the HIV-infected population of southern Alberta (\(P < .001\), by nonpooled Student’s t test). There were 4 diagnoses of CMV disease among 15 patients receiving care in 1986 (542 cases of CMV disease per 1000 person-years); this data was omitted for clarity.