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CORRESPONDENCE

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

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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 easily overlooked. The disease is very slow to progress, with minimal and subtle symptoms, and the signs and symptoms mimic those of other infections of the kidney [4].

The prevalence of TB in Venezuela is moderate (27 cases per 100,000 inhabitants), and genitourinary TB is hardly diagnosed in our patients with AIDS. From 2001 to September 2003, only 2 cases of TB were detected in our 600-bed hospital. To determine the prevalence of TB of the urinary tract among hospitalized 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 culture 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.

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