



Opportunistic Infections and Kaposi's Sarcoma among Haitians in the United States

Reports of opportunistic infections and Kaposi's sarcoma among Haitians residing in the United States have recently been received at CDC. A total of 34 cases in 5 states have been reported to date.

Florida: From April 1, 1980, through June 20, 1982, 19 Haitian patients admitted to Jackson Memorial Hospital, Miami, had culture, biopsy, or autopsy evidence of opportunistic infections, and 1 other patient had biopsy- and autopsy-confirmed Kaposi's sarcoma. The infections identified included *Pneumocystis carinii* pneumonia (6 patients), cryptococcal meningitis or fungemia (4), toxoplasmosis of the central nervous system (CNS) (7), *Candida albicans* esophagitis (7) and thrush (5), esophageal or disseminated cytomegalovirus infection (3), progressive herpes simplex virus infection (1), disseminated tuberculosis (8), and chronic enteric *Isospora belli* infection (2). Fourteen patients had multiple opportunistic infections. Three patients had recurring infection. The clinical course has been severe; 10 patients have died. The type of infection was initially recognized at autopsy for 6 patients.

The 20 patients ranged in age from 22 to 43 years (mean 28.4 years); 17 were males. All the patients had been born in Haiti and had resided in the Miami-Dade County area for periods ranging from 1 month to 7 years (median 20.5 months).

When initially seen, 18 of the 20 patients had peripheral lymphopenia (1,000 lymphocytes/mm³). Skin tests performed on 17 patients with various combinations of tuberculin, mumps, streptokinase/streptodornase, *Candida*, and *Trichophyton* antigens were all negative. Immunologic studies at CDC on specimens from the 11 patients tested showed severe T-cell dysfunction. Monoclonal antibody analysis of peripheral-blood T-cell subsets revealed a marked decrease of the T-helper cell subset with inversion of the normal ratio of T-helper to T-suppressor cells.

Of the 7 patients with histologically confirmed toxoplasmosis of the CNS, 5 have died. Because there was no history of underlying conditions or drugs associated with immunosuppression, CNS toxoplasmosis was not considered in the premortem diagnosis of the first 4 cases. Pathology findings for all these patients were confirmed with an immunoperoxidase method for toxoplasmosis and, in one instance, with electron microscopy as well. Tachyzoites were the predominant form of the parasite observed; encysted forms were rare or absent in many tissue blocks.

In addition to the 20 cases reported from Miami, a Haitian female from Naples, Florida, was reported to have *P. carinii* pneumonia.

New York: From July 1, 1981, through May 31, 1982, 10 Haitian residents of Brooklyn were diagnosed as having the following opportunistic infections: *P. carinii* pneumonia (5 patients), CNS toxoplasmosis (2), disseminated cryptococcosis (1), esophageal candidiasis (1), and disseminated tuberculosis (2). None had any underlying disease or history of therapy known to cause immunosuppression. Five died of their infections.

All 10 patients were males and ranged in age from 22 to 37 years. Eight stated they were heterosexual; the sexual orientation of the other 2 was not known. One patient gave a history of intravenous (IV) drug abuse; 8 denied drug abuse, and for 1, no information was available on drug use. The 10 had resided in the United States for periods ranging from 3 months to 8 years (the majority, for 2 years or less). At least 1 patient had onset of illness before arriving in the United States. Immunologic studies performed at CDC on specimens from 2 patients showed results comparable to those for the 11 patients from Miami.

Other States: Opportunistic infections or Kaposi's sarcoma were also reported for 3 other Haitians located in California, Georgia, and New Jersey. All 3 were heterosexual males who denied IV drug abuse. One patient had *P. carinii* pneumonia, another had Kaposi's sarcoma, and the third had esophageal candidiasis. Reported by GT Hensley, MD, LB Moskowitz, MD, AE Pitchenik, MD, MA Fischl, MD, SZ Tabei MD, P Kory, MD, MJ Post, MD, FK Conley, MD (Stanford University School of Medicine), G Dickinson, MD, D Becker, MD, A Fournier, MD, M O'Connell, MD, G Scott, MD, University of Miami School of Medicine, RA Morgan, MD, JQ Cleveland, MD, Dade County Health Dept, H Tennis, Metropolitan Dade County, HT Janowski, MPH, RA Gunn, MD, MPH, State Epidemiologist, Florida Dept of Health and Rehabilitative Svcs; J Viera, MD, S Landesman, MD, E Frank, MD, J Nadler, MD, Kings County Hospital, SUNY Downstate Medical Center, Brooklyn, C Metroka, MD, T Nash, MD, New York Hospital, SM Friedman, MD, DJ Sencer, MD, New York City Dept of Health, R Rothenberg, MD, State Epidemiologist, New York State Dept of Health; T Howard, MD, Cedars-Sinai Medical Center, M Gottlieb, MD, UCLA Medical Center, S Fannin, MD, Los Angeles County Dept of Health Svcs, J Chin, MD, State Epidemiologist, California Dept of Health Svcs; R Kapila, MD, New Jersey College of Medicine and Dentistry, IC Guerrero, WE Parkin, DVM, State Epidemiologist, New Jersey Dept of Health; J Hawkins, MD, Medical College of Georgia, RK Sikes, DVM, State Epidemiologist, Georgia Dept of Human Resources; Div of Parasitic Diseases, Div of Host Factors, Center for Infectious Diseases, Field Svcs Div, Epidemiology Program Office, Task Force on Kaposi's Sarcoma and Opportunistic Infections, CDC.

Editorial Note

Editorial Note: The occurrence of severe opportunistic infections among 32 Haitians recently entering the United States is a new phenomenon. The *in vitro* immunologic findings and the high mortality rate (nearly 50%) for these patients are similar to the pattern recently described among homosexual males and IV drug abusers (1-4). None of the 23 Haitian males questioned reported homosexual activity, and only 1 of 26 gave a history of IV drug abuse--substantially lower than the prevalence reported for heterosexual patients of other racial/ethnic groups who had Kaposi's sarcoma or opportunistic infections. Of the 34 patients discussed above with opportunistic infections or Kaposi's sarcoma, 30 (88%) were males. All patients were between 20 and 45 years of age. Data from medical screening of 10,780 Haitians entering the United States between March and November 1980 indicated that 73% were adult males. Only 2% of those screened were 12 years old, and over 90% were 45 years old (5).

The occurrence of opportunistic infections among adult Haitians with no history of underlying immunosuppressive therapy or disease has not been reported previously. However, 11 cases of disseminated Kaposi's sarcoma have been diagnosed by

dermatologists in Port au Prince, Haiti, over a period of 2 1/2 years (6). The reason for the high prevalence of disseminated tuberculosis among the group of patients discussed above is not known; but a high prevalence of tuberculosis has been documented among recent Haitian entrants (7), and the disease has been reported to disseminate more frequently among persons who are immunocompromised (8,9).

To date, it has not been established whether the cases of toxoplasmosis represent reactivation of old lesions acquired in Haiti or whether they are progressive primary infections acquired in the United States. However, serum specimens obtained from 2 patients in Miami and tested at CDC by indirect immuno-fluorescence (IIF) were negative for IgM antibody to *Toxoplasma*. This suggests that the infections of these 2 patients were not recently acquired. Serologic tests such as the IIF may be helpful in establishing or excluding a diagnosis of toxoplasmosis for patients with CNS symptoms. Tachyzoites in tissue specimens can be visualized more effectively using Giemsa stain or a recently developed immuno-peroxidase method (10) than with the standard hemotoxylin and eosin staining.

It is not clear whether this outbreak is related to similar outbreaks among homosexual males, IV drug abusers, and others, but the clinical and immunologic pictures appear quite similar. CDC is currently collaborating with local investigators to define this problem and identify risk factors.

Physicians who care for Haitian patients should be aware that opportunistic infections may occur in this population. Health-care providers who diagnose opportunistic infections or Kaposi's sarcoma among persons who do not have underlying disease and are not on immunosuppressive therapy are requested to report such cases to CDC through their appropriate state and local health departments.

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This page last reviewed 5/2/01