



## Current Trends Update: Acquired Immunodeficiency Syndrome (AIDS) among Patients with Hemophilia -- United States

In 1982, six hemophilia A patients who had developed *Pneumocystis carinii* pneumonia (PCP) and other opportunistic infections and who met the CDC case definition of AIDS were reported by CDC (1,2). As of November 30, 1983, physicians and health departments in the United States have reported a total of 21 AIDS cases among hemophilia patients--19 among patients with hemophilia A and two among patients with hemophilia B. In addition, seven cases from outside the United States meeting the CDC definition of AIDS in association with hemophilia A have been brought to CDC's attention. Of the hemophilia cases in the United States, one was diagnosed in 1981; eight, in 1982; and 12, to date in 1983 (Figure 1). Two patients are known to have had other risk factors for acquiring AIDS.

To date, no cases of Kaposi's sarcoma have been reported in association with hemophilia; each patient had an opportunistic infection suggestive of an underlying cellular immunodeficiency. PCP was the most common opportunistic infection in hemophilia patients with AIDS and has occurred in 20 (95%) of the U.S. patients. Many of these patients have had other opportunistic infections, principally candidiasis, cryptococcosis, toxoplasmosis, and histoplasmosis, or infections with cytomegalovirus and *Mycobacterium avium-intracellulare*. The geographic distribution has included 15 states, with four cases each in the Mid-Atlantic, South Atlantic, and East North Central regions, three in the East South Central region, two each in the New England and West North Central regions, and one each in the Pacific and Mountain regions. No state was the residence for more than two patients.

The National Hemophilia Foundation (NHF) and CDC have conducted a mail survey of 116 hemophilia treatment centers (HTCs) designated by the NHF in the 48 contiguous states, which estimated the prevalence of AIDS-associated diseases from 1978 to 1982 among approximately 6,700 hemophilia patients; a separate review of U.S. deaths reported to the National Center for Health Statistics as being hemophilia-related was also included in the survey. This survey failed to identify any diagnoses suggestive of AIDS occurring among hemophilia patients before the first case diagnosed in September 1981 or any cases other than those reported here. In addition to the 21 reported U.S. hemophilia patients with AIDS, some patients with hemophilia have been reported with unexplained, possibly AIDS-associated phenomena that do not fit the CDC criteria for an AIDS diagnosis, including lymphadenopathy syndrome (3), thrombocytopenic purpura (4), and Burkitt's lymphoma (5). Reported by S Karp, MS, M Shuman, MD, Moffitt Hospital, University of California--San Francisco, S Dritz, MD, City/County Health Dept, San Francisco, California; S Marchesi,

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### Editorial Note

Editorial Note: Although the etiology of AIDS remains unknown, epidemiologic evidence suggests an infectious cause (6,7). The possibility of blood or blood products as vehicles for transmission of AIDS to hemophilia patients is supported by the increased risk of AIDS in intravenous drug abusers (8) and reports of transfusion-associated AIDS cases (9,10). Patients with hemophilia receive transfusions of anti-hemophilic factor and plasma factor concentrates prepared from pools of sera from 2,000 to 20,000 donors. Cryoprecipitate and plasma factor preparations are associated with the transmission of several known viral agents, including cytomegalovirus, hepatitis B virus, and the virus(es) of non-A, non-B hepatitis (11). However, at least nine U.S. hemophilia-associated AIDS patients also received other blood products in the 5 years preceding their AIDS diagnoses.

The NHF's Medical and Scientific Advisory Council has issued specific recommendations for managing hemophilia patients receiving blood and blood products (12). In addition, the U.S. Public Health Service has requested that persons at high risk of acquiring AIDS refrain from donating plasma and/or blood and that an extensive effort be undertaken to develop and evaluate the use of laboratory tests for screening blood or blood products obtained from individuals in high-risk groups (13,14). Physicians diagnosing opportunistic infections or unusual neoplasms in hemophilia patients who have not received antecedent immunosuppressive therapy are encouraged to report these findings to local or state health departments and to CDC.

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