

Persistent, Generalized Lymphadenopathy among Homosexual Males

Since October 1981, cases of persistent, generalized lymphadenopathy—not attributable to previously identified causes—among homosexual males have been reported to CDC by physicians in several major metropolitan areas in the United States. These reports were prompted by an awareness generated by ongoing CDC and state investigations of other emerging health problems among homosexual males (1).

In February and March 1982, records were reviewed for 57 homosexual men with lymphadenopathy seen at medical centers in Atlanta, New York City, and San Francisco. The cases reviewed met the following criteria: 1) lymphadenopathy of at least 3 months' duration, involving 2 or more extra-inguinal sites, and confirmed on physical examination by the patient's physician; 2) absence of any current illness or drug use known to cause lymphadenopathy; and 3) presence of reactive hyperplasia in a lymph node, if a biopsy was performed.

The 57 patients had a mean age of 33 years and the following characteristics: all were male; 81% were white, 15% black, and 4% Hispanic; 83% were single, 6% married, and 11% divorced; 86% were homosexual, 14% bisexual. The median duration of lymphadenopathy was 11 months. Ninety-five percent of patients had at least 3 node chains involved (usually cervical, axillary, and inguinal). Forty-three patients had had lymph node biopsies showing reactive hyperplasia. Approximately 70% of the patients had some constitutional symptoms including fatigue, 70%; fever, 49%; night sweats, 44%; and weight loss of \geq 5 pounds, 28%. Hepatomegaly and/or splenomegaly was noted among 26% of patients.

Recorded medical histories for the 57 patients suggested that the use of drugs such as nitrite inhalants, marijuana, hallucinogens, and cocaine was common. Many of these patients have a history of sexually transmitted infections (gonorrhea 58%, syphilis 47%, and amebiasis 42%). Of 30 patients skin-tested for delayed hypersensitivity response, 8 were found to be anergic on the basis of at least 2 antigens other than purified protein derivative (PPD).

Immunologic evaluation performed at CDC for 8 of the above patients demonstrated abnormal T-lymphocyte helper-to-suppressor ratios (<0.9) for 2 patients. Since this review, immunologic evaluations at CDC of 13 additional homosexual males with lymphadenopathy from Atlanta and San Francisco revealed 6 with ratios of <0.9. The normal range of Tlymphocyte helper-to-suppressor ratios established in the CDC laboratory for healthy heterosexual patients is 0.9-3.5 (mean of 2.3). The normal range is being established for apparently healthy homosexual males.

Since the initiation of this study, 1 patient with lymphadenopathy has developed Kaposi's sarcoma.

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Editorial Note: The report above documents the occurrence of cases of unexplained, persistent, generalized lymphadenopathy among homosexual males. There are many known causes of generalized lymphadenopathy including viral infections (e.g., hepatitis B, infectious mononucleosis, cytomegalovirus infection, rubella), tuberculosis, disseminated *Mycobacterium avium-intracellulare*, syphilis, other bacterial and fungal infections, toxoplasmosis, connective tissue disorders, hypersensitivity drug reactions, heroin use, and neoplastic diseases (including leukemia and lymphoma) (2). Causes for the persistent lymphadenopathy among patients discussed above were sought but could not be identified.

This unexplained syndrome is of concern because of current reports of Kaposi's sarcoma (KS) and opportunistic infections (OI) that primarily involve homosexual males (1,3). Epidemiologic characteristics (age, racial composition, city of residence) of the homosexual patients with lymphadenopathy discussed here are similar to those of the homosexual KS/OI patients. Thirty-two (44%) of 73 Kaposi's sarcoma patients and 14 (23%) of 61 *Pneumocystis carinii* pneumonia patients reported to CDC in the period mid-June 1981-January 1982 had a history of lymphadenopathy before diagnosis (3). *Mycobacterium avium-intracellulare* (an opportunistic agent) has been isolated from the lymph nodes of a homosexual patient (4). Moreover, the findings of anergy and depressed T-lymphocyte helper-to-suppressor ratios in some of the patients with lymphadenopathy suggest cellular immune dysfunction. Patients with KS/OI have had severe abnormalities of cellular immunity (5,6). The relationship between immunologic findings for patients with lymphadenopathy and patients with KS/OI remains to be determined.

Although these cases have been identified and defined on the basis of the presence of lymphadenopathy, this finding may be merely a manifestation of an underlying immunologic or other disorder that needs to be characterized further. Virologic and immunologic studies of many of these patients are currently under way. An analysis of trends in incidence for lymphadenopathy over the past several years is being conducted to determine whether this syndrome is new and whether homosexual males are particularly affected. Results of these studies and follow-up of these patients are necessary before the clinical and epidemiologic significance of persistent, generalized lymphadenopathy among homosexual males can be determined. Homosexual male patients with unexplained, persistent, generalized lymphadenopathy should be followed for periodic review.

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Epistaxis and Liver-Function Abnormalities Associated with Exposure to "Butyl" Caulk — Kentucky

In a recent study the National Institute for Occupational Safety and Health (NIOSH) was asked to investigate a report of possible toluene overexposure involving a person who lived in a log home in Brodhead, Kentucky.

On February 27, 1981, a 45-year-old male resident of Brodhead was hospitalized for uncontrolled epistaxis. Three days earlier, while the walls on the first floor of his log home were being caulked with a toluene- and petroleum distillate-based "butyl" caulk, he had noted a "strong solvent odor." However, he remained in the house almost continuously. Over the next 3 days, he experienced increasingly severe headache, nausea, dizziness, and feelings of disorientation. On the fourth morning he had a nosebleed that became profuse in early evening, requiring that he be hospitalized. His wife and 2 sons, who slept upstairs, had similar symptoms, including nosebleeds, but to a milder degree. Neither he nor his family had a history of nosebleeds or bleeding diathesis. Results of blood tests done during his hospitalization to determine coagulation parameters were consistently normal.

In the first 5 days of his hospitalization, the patient continued to have intermittent nasal hemorrhage despite packing. He received 8 units of blood in the same period and underwent surgery on March 4. On March 6, a routine blood chemistry screen showed elevations of total bilirubin, alkaline phosphatase, gamma glutamyl-transferase, serum glutamic oxalacetic transaminase, and lactate dehydrogenase. His liver function returned to normal within 2 weeks, except for a persistently elevated alkaline phosphatase. Although he did not and does not consume alcohol, he has since developed moderate hepatomegaly. A liver biopsy done on February 1, 1982, showed fatty infiltration and fibrosis. There was no history of hepatitis or exposure to hepatitis; however, laboratory tests to rule out viral hepatitis were not done.

Evaluation of the log home included air sampling and caulk analysis by a private environmental consulting firm on April 5, 1981, and a visit by NIOSH investigators on April 20 (1). Air sampling on April 5 showed toluene at a concentration of 2 parts per million (ppm) in the patient's bedroom (acceptable NIOSH limit is 100 ppm). NIOSH investigators noted that the house was heated to about 75 F (24 C) without humidification. The patient's bedroom had bare log walls with caulk visibly extruding between the logs. NIOSH calculated the surface area of exposed caulk in the bedroom to be 4.4 square feet. Quantitative analysis of a bulk sample of fresh caulk yielded 6% toluene, 0.5% xylene, and 15.5% "naphtha" or mixed petroleum distillates.

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Editorial Note: Symptoms compatible with central nervous system (CNS) involvement have been reported following occupational exposure to toluene, xylene, and naphtha (2). Airborne xylene in high concentrations is particularly irritating to mucous membranes (3). Although toxic hepatitis has been reported only rarely in association with toluene and xylene exposures (4,5), persistently elevated alkaline phosphatase was reported for a glue "sniffer" who was