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BRIEFING
Kaposi's Sarcoma

The MMWR of June 5, 1981, contained a report of 5 cases of Pneumocystis carinii pneumonia occurring since October 1980 among young, previously healthy, homosexual men in Los Angeles. All patients tested showed evidence of previous or current cytomegalovirus (CMV) infection and the three patients tested demonstrated a decrease in their cellular immune response. Since June 5, we have become aware of additional Pneumocystis pneumonia cases and other opportunistic infections among homosexual men in New York City, California, and Georgia.

The June 5 MMWR prompted reports from New York City and California of cases of Kaposi's sarcoma (KS) in this same population (i.e. previously healthy homosexual men). Kaposi's sarcoma is a malignant neoplasm which is manifested primarily by multiple vascular nodules in the skin and other organs. Rare in the United States, the disease has been previously confined here to elderly men, in whom skin manifestations predominate and the disease is generally relatively benign. Two exceptions to this epidemiologic pattern have been previously noted. An endemic belt has been described in equatorial Africa where KS affects predominantly children and young adults and accounts for up to 9% of all cancers. KS has also been found to develop in renal transplant patients and others receiving immunosuppressive therapy.

A specific association with CMV infection has been demonstrated among American patients with KS. The epidemiologic similarity to Burkitt's lymphoma, serologic association with an herpesvirus (CMV), and an apparent increased incidence among immunosuppressed patients has led to speculation that immunosuppression and virus activation might contribute to the etiology of this disease.

Serologic evidence of past CMV infection and current excretion of CMV has been shown to be much more common among homosexual men than heterosexual controls.

Last week, CDC sent two epidemiologists to New York City to consult with the clinical investigators who first alerted us to the problem. The physicians had reported information on 20 cases of KS diagnosed among homosexual men aged 25-51 years in New York City during the past 18-24 months. Record review from their Medical Center identified only 3 cases in this age group from 1961-1979. The disease in this group seems characterized by systemic involvement of multiple organs including the GI tract, lymphoid organs, liver, lung, and even brain. In this regard it resembles more the African form of the disease. Though some of these patient have gone into brief remission, there is no recognized cure for KS. Seven of the 20 New York City patients have died and others are currently not responding to chemotherapy.

What are the Centers doing?

1. An MMWR article on KS will be published on June 26, 1981.
2. A multi-Center Task Force has been formed to address the problem including experts in infections among homosexual men, parasitology, cancer epidemiology, virology, and immunology.
3. A work group will visit New York City the week of June 28 to gather medical and epidemiologic information on cases, interview the physicians and patients, and collect laboratory specimens.
4. After collection and analysis of this information, hypotheses will be developed and further epidemiologic and laboratory studies will be designed and conducted.
5. Epidemiologists from the Center for Environmental Health are working closely with the NCI biometry Branch to search established metropolitan SEER* registries for age-specific incidence of KS.

*Surveillance, Epidemiology, and End Results (of cancer)

What are others doing?

Clinical and laboratory scientists in New York City (NYU, Sloan-Kettering), California (Stanford, University of California), and Bethesda (National Cancer Institute) have become aware of this problem and are planning clinic and laboratory studies.

Initial Hypotheses

1. Something is leading to immunosuppression among healthy, young, homosexual men. Once suppressed, these men develop opportunistic infection (e.g. pneumocystis, disseminated herpes, cryptococcal meningitis, etc.) and/or Kaposi's sarcoma.
2. Frequent reinfection and/or reactivation of CMV infection or exposure to multiple other infections (e.g. amebiasis) might lead to production of defective virus with oncogenic potential. For one, CMV infection has been shown to include transient abnormalities of in vitro cellular-immune function in otherwise healthy human hosts.
3. Various environmental substances (e.g. therapeutic or psychoactive drugs) or specific tumor viruses may act as carcinogens or cocarcinogens.

Other Issues:

Confidentiality: Publicity about these disorders may focus on the patients' sexual preference rather than on their very serious illnesses. Such publicity could compromise the patients' rights to privacy and seriously adversely affect epidemiologic investigations. In addition, it is not certain that the increase in these disorders is restricted to homosexual men.

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