

SCREENING STUDIES OF LATENT ACQUIRED IMMUNE
DEFICIENCY SYNDROME (AIDS) AMONG
PATIENTS WITH VENEREAL DISEASES

ATHESIS

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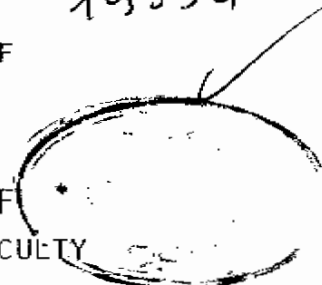
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INTRODUCTION & AIM OF THE WORK

Since (1981), investigators from several medical centers have reported details of the acquired immune deficiency syndrome (Gottlieb et al. 1981 - Masur et al. 1981 - Siegel et al. 1981 - Fauci, 1982 - Mildvan et al. 1982).

Most individuals developing this disorder are homo-sexually active men. Intravenous drug abusers, Haitians, and haemophiliacs are affected less often. Sexual partners and children of individuals at risk, as well as recipients of blood products from these individuals may be at increased risk of developing the syndrome (CDC, 1984. a).

The aetiology of AIDS is unknown, but it is almost surely due to a transmissible agent, most likely a virus (Fauci et al. 1984), which is transmitted sexually, or less commonly through exposure to blood or blood products (CDC, 1983. d). The existence of pediatric form of AIDS, makes Scott et al. (1984) to suggest the possibility of transplacental, perinatal, or postnatal transmission.

The clinical manifestations are those of severe life-threatening opportunistic infections, frequently pneumocystis carinii pneumonia, and/or neoplasms particularly the rare Kaposi's sarcoma (Fauci et al. 1984). A retrospective review

of cases indicates that many patients with AIDS have a prodromal illness characterized by fever, lymphadenopathy, malaise, weight loss, oral thrush, and/or diarrhea lasting for several weeks or months (Small et al. 1983 - Clumeck et al. 1983 - Friedman-Kein et al. 1982).

The syndrome may also represent a spectrum of disease, that may involve in addition to the classical AIDS, the immunologic abnormalities in otherwise asymptomatic individuals, and a syndrome of chronic lymphadenopathy, often associated with constitutional symptoms of non-life threatening infections (DeShazo et al. 1984 - Levine et al. 1984).

AIDS is an acquired and profound defect in cellular immune function. The particularly affected are those functions mediated by T-lymphocytes, such as delayed type hypersensitivity, proliferative responses to mitogens and recall antigens, alloreactivity and cytotoxicity. Alteration in the distribution of certain subpopulations of T-cells as defined by monoclonal antibodies accompany the defect. The hallmark, or at least a most consistent finding has been a depression in the ratio of T-helper cells to T-suppressor cells (Gottlieb et al. 1981 - Masur et al. 1981 - Siegal et al. 1981 - Mildvan et al. 1982 - Greene et al. 1982 - Stahl et al. 1982 - Pitchenik et al. 1983).

The reported incidence of AIDS has continued to rise steadily (roughly doubled every six months), and the overall mortality rate may approach 100%, making the disease one of the extra-ordinary infectious disease in the history (Fauci et al. 1984).

Critical issues surrounding the diagnosis, screening of blood products, treatment for complicating infections and cancers, and prognosis for immunologic recovery in affected person are unresolved. The identification of the cause of AIDS and the institution of effective preventive measures require the urgent attention of the medical and scientific community worldwide (Gottlieb et al. 1983).

The aim of our study is to write a review of literature about AIDS, and throw a spotlight on the various aspects of the disease, its epidemiology, aetiopathogenesis, clinical manifestations, immunologic abnormalities, treatments, and prevention. We will also evaluate the cell mediated immunity in 30 venereal cases, as well as, 30 controls, by using the purified protein derivative and candida albicans antigens, and search for the constitutional signs and symptoms of the prodromal stage of AIDS (pre-AIDS) and chronic lymphadenopathy syndrome and AIDS among them.

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REVIEW OF LITERATURE

EPIDEMIOLOGY

In the spring of 1981, the Centers for Disease Control (CDC), recieved reports of unprecedentedal occurrence of Kaposi's sarcoma and pneumocystis carinii pneumonia (PCP) in apparently previously healthy homosexual men in the United States of America (USA) (CDC. 1981). Because of the profound disturbances in the cellular immune function underlying this illness, the disease has been termed Aquired Immune Deficiency Syndrome (AIDS) (Gottlieb et al, 1983).

DEFINITION:

For surveillance purposes, the CDC defines a case of AIDS as "a disease, at least moderately predictive of a defect in cell mediated immunity, occuring in person with no known cause for diminished resistance to that disease. Such disease includes, Kaposi's sarcoma, pneumocystis carinii pneumonia and other serious opportunistic infections (CDC. 1982. c).

INCIDENCE AND DISTRIBUTION:

The story of AIDS started in June and July 1981, when 15 cases of pneumocystis carinii pneumonia and 26 cases of Kapos's sarcoma were reported to the CDC, in previously healthy homosexual men, in New York, California, Los Angeles,

and San Francisco (CDC. 1981). Since then and by September 2, 1983, 2259 cases who met the surveillance case definition had been reported from 41 states and Puerto Rico in USA (CDC. 1983.e).

Although the vast majority of patients has resided in USA, the syndrome has been described in many other countries as well, by August 1983, 122 cases have been reported (Fauci et al. 1984).

In USA, most cases had been reported among residents of big cities. The distribution of reported cases in USA by state residency is as follows: 42% of all cases in New York city, 11% in San Francisco, 7% in Los Angeles, 5% in Miami, and 35% in other states (CDC. 1983.e).

In retrospect, AIDS was first seen in USA in 1978 or 1979, at least two years before the first reports. By using the active retrospective surveillance including, review of selected cancer registries, contact with selected physicians, and review of requests received by CDC's Parasitic Disease Drug Service for pentamidine (a drug used for the treatment of PCP), 77 patients were found to meet the CDC's surveillance definition for AIDS (Jaffe et al. 1983.a).

The 2259 cases reported in USA can be distributed

according to the year of diagnosis as follows: 58 cases (3%) before 1981, 231 cases (10%) in 1981, 883 cases (39%) in 1982, and 1087 cases to September 2, 1983 (CDC. 1983. e).

Previous reports indicate that, the number of patients in the USA, is increasing in alarming rate, and becoming widely distributed, that it covers almost all states.

RISK GROUPS:

Although AIDS was first recognized in homosexual men (CDC. 1981), the disease is no longer confined to this group. Other groups with increased risk have subsequently been identified, these groups include, intravenous drug abusers (Masur et al. 1981), Haitian in USA (Vieira et al. 1983) and Hiati (Pape et al. 1983) haemophiliacs receiving factor VIII concentrate (Davis et al. 1983. a- Ragni et al. 1983), female sexual partners of patients with AIDS (Harris et al. 1983) or persons at high risk for acquiring AIDS (Pitchenik et al. 1984), prison inmates (Wormser et al. 1983), blood transfusion recipients (Deresinski et al. 1984), and others. For the purpose of epidemiologic investigations AIDS patients have been classified into groups at great risk of acquiring the syndrome. AIDS risk groups are arranged in hierarchical order, so that cases with characteristics of more than one group are tabulated only in the group listed first (CDC. 1983. c).

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The groups at increased risk for AIDS are: Homosexual and bisexual men, intravenous drug abusers, Haitian living in the USA and Haiti, haemophiliacs receiving factor VIII concentrate, female and male sexual partners of patients with AIDS, and groups with non apparent or unknown risk factors (Fauci et al. 1984 - Gottlieb et al. 1983).

The 2259 patients reported in USA can be distributed according to the risk groups as follows: homosexual and/or bisexual men constitute about 71% of the total number of patients, those who have used intravenous drugs 17%, resided Haitian persons 5%, haemophiliacs 1%, heterosexual partners of patients with AIDS, or individuals at increased risk of AIDS 1%, those exposed to blood transfusion 1%, and others whom information about risk factors is either absent, incomplete, or not related to the above mentioned risk factors constitute about 4% of the total number of the patients (CDC. 1983.e).

Clearly the homosexual and bisexual men constitute the main risk group for acquiring AIDS, as it comprises 71% of the total number of cases reported to the CDC in United States of America. It is naturally that this group attracted the attention to be studied to identify the risk factors within this group.

Jaffe et al.(1983. b) conducted a case (homosexual patient) - Control (healthy homosexual) study to identify the risk factors for the occurrence of Kaposi's sarcoma and PCP in homosexual men. They found that cases have reported a history of syphilis, hepatitis other than B, parasitic diarrhea and treatment for enteric parasites, almost twice more frequent than controls. Also they more frequently use the inhalant nitrites and more likely to have reported inserting their tongues (rimming) or hands (fisting) into partner's rectum than the controls do. They also reported more exposure to semen, faces and rectal trauma during sexual intercourse than controls.

Jaffe et al.(1983. b), also found, that the most striking feature is the numbers of sexual partners. The number of sexual partners per year for cases is more than twice that of controls, also the cases reported a higher number of partners in the last year before illness, and more bath houses attendance than controls.

Jaffe et al.(1983. b), concluded that the occurrence of AIDS in homosexuals is associated with certain aspects of their life style, and that the number of sexual partners seems to be the most important risk factor; other factors specially drug abuse must be considered.

patient) - Control (healthy homosexuals) study to identify the risk factors for development of Kaposi's sarcoma in homosexual men.

Marmor et al (1982), found that patients reported higher rate of sexually transmitted diseases, and other infections specially amoebiasis and giardiasis, than did controls. Mononucleosis was reported more often by patients than controls. They also found that patients reported greater use of metronidazole (flagyl), recreational drugs including, amyl nitrite, ethyl chloride, cocaine, phencyclidine, methaqualone and amphetamine. Amyl nitrite was found the only drug reported to be used by all patients. Recreational drug use by the time before diagnosis is significantly greater in patients than controls.

Marmor et al (1982), found that the patients were more promiscuous than controls.

Judson et al (1980) study, compared the prevalence rates of the most common sexually transmitted diseases in heterosexual and homosexual men. This study resulted in indicating that the homosexual men were significantly more likely than heterosexual men to have gonorrhea (30.31% vs. 19.83%), early syphilis (1.08% vs. 0.34%) and anal warts