

Acquired Immune Deficiency Syndrome in Thailand*

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The first case of Acquired Immune Deficiency Syndrome (AIDS) occurred in Thailand in 1984. One death and several patients with opportunistic infections due to the full-blown syndrome have been diagnosed at two of Bangkok's teaching hospitals. House officers at those hospitals had been expecting the occurrence of AIDS for at least three years prior to that time and had been wondering why it took until late 1984 for the first patient to present himself.

Many excellent review papers have been published concerning AIDS,^{1,4} and it is not the goal of this essay to duplicate them. AIDS may well represent this decade's most serious worldwide public health challenge; a disease transmitted by asymptomatic carriers; one that has a long latent stage followed by an attack on the very essence of man's defense mechanism. A partial understanding of transmission mechanisms, clinical manifestations and the natural history of AIDS is currently emerging. French and American researchers simultaneously discovered the agent now generally known as HTLV-III, a retrovirus related to the human T-cell leukaemia agent.^{5,6}

In the short period since the discovery of this disease in 1981,⁷ we have learned that after inoculation by blood,⁸ saliva⁹ or semen¹⁰ there

is an incubation period ranging from six days to many years.¹¹ Some patients first develop an acute illness resembling infectious mononucleosis. They have viraemia and their body fluids can be highly infectious to other people. However, not all such patients have HTLV-III antibodies during this time.^{3,4} There is a reversal of T-cell subsets owing to an increase in suppressor cells during this initial phase. After an illness of 3-19 days, the patient recovers and may or may not become a carrier of the HTLV-III virus.¹¹ What happens after that is not yet entirely clear. However, we do know that some patients will develop prolonged lymphadenopathy, a wasting illness or asymptomatic immunodeficiency. This is called AIDS-related complex.^{2,11} Some patients may recover completely.^{2,11} A small group of individuals may harbour a sustained HTLV-III infection for many years which results in severe T-helper-cell damage leading to the full-blown syndrome.^{2,11} AIDS is currently defined as a disease characterised by the occurrence of opportunistic infections (most commonly *Pneumocystis carinii* pneumonia) or rare malignancies (Kaposi's sarcoma) in otherwise healthy individuals. The majority of patients (95%) belong to one of several high-risk groups comprising

promiscuous male homosexuals, drug addicts, haemophiliacs, Haitians, residents of West and Central Africa and spouses or children of members of such groups.² Several cases have also been reported in which transmission has occurred as a result of isolated blood transfusion.^{8,12}

Studies of homosexual and bisexual men have shown that acquisition of the infection is closely associated with frequent recipient anal coitus.² The risk increases with an increasing number of different partners.² AIDS was first recognised in New York⁷ and reports from other cities in the United States, Europe and Australia with large homosexual communities soon followed.² There are now 8,000 reported cases of AIDS in the United States and an additional 40,000 new cases are projected for that country alone by the end of 1986.⁴ All continents have reported cases of AIDS; it is clearly spreading worldwide and rapidly. For over two years, the full-blown presentation of AIDS has had a mortality rate of nearly 100 per cent and involves a cost per patient well above US\$50,000.

A laboratory kit test for HTLV-

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III antibodies has been developed and will soon become commercially available.¹³ Such a test will be of great assistance in the study of the epidemiology of AIDS as well as in the diagnosis and screening of blood donors. This test may one day become one of the components of medical examinations for pre-marital and pre-employment purposes as well as for induction into military service or it may be made a requisite for the granting of visas. However, it does not identify treatable disease when used for screening and could well isolate positive individuals, rendering them unemployable "pariahs", thus creating additional social and ethical problems. Therefore, a simple test that detects replicating antigens of HTLV-III is urgently needed. Such a test could identify carriers and newly infected virus shedders, the individuals who are a public health threat.

The epidemiology of AIDS has been compared with that of hepatitis-B,^{1,2} which is a major health problem in Southeast Asia. It should be noted that positivity to HTLV-III antibody among San Francisco homosexuals (1%, 1978; 25%, 1980; 65%, 1984) and American haemophiliacs (almost 100% in 1984) is now much greater than that of hepatitis-B antibody positives in Thailand.^{14,15} Furthermore, it is frightening to contemplate that patients with early HTLV-III infection, while not yet antibody-positive (and thus not detectable by present technology), would still be capable of transmitting the disease to others.¹¹

Much work is being devoted to isolating viral parts that might be suitable for preparing a vaccine. Such a vaccine, once developed, could be administered to not-yet-infected members of high risk groups. However, it is not going to help those already infected; prospects for a cure for patients with full-blown symptoms are remote. The life expectancy for such patients is presently less than that for

most common cancers. Whether antiviral therapy could prevent the progression of the disease from the acute infectious illness, AIDS-related complex or the carrier state to the full-blown AIDS state is not yet known.

Public health efforts to control the further spread of AIDS have so far consisted of attempts to prevent members of the high risk groups from donating blood, the closure of bath-houses, and efforts to alter the life style of homosexuals.² The latter efforts seem to have found some support within homosexual communities and largely consist of encouragement of monogamy and discouragement of anal coitus. The use of condoms is also being advocated. Most countries which have been importing American blood products, particularly Factor VIII concentrates, have discontinued this practice for the time being.

Considerable interest in AIDS has been generated by the media and some of this has been alarmist. Medical workers have been reluctant to care for members of high risk groups and a few laboratory directors have not accepted specimens from AIDS patients. Such practices are to be deplored. An AIDS patient and laboratory specimens from such an individual are safe if handled or treated in the same manner as those of hepatitis-B patients, which most modern medical centres are prepared to do routinely.¹⁶

The significance of this for Thailand (and, to some degree, certain other ASEAN countries) needs to be considered urgently since there are several conditions which are peculiar to this country that may relate to the AIDS threat. Homosexuality has been well tolerated in Thailand for many years. But homosexual activity in Thailand has not been characterised by the same gross promiscuity that seems to be common in New York and San Francisco. For example, it is not unusual for a typical AIDS patient in New York to have had close to a

thousand different sexual contacts during the year prior to the onset of his symptoms.^{3,4} There seems to be little doubt that it is such a high degree of promiscuity that helped to amplify the spread of this disease in America. Thailand is, however, one of the most popular vacation resorts in Asia for male homosexuals. There are some 20 gay bars in Bangkok and another six in Pattaya. An estimated 500 male prostitutes work in these bars. A brief survey by the authors revealed that the average bar-boy has sexual contacts with 200 foreign visitors per year. Most such contacts involve recipient anal coitus, the very type of sexual activity that is most likely to transmit AIDS. These contact rates are lower than those reported with regard to AIDS patients in the United States.² This may well be one reason why it took longer for the disease to arrive in Thailand. Many, if not most, Thai male prostitutes are homosexual by profession and not by preference. Many have girl friends and even wives and families. Some of their spouses work as bar-girls in heterosexual bars and are promiscuous. The authors recently encountered such a person, the spouse of one of our AIDS patients. She experienced weight loss and was found to have depressed T-helper cell levels. This case involved a rather special risk, that of transmission of the virus from the male homosexual group to promiscuous females. The fact that female AIDS carriers can transmit the agent to males by conventional coitus is as yet not well documented, but highly probable.

An additional subject worth contemplating is that AIDS and AIDS-related complex are highly prevalent in Africa. The estimate for Zaire is that between 8 and 12 per cent of the general population has anti-HTLV-III antibodies.⁴ Homosexuality is not thought to be the major factor in the transmission of AIDS in Africa and females are as frequently infected as males.

We know that even a minute amount of serum within a non-sterilised needle can transmit hepatitis-B. The first documented case of needle-stick transmission of HTLV-III (complete with mononucleosis syndrome) was in a nurse in England.¹⁸ The possibility of insect vectors also transmitting AIDS cannot be excluded and must be considered; Southeast Asia certainly has a generous supply of insects and arthropods. The climate and crowded living conditions as well as poverty among the poorer segments of Thai society are not unlike those found in West Africa. Therefore, the possibility must be considered that this disease might develop different epidemiological patterns in Southeast Asia, not unlike the ones seen in Zaire. There is an urgent need to study these issues and we would like to offer some suggestions in the hope of stimulating constructive discussion.

1. Every effort should be made to delay further introduction and spread of HTLV-III from abroad. This can be done by making this country less attractive as a tourist resort for male homosexuals from abroad. The closing of "gay bars" and the voluntary restriction of homosexually oriented advertising by the press could be among the approaches. Police action against street soliciting and exhibitionism could make male prostitutes less readily available to the tourist. Foreigners who are identified as AIDS patients or carriers should be invited to go home as soon as possible.

2. A well-designed campaign to educate local high risk groups concerning the health hazards of anal coitus and promiscuity should commence as soon as possible. This information should also be disseminated among female prostitutes. The use of condoms should be advocated again. Some efforts are badly needed to curtail widespread heterosexual prostitution.

3. An on-going surveillance pro-

gramme for detecting HTLV-III antibodies among high risk groups and blood donors should be initiated. Such a programme should be coordinated with ASEAN neighbours.

4. Blood banks must make every effort to exclude high risk groups from the donor pool. They should also develop standby capabilities for routine HTLV-III antibody testing of blood as soon as surveillance studies reveal a real risk.

5. Treatment facilities willing and able to deal with the numerous medical, social and psychological problems of AIDS patients should be designated and properly staffed.

6. A permanent committee under the leadership of the Ministry of Health should be formed which should gather and interpret data and help formulate policy of how to deal with this threat.

Summary

Acquired Immune Deficiency Syndrome (AIDS) is caused by an infection with the HTLV-III agent, a retrovirus which can cause a wide range of clinical manifestations. Among these are an acute illness similar to infectious mononucleosis, asymptomatic immunodeficiency, a carrier state, a wasting process, prolonged lymphadenopathy, rare malignancies and the full-blown syndrome (AIDS) with opportunistic infections. The virus has been found in blood, saliva and semen and appears to be sexually transmissible. Anal coitus seems to be highly associated with AIDS in the western world. Other modes of transmission, not yet fully understood, are thought to play an important role in Africa where this disease may well have originated. Some of the climatic and social conditions found in African countries with a high prevalence of AIDS among the general population are also present in Thailand. The possibility of this worldwide disease taking on a different epidemiological pattern in Thailand must be considered.

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