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→ Dr Smithies

Secretary of State

AIDS

I enclose an update on the AIDS epidemic which includes a summary for your urgent attention. I would appreciate a meeting at your early convenience to discuss the matter.

GRO-C: Donald Acheson

27 June 1985

CMO

cc

MS (H)

PS (H)

PS (L)

2-43

Sir Kenneth Stowe

AIDS

Attached is the final draft of my report which I have submitted for the Secretary of State's urgent attention. It clearly has implications outside this Department.

27 June 1985

GRO-C: Arnold Acheson

CMO

HTLV3 infection,
the AIDS epidemic
and
the control of its spread
in the
UK

June 1985

1. SUMMARY

1. AIDS is the principal end stage of infection with HTLV3⁷ virus. It is estimated that at least 10,000 people mostly men have been infected with the virus in the UK the majority in London and the number is increasing rapidly; the equivalent number in USA has been estimated at about 500,000.

2. The results of the infection are potentially fatal and there is no effective treatment for it. A vaccine is unlikely to be developed in the foreseeable future.

3. There is usually a prolonged incubation period after infection (average 2½ years) during which the person is unaware of the infection, and feels well, but is infectious.

4. Infection is transmitted during sexual intercourse particularly but not exclusively between homosexual males, and by means of blood, blood products, contaminated needles and syringes. Infected mothers may pass on the virus to their babies during pregnancy or at birth.

5. In the United Kingdom most cases of infection that have occurred so far have been in homosexual males and patients with haemophilia treated with infected Factor VIII from pooled plasma. A few persons who use contaminated needles and syringes for drug abuse have also been infected, as have persons receiving blood for transfusion.

6. The infection has been transmitted to a few female partners of bisexual men and haemophiliacs, and perhaps from infected females to males. Although heterosexual intercourse may be less effective than homosexual intercourse in the transmission of the infection it would be wrong at present for policy to be based on the assumption that HTLV3 infection cannot be transmitted as a result of heterosexual intercourse.

7. A comprehensive campaign to reduce the spread of infection principally by means of education directed at those specially at risk is urgently needed.

8. The personal and social consequences of HTLV3 infection to the infected person and his or her family are calamitous.

⁷ the full conventional designation is HTLV/LAV3

2. BACKGROUND AND NATURAL HISTORY

The condition referred to as "AIDS" (Acquired Immune Deficiency Syndrome) is the principal end result of an infection by a virus (HTLV3) the action of which is to depress the body's defences against infection and cancer. People with normal body defences rarely contract the conditions from which AIDS patients suffer and these conditions are difficult and expensive to treat.

As the first cases of AIDS occurred as recently as 1979, little can yet be said about the long-term outlook of people infected with HTLV3 virus. Enough is however known to make it possible to conclude that many will become ill and a substantial proportion will develop and die from AIDS. Of a group of American men known to have been infected with the virus in 1980-2, and who are being followed up, about 10 per cent have so far developed 'AIDS' and an additional 30 per cent have developed other symptoms and signs such as fever, loss of weight, enlargement of the lymph glands or diarrhoea. It is not yet clear at what point the effect of the virus on the body's defences becomes irreversible but no sufferer from the fully developed AIDS syndrome has yet recovered. As far as the remainder of the infected men are concerned changes in their blood suggest that a proportion may yet develop 'AIDS' or other manifestations of infection. The virus has been isolated from the brains of infected persons and can cause various disturbances of the nervous system including dementia.

The virus which is the cause of AIDS was isolated in 1983 in France and in the USA. Although much is already known about its structure, scientists agree that there are grave technical problems in preparing a vaccine and that plans should be based on the assumption that no means will be available to prevent the disease by immunisation in the next five years.

The treatment of the 'opportunistic' infections and tumours from which 'AIDS' patients suffer is sometimes successful and may prolong life but does not tackle the causative virus.

3. FACTS ABOUT THE EPIDEMIC

(a) Cases of AIDS

In the USA there had been 8,495 cases and in the UK 108 cases of fully developed AIDS by the end of 1984. In 1985 a further 10,000 cases are expected to occur in the USA and between 100 and 150 cases in the UK.

	USA	UK
1979	10	1
1980	46	0
1981	252	4
1982	980	9
1983	2,643	36
1984	4,293	58
1985	10,000 (est)	150 (est)

Table 1 Cases of the fully developed AIDS syndrome in USA and UK.

So far cases in both countries have been concentrated in certain big cities eg San Francisco, Los Angeles, New York and London. The prediction of the future trend of cases of AIDS is difficult. As the incubation period is on average 2-3 years it is inevitable that any reduction of incidence of AIDS as a result of recent public education will not be seen for some time so we must plan for a continuing steep increase of cases of AIDS in the immediate future and middle-term. For planning purposes we are assuming that between 1,000-2,000 new cases of AIDS will occur in the UK in 1988 the majority in London. In addition there will be a much larger number of patients with less serious manifestations who will require supervision in outpatients.

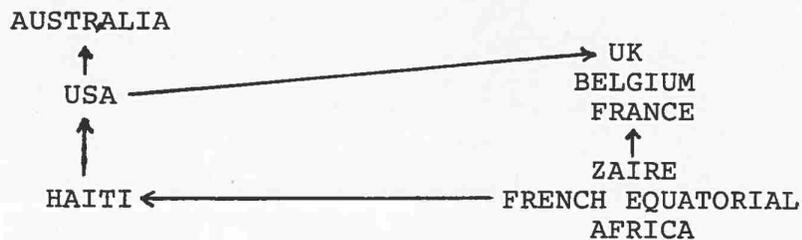
b. Numbers of infected persons

The crucial issue, however, is not the number of cases of AIDS but the number of infected persons. It has been estimated that in the USA there may at present be 500,000 infected persons. In the United Kingdom various estimates have been made of which 10,000 represents the midpoint. The majority of these persons are in London and the number is increasing perhaps at the rate of 50-100 per week. People infected with HTLV3 virus are usually free of symptoms for many months or years, are unaware of their infections, but are nevertheless infectious at least to the same degree as patients with fully developed AIDS. This degree of infectivity may persist indefinitely.

Unless effective means of controlling spread become available, an exponential increase in the number of infected persons can be expected at least in the immediate future.

c. Origin and spread of the epidemic

It has been suggested that the virus originated in Sub-Saharan Africa where infection has recently been discovered to be widespread and equally prevalent in both sexes.



Many of the early UK cases had had sexual contact in the USA. A small number of British cases have had direct or indirect contact with Sub-Saharan Africa.

4. MEANS OF SPREAD

Virus has been recovered from blood, semen and saliva of infected persons. The infection is known to have been transmitted in the following ways:-

- a. through infected blood and blood products
- b. during sexual intercourse, particularly but not exclusively between homosexual men
- c. by use of or injury by contaminated needles and syringes
- d. by donation of an infected organ [not in the UK]
- e. from infected mother to child at birth or during pregnancy.

The virus is easily destroyed by disinfectants outside the human body. There is no evidence of transmission by social contact or by sharing washing, eating, drinking or toilet facilities, or as a result of living in the same home. In one reported case deep kissing was suggested as the means of transmission.

5. GROUPS AT RISK

- a. Male homosexuals

These comprise 72 per cent of the American and 89 per cent of the British cases of AIDS. More than 60 per cent of male homosexuals who attend STD clinics in San Francisco and about 20 per cent in one clinic in London are known

to be HTLV3 seropositive : evidence suggests that the proportion of infected homosexuals attending STD clinics in other parts of England is much lower (5 per cent) and in Scotland lower still. This group is believed to represent the largest pool of infection at present.

b. Female partners of homosexual/bisexual men

Spread by sexual intercourse from males to females has undoubtedly taken place in both categories, although so far the number of documented cases has been small. By the end of February 1985 68 of 8,697 American cases and 1 of 132 cases in the UK were recorded as in female partners of bisexual men.

c. Intravenous drug abusers and persons who use other infected equipment

This constitutes a large group in the United States where it comprises 27 per cent of all cases and provides most of the infected women. Only one British case in this category has occurred so far although there has been one other who is also a homosexual. From the public point of view this is a potentially crucial group for the future because many of the women who abuse intravenous drugs are prostitutes, and also because they provide the largest source of infection in children. There is a theoretical possibility of transmission by tattooing, ear piercing other skin piercing instruments and by use of infected razors.

d. Haemophiliacs

Sufferers from this disease, who are almost exclusively male, are treated by repeated injections of Factor VIII which is a clotting factor derived from pooled human plasma which in recent years has been infected with

HTLV3 virus. More than 50 per cent of these patients have been infected by HTLV3 virus and there are probably about 2,500 haemophilic men in the UK so infected. A small number have transmitted this infection to spouses, and in the United States also through them to their children.

e. Recipients of blood transfusions

More than 100 cases of AIDS have occurred in the USA as a result of transfusion of infected blood but so far none has occurred in the UK (although two recipients have been infected with HTLV3 virus). It is almost inevitable that some cases will occur sooner or later.

f. Children of infected mothers

More than 100 cases have occurred in the USA mostly in children of intravenous drug abusers. Transmission of the virus occurs before or during birth or possibly by breast milk. More than 60 per cent of the children have died in infancy or have AIDS and, the long-term outlook for the survivors is uncertain.

g. Health care workers

Transmission to doctors, dentists, nurses and other health workers due to accidents with infected needles and sharp instruments is a possibility and has occurred in one case. In a number of other cases where accidents have occurred transmission has not taken place suggesting that the agent is of relatively low infectivity.

8. TRANSMISSION BETWEEN SEXUALLY ACTIVE HETEROSEXUAL ADULTS

The key issue which will determine the eventual scale of the epidemic in the absence of effective preventive action is the facility with which transmission of infection takes place as a result of heterosexual intercourse. A small number of the female partners of bisexual males and of haemophiliacs (see 4(b) and (d) above) are known to have become infected which suggests that transmission of infection from male to female presumably by semen in the course of vaginal intercourse can take place.

As far as transmission from female to male is concerned the evidence is at present conflicting. In New York City, in spite of a large number of AIDS cases in female prostitutes (who abuse intravenous drugs) only 28 out of a total of 3,354 cases have occurred in males who did not admit either homosexual intercourse or i-v drug abuse or belong to another high risk group. However, a number of cases have been reported in men in the US Army in which it is claimed that the only relevant risk factor was promiscuous heterosexual intercourse. The epidemic of HTLV3 infection in Sub-Saharan Africa affects male and females almost equally. While it is not certain to what extent transmission has been due to tribal scarification and dirty needles in this region, heterosexual intercourse cannot be excluded as a possible means of transmission.

Although the American data suggests that homosexual intercourse is the most important means of sexual spread of HTLV3 infection in our present state of knowledge, it would be wrong for policy to be based on the assumption that heterosexual intercourse will not in the long run assume a significant role. This point should be taken into account in formulating a preventive strategy.

9. CONTROL OF SPREAD OF INFECTION

In the absence of effective immunisation of susceptibles, control of the epidemic must depend upon reducing the frequency of transmission of infection. This will require the urgent development of a properly surveyed and evaluated programme of health education and counselling with the assistance of experts and the active co-operation of the groups at risk.

a. Male homosexuals

The object must be to reduce the spread of infection within this group. A programme of education and advice must be evolved for the gay community throughout the UK; this will require their co-operation. A favourable point is that the infection is at present largely centred in London and there is still an opportunity to curtail its spread to the provinces. The possibility of offering immunisation against Hepatitis B as part of a package of health education should be considered.

b. IV drug abusers

With the assistance of narcotics anonymous and others every effort should be made to get the message across in clinics, and elsewhere that AIDS is a serious potential risk of IV drug abuse.

c. Haemophiliacs

Check that all Factor VIII and Factor IX used in UK is now heat treated. Provide health education and advice for infected haemophiliacs and their families.

d. Blood transfusion

Introduce at the earliest opportunity an effective test for all donated blood simultaneously with a similar service for STD clinic. Introduce counselling and education for donors with HTLV +ve tests. Train an appropriate number of counsellors.

e. Organ and sperm donors

Introduce at the earliest opportunity an effective test for all donors and counselling and education for HTLV +ve donors as in (d).

f. Health care and other workers

Revise interim guidelines for Health Care Workers; extend advice to surgeons, dentists, acupuncturists, tattooists, chiropractors, etc. Introduce indemnification for health workers infected as a result of work.

g. General

Provide education directed at the general population and secondary schools (as part of sex education) on the nature and risks of AIDS.

10. SOCIAL IMPLICATIONS

The personal and social implications of HTLV3 infection for the infected person are calamitous. In the present state of knowledge a male must accept the likelihood of being infective sexually for an indefinite period, possibly for life, in addition to suffering from a potentially fatal condition for which there is no treatment and for which there is an uncertain but extended latent period. An infected

female must accept in addition the probability of infecting any subsequently conceived children. An HTLV infected child has the prospect of life-long infectivity if he survives childhood. All infected persons face the risk of stigma and of being ostracised; thus children have been refused entrance to school and adults may lose jobs or be refused employment without justification from the public health point of view.

Very difficult issues arise in relation to tests which may reveal a condition for which there is no treatment particularly when it may have a fatal outcome. These issues are relevant to HTLV3 testing and will arise first in relation to the tests which will shortly be introduced for blood donors. Similar issues may also arise if it were suggested that testing should take place on entry to employment in certain jobs, into the Armed Services or as a precondition for life insurance or even for marriage. There are also difficult questions which have to be solved in relation to who has a right to know the result of a positive test apart from the person concerned.