DECONSTRUCTING AIDS

A growing number of doctors and scientists are questioning the received wisdom about AIDS. ELENI PAPADOPOULOS-ELEOPOULOS and VALENDAR F. TURNER look at the alleged AIDS epidemic in Africa.

Michael Fitzjames

ACCORDING TO the World Health Organisation, about 2.5 million sub-Saharan Africans have AIDS—Africa is apparently in the grip of an AIDS pandemic. (In the USA 300,000 people have AIDS.) AIDS in Africa has been portrayed as providing two important lessons for the West. The first is that Africa is an example of the potential devastation that AIDS can unleash, the second that by heterosexual transmission AIDS will eventually overtake the West. However, there is no convincing evidence that millions of Africans are infected with HIV, the putative cause of AIDS, or that African AIDS is heterosexually spread.

The only evidence that some Africans are "infected" with a virus called HIV is indirect, and involves the random testing of Africans' blood for the presence of antibodies that react with a collection of so-called HIV proteins. If "HIV proteins" (present in the test kits) only reacted with HIV antibodies, there would be no problem. Unfortunately, this is not so. Antibodies produced in response to the presence of one foreign agent may also react with another, different, foreign agent, and the more infectious agents that a person has been exposed to, the greater the likelihood that such "cross-reacting" antibodies will be present. Ruling out cross-reactions between the "HIV proteins" and the plethora of other antibodies present in individuals constantly exposed to microbial agents can be achieved only by measuring how good a match there is between the antibody reactions and the presence or absence of HIV itself. This has never been done. So in Africa no-one knows whether the antibody tests are specific for HIV (ie, whether a positive test really means HIV infection).

Many AIDS experts accepted this fact even at the beginning of the AIDS era. Earlier this year, Myron Essex, a

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leading American researcher, and his colleagues from Harvard University, discussing their experimental data on HIV antibody testing in Africa, again said that the HIV antibody tests "may not be sufficient for HIV diagnosis in AIDS-endemic areas of central Africa where the prevalence of mycobacterial diseases [leprosy, tuberculosis and others with antibodies that cross react] is quite high". Thus there is no certainty that large numbers of Africans are actually infected with the putative agent, HIV.

AIDS experts also agree that acquired immune deficiency (the "AID" in AIDS) is long-standing in Africa. This has been caused by malnutrition, certain well-known viruses and diseases such as malaria and tuberculosis, all of which are known to exert a major depressant action on the immune system.

Nonetheless, in Africa, unlike in the West, patients are classified as having AIDS without laboratory proof that they have either immunodeficiency or HIV infection. All they need are various clinical indications.

But the conditions accepted as forming the "S" (Syndrome) in "AIDS" in Africa bear no relationship to AIDS in the West. In the West, AIDS consists of a person having one or more of about 27 relatively rare diseases. In Africa, AIDS, as defined by the World Health Organisation 1986-1987 Bangui African AIDS definition, is no more than a collage of common symptoms and signs such as cough, fever and diarrhoea, and a few diseases, some of which have been endemic in Africa for generations. These include the cancer Kaposi's sarcoma, a description of which is contained in the Ebers papyrus dating from 1600BC. (In the West, Kaposi's sarcoma is restricted to gay men.) Of the 661 million people in sub-Saharan Africa, 2-3 million have active TB with an annual mortality of 790,000. Despite this and the fact that, in adults, "HIV infection" usually *follows* TB infection, TB has now become an AIDS-defining illness; indeed, 30-50 per cent of African "AIDS" deaths are actually from TB.

Many AIDS experts also expect us to believe that, unlike in the West, AIDS in Africa is spread predominantly by heterosexual contact. As the number of heterosexual cases in the West is too small to be statistically meaningful, the African "evidence" is used to predict the same predicament in the West. The claim of heterosexual spread in Africa is based on lack of evidence of homosexual transmission or intravenous drugs and the approximately equal numbers of males and females held to have AIDS as well as HIV-positive test results. But this does not prove that AIDS is heterosexually spread—influenza and appendicitis also have an equal sex distribution. Indeed, given the fact that what is known as AIDS in Africa has been present for centuries and was equally common in men and women, and that positive HIV antibody tests may be due to the presence of antibodies formed in response to malaria, tuberculosis, leprosy and many parasitic diseases, one would predict that in Africa an equal number of men and women will have both "AIDS" and positive antibody tests.

A disease is said to be caused by a sexually transmitted infectious agent if one infected partner, say the active partner (man) transmits the agent/disease to the passive partner (woman), who in turn transmits the agent/disease to another man. That is, heterosexually transmitted diseases are transmitted bidirectionally, from men to women to men. In the West, the largest (thousands of cases) and most judiciously conducted prospective epidemiological studies have proved beyond reasonable doubt that in men and women the only sexual act leading to the acquisition of "HIV antibodies" (women) or "HIV antibodies" and eventual AIDS (gay men) is passive (receptive) anal intercourse. In other words, in the West, "HIV antibodies" and AIDS, like pregnancy, can be acquired only by the passive partner.

This is strange enough: in the history of medicine there has never been a sexually transmitted agent/disease which is spread unidirectionally—but it is even stranger to consider that HIV/AIDS is supposedly transmitted unidirectionally in the west and bidirectionally (heterosexually) in Africa.

The alternative is to agree with many African physicians that positive HIV antibody tests in Africa do not mean infection with HIV and that immunosuppression and certain symptoms and diseases which constitute African AIDS have existed in Africa since time immemorial. According to Professor P.A.K. Addy, head of clinical microbiology at the University of Science and Technology in Kumasi, Ghana: "Europeans and Americans came to Africa with prejudiced minds, so they are seeing what they wanted to see . . . I've known for a long time that AIDS is not a crisis in Africa as the world is being made to understand. But in Africa it is very difficult to stick your neck out and say certain things. The West came out with those frightening statistics on AIDS in Africa because it was unaware of certain social and clinical conditions. In most of Africa, infectious diseases, particularly parasitic infections, are common. And there are other conditions that can easily compromise or affect one's immune system." Dr Konotey-Ahulu from the Cromwell Hospital in London expresses a similar view: "Today, because of AIDS, it seems that Africans are not allowed to die from these conditions [from which they used to die before the AIDS era] any longer. If tens of thousands are dying from AIDS (and Africans do not cremate their dead) where are the graves?" According to him, the uppermost question in the minds of intelligent Africans and Europeans in that continent is: "Why do the world's media appear to have conspired with some scientists to become so gratuitously extravagant with the untruth?" ■

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Reconstructing AIDS

IT IS hard to imagine that anyone, let alone trained scientists, could read the extensive scientific literature on AIDS in Africa and conclude, as Papadopoulos-Eleopoulos and Turner did recently ("Deconstructing AIDS", October IM), that this public-health catastrophe is a fiction.

Their argument seems to be that most deaths attributed to HIV in Africa are really due to "old" infectious diseases, particularly tuberculosis. For good measure, they also propose that there is not much "real" HIV in Africa; and even when it occurs, it is not transmitted by sex.

It is true that the World Health Organisation has endorsed a simpler AIDS case definition in Africa because of the lack of sophisticated diagnostic laboratories required to identify the AIDS-defining illnesses recognised in Western countries. The problem with this definition is not so much that it overestimates AIDS—if anything, it *misses* cases that would have been classified as AIDS in the West. Validation studies have shown that more than 90 per cent of the cases it detects are true AIDS cases; that is, individuals who are HIV seropositive, with advanced, HIV-related diseases.

Other studies have shown the impact of AIDS on mortality across sub-Saharan Africa. In rural Uganda, more than 52 per cent of all deaths over a two-year period (1989-1990) were in people infected with HIV, and the risk of dying was 21 times higher in people infected with HIV than people who were uninfected. In Abidjan, Côte d'Ivoire, HIV was the leading cause of male deaths in 1990, with 15 per cent of deaths attributable to AIDS and a further 26 per cent in HIV seropositive men.

Dr Essex, of Harvard University, and his colleagues did indeed show this year that the simple screening test (known as ELISA) for HIV can sometimes register a positive result in a person without HIV. The presence of leprosy antibodies seems to be one way this can happen. What Papadopoulos-Eleopoulos and Turner did not say is that the more sophisticated HIV confirmatory test (known as Western blot) is *not* fooled by the other antibodies. It is extremely specific for HIV, and for this reason is used routinely for diagnostic purposes and in studies of the kind that time and time again demonstrate an astonishingly high prevalence of HIV in parts of Africa.

Though many people in Africa die with both HIV and tuberculosis, it is nonetheless clear that HIV is playing a major role. Studies in Africa and Western countries have shown that HIV infection greatly increases the chance of a person developing active tuberculosis. In Zaire, women infected with HIV had a 26-fold increased risk of developing tuberculosis compared with HIV negative women, and in New York, active tuberculosis developed in 4 per cent of HIV seropositive patients and none of the 62 seronegative patients examined. Furthermore, a person with HIV is much more likely to develop tuberculosis that is resistant to treatment than a person without HIV.

Papadopoulos-Eleopoulos and Turner perhaps reveal their world view most clearly in their claim that "the only sexual act leading to acquiring HIV infection is passive (receptive) anal intercourse". Why would they choose to ignore the dozens of epidemiologically validated studies which show that HIV infection can be transmitted from women to men, and from men to women through vaginal intercourse?

Studies in Europe and North America have shown that the efficiency of female to male transmission of HIV is somewhat lower than that of male to female, and anal intercourse carries a somewhat higher risk than vaginal intercourse for the receptive partner. But unless every person, male or female, with HIV infection who claims a sexual history devoid of receptive anal intercourse is a liar, there is something seriously wrong with Papadopoulos-Eleopoulos's and Turner's reading of the data. Did the 13,119 people (12 per cent) in Europe with AIDS attributed to heterosexual contact all tell lies about their sexual history? The number of heterosexual cases is hardly "too small to be statistically meaningful" in the West.

The reality of heterosexual HIV transmission in Africa is demonstrated not by roughly equal numbers of male and female cases, but by the higher rates among sexually active, single men and women, people with other sexually transmitted diseases, and female prostitutes and their clients. Also at higher risk of having HIV are truck drivers, businessmen and others who travel within Africa. In sum, HIV has the classic demographic profile of a sexually transmitted disease.

AIDS may conceivably not be the biggest health problem facing Africa; but it is killing large numbers of people in their most productive years and leaving their young children orphaned across the continent. It is some time since the African AIDS pandemic was seriously viewed as a model for the disease's future course in the West; the underlying social conditions are simply too different. But this is no excuse for dismissing an ongoing human tragedy as something dreamed up by Western scientists for their own amusement.

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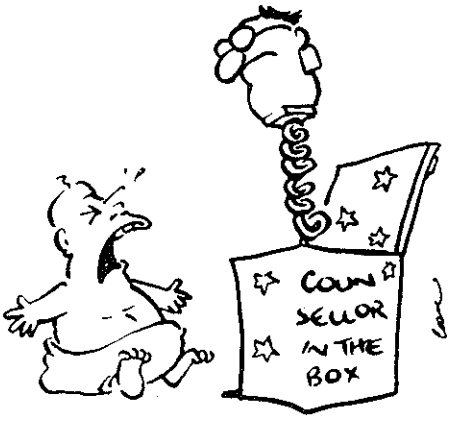
DRs PAPADOPOULOS-ELEOPOULOS AND TURNER REPLY: In the Ugandan study referred to, 9,389 rural subsistence farmers were tested for "HIV antibodies" and over the next two years 109 out of 9012 found negative and 73 out of 377 found positive died. However, only five of the positives died of "AIDS". The authors did not list details of the five "AIDS" deaths, but an accompanying commentary from the US Centre for Disease Control implied that they were due to "tuberculosis, other pneumonias, and diarrhoeal diseases". In the Cote d'Ivoire study, 698 adult corpses were examined and had blood tests. Deaths were considered due to "AIDS" if the corpses had physical signs satisfying the Bangui African AIDS definition, or

if the diagnosis before death was "AIDS, retroviral disease, wasting, pneumonia, chronic diarrhoea, extrapulmonary tuberculosis". Because pulmonary tuberculosis was not included, the researchers claimed underestimation of the number of "AIDS" cases. Under this guise, AIDS was the cause of death in 16 per cent of male and 15 per cent of female corpses. Overall, 43 per cent of all males and 34 per cent of all female with and without "AIDS" had a positive Western blot (WB) test. Of the "AIDS" cases, only 65 per cent had a positive test.

"Validation" studies from Zaire and Uganda have shown that 62-83 per cent of "AIDS" patients had a positive test, but so did 44 per cent with malaria, 97 per cent with shingles, 41 per cent with carcinoma, 33 per cent with piles and 42-87 per cent of women with amenorrhoea (cessation of menstrual bleeding). Thus in Africa, all that is "validated" is an abundance of "AIDS" without "HIV antibodies" and conversely, a wealth of "HIV antibodies" with non-"AIDS" diseases.

Neither the cause of a disease nor even infection with a putative agent can be validated with antibody tests. The blood of patients with glandular fever (caused by a virus) contains antibodies which react with the red blood cells of horses and, indeed, this antibody test is used in the laboratory diagnosis of glandular fever. However, patients with glandular fever are not infected with horse blood nor is horse blood the cause of this disease. The most one can say about people who have antibodies that react with so-called "HIV proteins", that is who are HIV positive, is that they have an increased risk of developing and dying from "AIDS" and non-"AIDS" diseases. The only way to show that a positive antibody test proves HIV infection is to compare the test results with the presence or absence of HIV in the patient, that is, to use HIV isolation as a gold standard. This has not been done and could not be done because, despite claims to the contrary, nobody has yet isolated HIV. Thus the specificity of the HIV antibody tests, including the WB, cannot presently be determined, a view accepted by one of the world's best-known HIV/AIDS epidemiologists, William Blattner, from the US National Cancer Institute. He says: "One difficulty in assessing the specificity and sensitivity of retrovirus assays [HIV is a retrovirus] is the absence of a final



'gold standard'. In the absence of gold standards for both HTLV-1 and HIV-1, the true sensitivity and specificity for the detection of viral antibodies remain imprecise."

Essex did use the WB and on page 298 there are several photographs clearly illustrating that the WB is "fooled" by other antibodies: "WB cross-reactivity occurred with all HIV-1 products [proteins] . . . leprosy patients and their contacts show an unexpectedly high rate of false-positive reactivity of HIV-1 proteins on *both WB* and ELISA . . . ELISA *and WB* may not be sufficient for HIV diagnosis in AIDS-endemic areas of central Africa where the prevalence of mycobacterial disease is quite high." (Leprosy and two of the common AIDS defining diseases, tuberculosis and MAC, are caused by mycobacteria).

We have been misquoted as saying "the only sexual act leading to acquiring HIV infection is passive (receptive) anal intercourse". We went to great pains not to go beyond the data and in fact said "the only sexual act leading to the acquisition of "HIV antibodies" (women) or "HIV antibodies" and eventual AIDS (gay men) is passive (receptive) anal intercourse". There is no proof that "HIV antibodies" is synonymous with "HIV infection".

Our world view is that of basic science, but epidemiology suffices to show that passive anal intercourse practised by either sex is *the* risk factor which leads to the acquisition of a positive antibody test, whatever that may mean, and AIDS. This was the conclusion of a review published last year by Van Griensven and Careres examining more than 25 large studies on gay men: ". . . It can be said that the cited reports yield convincing evidence that unprotected anogenital receptive intercourse poses the highest risk for the sexual acquisition of HIV-1 infection . . . no or no consistent risk of the acquisition of HIV-1 infection has been reported regarding insertive intercourse." If HIV is a sexually transmitted agent and the 13,119 AIDS cases "attributed to heterosexual contact" were caused by HIV, given the fact that even the most sexually active gay men are not as promiscuous as prostitutes and the claim that HIV is transmitted more efficiently from "male-to-female" then one would expect the same percentage of prostitutes as gay men to have a positive "HIV antibody" test. In 1984, about 30 per cent of European gay men had a positive "HIV antibody" test. In Spain, of 519 non-intravenous drug-using (NIVDU) prostitutes tested between May 1989 and December 1990, only 12 (2.3 per cent) had positive WB. Some prostitutes had as many as 600 partners a month and the development of a positive WB was directly related to the practice of anal intercourse. The authors also noted: "A more striking and disappointing finding was the low proportion of prostitutes who used condoms at all times, despite the several mass-media AIDS prevention campaigns that have been carried out in Spain." In 1990 and 1992, in two Scottish studies, not one NIVDU prostitute was found WB positive. In the 1993 "European working group on HIV infection in female prostitutes study", only nine (1.2 per cent) of 756 NIVDU prostitutes were found WB positive. These nine included three with another risk factor (blood transfusions) but notwithstanding, the prevalence of a positive WB among these prostitutes is the same as that for a population of 89,547 hospital patients *at no known risk for AIDS or HIV infection* studied at 26 hospitals in 1988-1989 in the United States (1.3 per cent). Closer to home, of 53,903 Filipino prostitutes tested between 1985 and 1992, 72 (0.13 per cent) were found positive. Are these data consistent with "the classic demographic profile of a sexually transmitted disease"? One cannot but agree with Zimbabwean scientist Richard Chiruumata that for one third of heterosexual adults in some central and east African countries to be, as it is claimed, infected with HIV, "life in these countries must be one endless orgy".

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