

EIR Science & Technology

When tropical epidemics and tuberculosis meet HIV

Garance Phau reports on the latest epidemiological findings, regarding the spread of AIDS in the tropics, from the Fifth International Conference on AIDS in Montreal, Canada.

Scientists and physicians attending the Fifth International Conference on AIDS, at the Palais des Congrès in Montreal June 4-9, presented shocking new evidence on the spread of AIDS in the Third World, and a picture of how the HIV virus's destruction of patients' immune systems is leading to an explosion of tropical diseases and tuberculosis already endemic in those areas.

EIR predicted back in 1985 that this would happen, when we insisted—against all the “experts” from the World Health Organization (WHO) and the Atlanta Centers for Disease Control (CDC)—that AIDS was not a venereal disease, but primarily a result of socio-economic factors, and therefore would spread as a result of the global economic collapse. This was demonstrated by the findings of Dr. Mark Whiteside on the correlation between AIDS and TB in very poor areas such as Belle Glade, Florida, where the majority of cases were not from any “high-risk group.” (See *EIR*, Sept. 27, 1985, “Why the AIDS Pandemic Requires a National Public Health Mobilization,” and *EIR*'s Feb. 15, 1986 Special Report, “An Emergency War Plan to Fight AIDS and Other Pandemics.”)

At that time, Dr. Whiteside's work was mocked by the AIDS Establishment. At the Montreal conference, speakers from Argentina, Spain, New York City, Zambia, Zimbabwe, and the Central African Republic, scientists from the four corners of the planet, confirmed those warnings: Tuberculosis is back.

There are times when one wishes one's predictions had been wrong, because the mind recoils at confronting the truth it had predicted. The holocaust now engulfing the developing sector is such a case, as AIDS accelerates the pace and virulence of all the other epidemics, from tuberculosis to leprosy,

from sleeping sickness to elephantiasis.

As Kenneth Kaunda, President of Zambia, warned in a speech to the conference, “AIDS could extinguish the human race,” and no frontiers may stop it. Two of Kaunda's own sons have died of AIDS.

Yet governments and the “experts” refuse to confront the socio-economic crisis. The Montreal conference devoted enormous attention to palliative care, but not one of the 6,000 sessions to the immediate economic and financial requirements to deal with the situation. An angry researcher from English-speaking Africa remarked, “How many such conferences to present the ‘facts’ will WHO need before it resolves to act?”

Dr. N'Galy Bosenge, head of the Zairean national program to fight AIDS, described how the economic crisis has furthered the spread of the disease and prevented his government from taking effective action:

AIDS strikes the population as a whole. There are no risk groups, 90% of the propagation being in the normal heterosexual population. The migration of the countryside people into the cities is an important cause of propagation. Many women without resources to feed themselves or their families become forced to engage in prostitution.

We lack resources not only for AIDS, but for health in general. We can tell medical staff to take precautions; it is not of much use: Everyone knows that when you are in contact with blood, you wear gloves—but we don't have gloves. In Africa, laboratory employees could tell you horrible stories about contaminated blood. We can spend less than \$1 per

person annually in health care (and that figure is the same for much of the African continent). How could we set up blood banks with our limited resources?

Several hospitals in Zaire do not have the money to get the necessary equipment for the sterilization of syringes and other necessary medical instruments. Outside of the main cities, hospitals do not even have running water. In short, all the conditions are there for the virus to spread.

The spread of tuberculosis

The association of tuberculosis with HIV is "the worst problem Africa faces today," said Dr. Bosenge, speaking in the plenary session on June 6. The growing incidence of HIV-related tuberculosis is the biggest obstacle to the clinical management of AIDS in Africa. "And the TB problem is only likely to grow," he emphasized, as he presented slides showing increased TB statistics for Tanzania, Zaire, and Burundi. Since 90% of the African population tests positive for the TB bacillus, there is "an enormous reservoir of the disease that could be reactivated."

Within the pool of HIV-infected persons, which WHO puts at roughly 10 million (and is probably closer to 50 million), a tuberculosis epidemic has emerged. News of untreatable tuberculosis in HIV-positive patients originated from Haiti, and at first the CDC pooh-poohed the Haitians, saying they did not know how to treat tuberculosis properly. That was in 1987. Then French military physicians identified the same problem in Burundi: untreatable TB in HIV-positive people, not cured after one year of treatment, still contagious, and infecting others.

Now, extrapulmonary tuberculosis (EPTB) has been added to the list of clinical manifestations of AIDS, and the association between TB and HIV has become a recognized worldwide phenomenon. As yet the real extent of the association between the two infections is unknown. When statistics are compiled on proven AIDS cases, the usual figure for extrapulmonary tuberculosis is 10% of all AIDS cases. However, more and more serological studies done in tuberculosis centers indicate that often tuberculosis is the *sole* manifestation of HIV infection. In Central Africa, as in New York City prisoners, tested TB patients have been found to be HIV-positive in 50% of cases!

On June 8, Miles Braun of the Atlanta Centers for Disease Control presented the CDC review of AIDS and TB in the United States. He noted that of 48,000 AIDS cases diagnosed between October 1987 and March 1989, 1,200 had EPTB. In Mexico, 8% of AIDS patients were recorded as having EPTB, and the figure is 12% in Haiti. These are people who suffer from several of the other clinical diseases associated with the official AIDS definition, so they only reflect a small portion of the epidemic.

In New York City, as of 1988, TB rates had increased 36%, a figure which we find again in Bangui, the capital of

the Central African Republic, which reported a 10% increase back in 1985-86. The CDC review of the records showed that tuberculosis was much more frequently associated with AIDS in heterosexuals than among the "high-risk groups."

In plain English, the incidence of TB is increasing as HIV disseminates in the general population.

Asked about the association of "regular" (i.e., pulmonary) tuberculosis with HIV, Braun said the CDC was reviewing that question as well. While we know EPTB to be a more characteristic marker of HIV infection, there is also an increased incidence of pulmonary TB. Braun estimated that perhaps 25% of HIV positive persons with EPTB had pulmonary tuberculosis as well.

While pulmonary TB is not on the list of clinical diseases which make for the diagnosis of AIDS today, it will be tomorrow. It is already being seen in U.S. cities as well as throughout the developing sector. Most worrisome is the rapidly increasing prevalence of EPTB in young heterosexual HIV-infected patients, an age group normally spared, since the invention of antibiotics. In Montreal, a researcher from Spain, Dr. Casabona from the Barcelona AIDS program, showed that TB had become the number-one problem, with EPTB the first manifestation of AIDS in the area.

An Argentinian physician reported an epidemic of TB in his country, with 17,000 cases a year, so that if HIV serologies were performed, a great many AIDS cases might appear. While Argentina reports few cases of AIDS today, a talk by Dr. Oscar Fay of the National University on June 5 indicated that if blood bank screening were not instituted right away, there would be 10,000 transfusions of HIV-contaminated blood in 1989.

A report by Chequer Pedro, from Brazil's health ministry, reported that out of 5,219 AIDS cases, 1,068, or 21%, had tuberculosis, which was the third-most prevalent manifestation of AIDS in the country (behind candidiasis at 53% and PCP at 29%). An indication of the dangerous shift in TB prevalence toward younger age groups was given by a researcher from Zambia, in the June 8 seminar. Alison Elliott of the London School of Tropical Medicine showed a study done in Lusaka, Zambia to establish HIV prevalence among TB patients: While 10% of TB patients over 60 years of age were found to be HIV-seropositive, the figure climbed to 80% for TB patients in their thirties! The study found 62% HIV positivity among TB patients generally. For Zimbabwe, a similar study showed 32% HIV seropositivity among TB patients.

Here and there, there is increased incidence of Bovine TB infection in children, and the debate is on as to whether BCG (Bacillus Calmette-Guerin, an attenuated strain of tuberculosis given as a vaccine to prevent active tuberculosis infection) can still be used or not. There was wide agreement at the seminar that emergency measures to stop the TB epidemic were required, for the secondary TB epidemic had already started.

"Remember that TB is a readily transmissible disease to immuno-competent people as well," wrote one researcher, referring to people with normal immune systems.

"I fully agree with you" answered Luc Montagnier of the Pasteur Institute in Paris, in the closing press conference, when this reporter asked whether it was not true that the AIDS epidemic could only be thwarted by emergency assistance to stop the spread of TB and tropical diseases in Africa or in Ibero-America.

Yet no such assistance is forthcoming.

When HIV spreads in regions afflicted by tropical disease epidemics, death is not far away for entire populations. We are entering into this cyclone today, and we have no idea if, when, and how, we shall weather the storm. That chilling reflection was brought to the audience listening to a morning seminar on June 8, chaired by Warren Johnson of Cornell

Africa told: Give AIDS patients 'home care'

Governments of African and other Third World countries were told, in a seminar at the Montreal meeting on the economics of AIDS, that they ought to move away from emergency care for AIDS patients, to home and hospice care. The issue of who should provide this home care was not addressed. A clinician attending the conference said that a meeting in Nairobi, Kenya had just addressed the question of home care. "In Africa, the visible AIDS epidemic has just started," he said, meaning that people are beginning to die of the long-incubating disease. "All the talk about treating opportunistic diseases which we hear at this conference, is out of place in an African context. We do not have the means to keep AIDS patients alive for months on expensive therapies for the many infections, much less for any antiviral drug such as AZT."

"It has become necessary to work with charity organizations to plan 'home care,' " he added. "There is just no alternative in the present economic and social context today." He did not discuss the difficulties families face in keeping an AIDS patient at home in the final stage of the disease: the patient may suffer from profuse diarrhea, pneumonia, or TB, is often demented, and poses a real threat of contagion in a non-hygienic environment—not just of HIV contamination, but of the other pathogens as well.

University Medical Center, Ithaca, New York, entitled "The Impact of HIV on Tropical Diseases." "Therapeutics is already slim for all the diseases we find in tropical areas," remarked Johnson. What he means, is that severe forms of leprosy, elephantiasis, and the blindness of oncochocercosis, are not exactly "curable" diseases!

Even TB is a mutilating disease if not diagnosed and treated in time. Normally prevention and/or early diagnosis is the best defense, but with the economic crisis of the past 10 years, prevention has been tossed out the window.

Johnson spoke first of visceral leishmaniasis (a disease causing lesions of the internal organs) and leprosy in association with HIV infection.

Approximately 500,000 people are infected with visceral leishmaniasis (also known as Kala Azar) in the world today, with Spain, the Magreb, and parts of Brazil areas of high prevalence. Fifteen million suffer from cutaneous leishmaniasis. The disease is insect-borne, and dogs are an important intermediate host. Mortality—with attempt at treatment—ranges from 5-15%. "Today we have 31 documented cases of Kala Azar associated with HIV," said Johnson, who added that the disease might soon be added to the official list of clinical manifestations of AIDS.

Virulent forms of Kala Azar in HIV seropositive persons had been reported to last year's AIDS conference in Stockholm by Professor Coulaud of France, who had argued for the disease to be put on the list of AIDS-related diseases.

Tropical diseases on the increase

Leprosy, a disease of poverty, has dramatically increased in the past 10 years, with the Knights of Malta's anti-leprosy organization reporting that the incidence of the disease has been doubling yearly, with an estimated 20 million cases today, up from 11 million in the spring of 1988, approximately 5 million or so in 1987, and 2 million in 1984.

Now Johnson reports that leprosy is affecting regions now hit with the HIV epidemic, and that there is serious concern that leprosy will shift to the more virulent and more contagious form, lepromatous leprosy, in HIV-positive individuals.

Dr. Pradinaud of French Guiana reported recently in the publication *Médecine Tropicale*, the case of a patient with latent leprosy who, as he progressed to AIDS because of HIV infection, developed the virulent neurological manifestations of leprosy.

Johnson, who closely collaborates with a team of Haitian physicians, reminded the audience that there were 18 documented cases of AIDS-associated leprosy on the island. In a talk on June 6, a team of French and African scientists reported on serological studies of 1,244 leprosy patients, in which they found HIV-1 and HIV-2 (combined tests) prevalence rates of 4.9% in the Ivory Coast (and 14.4 for HTLV-1, the other retrovirus which is a scourge in Africa), 3.7% in

Congo (9.7% for HTLV-1), and 0.9% in Senegal. While the percentages are not very high, they indicate the beginning of a dangerous overlap between the two diseases.

Johnson gave a second presentation on the subject of the impact of HIV on tropical diseases; during which he proceeded to establish a frightening forecast as to the future course of multiple epidemics in Africa and Ibero-America. He drew up a list of tropical diseases that would flare up because of HIV: leprosy, leishmaniasis, and also chagas.

Chagas, affecting millions in the Americas, has terrifying potential.

Sleeping sickness, could sweep Africa again.

Amebiasis and amebic meningoencephalitis, can be expected to flare up.

Then schistosomiasis, lymphatic filariasis (elephantiasis), oncochercosis (one of the main causes of blindness), strongyloidiasis, all prevalent diseases in areas where HIV is breaking out—will make their appearance.

Johnson showed the common areas of prevalence of those diseases, as well as common areas of prevalence of HIV.

He then went back to the problem of trypanosomiasis. If we take the trypanosomiasis called chagas in Ibero-America, he explained, a disease transmitted by bedbugs, there is no really effective treatment. It affects several million people (8% of Brazilian children are infected in the northeast of the country). Chagas, which can lead to serious autoimmune diseases and is notably responsible for cardiac muscle diseases, can also remain latent in a majority of individuals.

When chagas affects an HIV-infected individual, it could evolve from the latent to the virulent form, said Johnson, "though I don't have a case to demonstrate this for you." During the question period, a French physician from St. Denis Hospital brought up a case confirming Johnson's worries. He stated that he had had a case of a patient from Honduras who died of AIDS with a virulent form of chagas disease.

Johnson also stressed the feared flare-up of the African form of trypanosomiasis, sleeping sickness, a disease that threatened to depopulate the continent earlier this century and which is again developing today, especially because of a collapse in insect (tse tse fly) control. He showed maps of tse tse fly presence, which show that one species of fly is prevalent in Western Africa where HIV-2 is spreading, while the other type is prevalent in Central Africa, where HIV-1 is most prevalent.

Johnson's presentation, unfortunately, corroborates the studies carried out by the Fusion Energy Foundation and the foundation's forecast as to the potential for a biological holocaust. I myself spoke on this subject during a conference in Munich, West Germany last year, and I used data similar to those of Dr. Johnson. I wish I had been wrong, I said to myself as the seminar ended. The emerging reality is too horrible to contemplate.

Experts disagree on AIDS fundamentals

One should not expect any more big breakthroughs in AIDS research, Dr. Robert Gallo of the U.S. National Cancer Institute announced at a press conference on June 6 in Montreal. He took an optimistic note: "There will be new findings, but the major things we need are done. . . . It's a problem of technology and time and testing this or that in a certain number of ways. . . . We probably have more information about how this virus works to cause the disease than we have about any single agent in the history of medicine."

Gallo proceeded to extol the promise of "soluble CD4"—what he has previously called the "magic bullet," the compound that it is hoped the HIV virus will bind to, instead of to the human cell. His enthusiasm overlooks the fact that many human cells that do not have CD4 receptors are still infected with HIV; that the infection of T4 is but one aspect of HIV pathogenicity; and that CD4 receptors do play a role which, once we inject a person with soluble CD4, could lead to important side effects, notably regarding immune functions.

Luc Montagnier of the Pasteur Institute in Paris did not agree with Gallo's boundless optimism. The pathogenesis of AIDS remains unknown, he said. "As long as we have no coherent hypothesis to explain AIDS, we shall have difficulties in developing rational therapeutics."

Dr. Michael Ascher presented his hypothesis on dysfunction of the immune system. His notion that the problem stems from overstimulation of the immune system, which exhausts itself, is conceptually much better than the standard "one virus kills one lymphocyte" version dished out by the WHO.

It were better to refer to the work of Elie Mechnikov, the Russian associate of Louis Pasteur and discoverer of phagocytosis. Mechnikov's basic tenet, that death is ultimately brought about by self-phagocytosis, or an autoimmune phenomenon seen in aging, is essential to the concept of immunity.

And what about the important and generally ignored fact of HIV-induced neurological dysfunction? (See *EIR*, July 1, 1988, "Should 'AIDS' be renamed 'CNSD,' 'Central Nervous System Disease'?" This topic will also be the feature of a future report in *EIR*.)