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Mankind Had a Near Miss From a Mystery Pandemic

IN THE aftermath of the six-day war in the Middle East last summer, direct air transport from Uganda to Germany and Yugoslavia was disrupted. Shipments of "green monkeys" for use in preparing vaccines were diverted to London airport before transshipment.

In the process, a group of at least eight monkeys acquired a disease heretofore unknown to medical science. The disease remains unnamed but might be called Marburgvirus, for it infected at least 32 people and killed five of them in Marburg, Germany, and infected two in Frankfurt.

Twenty-seven of the infected cases were among laboratory workers who handled the monkeys or their organs. Five were secondary cases, nurses or doctors who attended the primary ones and were in direct contact with the patients' tissues or secretions. In a brief review in *Nature* magazine, Dr. C. E. Gordon-Smith, director of the British biological warfare research laboratory at Porton, also alludes to the transmission of Marburgvirus as a venereal disease, but this is perhaps conjectural.

THERE IS, however, no doubt that Marburgvirus is extraordinarily contagious and rapidly lethal in a distressingly high proportion of cases. It is found in the blood, throat secretions and urine of infected animals and men and direct contact is the only known medium of transmission. What might have been an epidemic of world-shaking dimensions was contained by the sheer good luck that it did not spread to man at London airport but first appeared in the medically knowledgeable environment of the laboratory destinations.

The Porton laboratory

was involved when the unusually contagious character of the new disease was first realized by the German physicians. As its director remarks, "The facilities for the study of infectious diseases are of a kind probably unmatched in Western Europe; there is a strict code of safety and specially designed apparatus to cope with hazardous operations. Elaborate precautions are taken to prevent the escape of infective material and a research section is devoted solely to the study of laboratory hazards."

Its scientists were then especially prepared for the further experimental study of the new disease. They soon showed that the Marburgvirus was quite distinct from any previously known disease agent and quite unresponsive to every antibiotic tried.

The virus is also under study in Johannesburg and in the United States Public Health Service researchers at the Communicable Disease Center at Chamblee, Ga., have confirmed that it is a new virus though possibly related to the vesicular stomatitis of cattle.

THE ORIGIN of Marburgvirus is unknown. It may be indigenous to green monkeys in Africa; it may have been acquired by contact with other animals in whose company the monkeys were held during transshipment through London.

The threat of a major virus epidemic—a global pandemic—hangs over the head of the species at any time. We were lucky on this occasion, but it was a near miss. It could easily have established a very large focus of infection in countries like India or China or South Vietnam, and in our present knowledge of virology we

would have been ill-equipped to stop it from dominating the earth, with a half-billion casualties.

We have also seen the irony of the constructive role played by a BW laboratory in containing the virus. But we cannot blind ourselves to the knowledge that biological warfare now has one more potential weapon in its repertoire. Furthermore, a great deal of scientific ingenuity is dedicated to "improving" such agents, the most suicidal of human enterprises today.

Marburgvirus is but one example of the evils of nature that are our real enemies in the living world. It is very unlikely to discriminate between Democrat or Communist or Maoist. And as human society is now organized, our encounters with such threats will not for long be just near misses.

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