

African hemorrhagic fever: Welcome to Marburg country

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African hemorrhagic fevers are lethal, incurable viral infections with a notorious propensity to afflict health care workers. Lassa and Ebola are the best-known culprits, and these killers spread fear well beyond their geographic range. Chances are your hospital has a plan to deal with febrile travellers returning from endemic regions of Africa. Such plans involve isolation, space suit technology and desperate calls to public health and tropical disease experts.

Africa's latest hemorrhagic fever outbreak is centred in the Watsa region of the Democratic Republic of Congo (DRC), close to the Uganda border. It began in January 1999 and came to the attention of international health organizations in April. By mid-May, about 90 people had been infected and 60 had died. Marburg virus was confirmed in one patient.

Marburg is Ebola's first cousin, and these are the only known members of the filovirus family of RNA viruses. Marburg was identified in Marburg, Germany, in 1967, isolated from a researcher who had been working with African green monkeys

imported from Uganda for polio vaccine development. In the Marburg outbreak, 37 people became ill, most of them laboratory workers, medical personnel, and family members. The next confirmed Marburg attack was in

exposure, Marburg incubates for 5 to 10 days, long enough for victims to reach any part of the globe. The illness begins suddenly with fever, chills, headache and myalgias — the classic presentation for malaria,

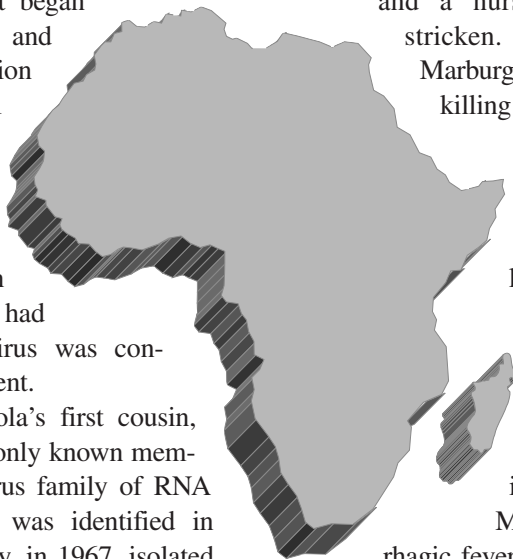
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1975, when a traveller fell ill in Johannesburg after contracting the disease in Zimbabwe. A companion and a nurse were also stricken. In 1980 Marburg struck twice, killing a traveller and his attending physician in western Kenya. The last known case prior to this year's outbreak was a 1987 fatality, again in Kenya.

Marburg hemorrhagic fever is uncommon and rarely recognized. The virus's animal host is unknown. After

which is our region's most common febrile illness. On about day 5, a maculopapular rash may erupt. In severe cases, this progresses to generalized capillary leaking, multi-organ failure and death. Overall, the fatality rate is thought to be about 25%. Human-to-human transmission occurs by direct contact with infected secretions or tissues, and the virus remains viable for 5 days on contaminated surfaces. Marburg is one scary bug!

A complicating factor in the 1999 Congo outbreak is that it began in a war zone. The DRC is embroiled in a putative civil war — a war that is, in fact, an international African conflict, where "rebel" forces are supported by Ugandan and Rwandan troops and "government" forces are comprised of troops from Angola, Namibia and Zimbabwe. In this setting, Marburg's



Harare, Zimbabwe, and the University of Ottawa

incubation period provides a window of opportunity for returning troops to export the virus throughout central and southern Africa.

On May 13th in Harare, Zimbabwe, the front-page headlines read:

“Ebola-like disease hits Zimbabwe! One dead; two critically ill!”

All 3 cases were soldiers who had returned from the DRC and were being treated at the hospital where I now work. In our “casualty” department, there was the usual din of activity, the crying of babies, and the familiar moans of patients in pain. But above this, there was a worried buzz as our staff exchanged experiences and concerns. Some remembered the victims. Days earlier, they had been assessed in the department and admit-

ted to 3 different areas in this massive teaching hospital. I spoke to the attending internist, who confirmed that some belated infection control

measures had been implemented. The space suits must have been at the cleaners, but there were gloves, masks and some short-sleeved gowns available (especially nice on those really hot days) for barrier protection. The nursing shortage didn’t permit one-to-one nursing, but the patients had been placed in private rooms. In a place where washing your hands is a chal-

lenge because of soap shortages and the complete absence of paper towels, the stage was set for a disastrous nosocomial outbreak.

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It didn’t happen. I am still here. The studies from the virology centre in Johannesburg were negative for Marburg. But it makes me wonder. Which of the 6 to 10 severe (or cerebral) malaria cases we treat each day will be carrying a more sinister and deadly secret?

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