Notes from the Field

Rift Valley Fever Response — Kabale District, Uganda, March 2016

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On March 9, 2016, a male butcher from Kabale District, Uganda, aged 45 years, reported to the Kabale Regional Referral Hospital with fever, fatigue, and headache associated with black tarry stools and bleeding from the nose. One day later, a student aged 16 years from a different sub-county in Kabale District developed similar symptoms and was admitted to the same hospital. The student also had a history of contact with livestock. Blood specimens collected from both patients were sent for testing for Marburg virus disease, Ebola virus disease, Rift Valley fever (RVF), and Crimean Congo Hemorrhagic fever at the Uganda Virus Research Institute, as part of the viral hemorrhagic fevers surveillance program. The Uganda Virus Research Institute serves as the national viral hemorrhagic fever reference laboratory and hosts the national surveillance program for viral hemorrhagic fevers, in collaboration with the CDC Viral Special Pathogens Branch and the Uganda Ministry of Health.

On March 11, the blood specimens from both patients were found to be positive for RVF by reverse transcription–polymerase chain reaction and RVF immunoglobulin M testing. These two cases were the first confirmed cases of RVF detected in Uganda since 1968 (*1*). Concurrently, probable cases of RVF were identified in Kabale District; both of the patients in these cases died. Both patients had RVF symptoms and a history of contact with animals through animal care and butchering, but specimens were not obtained from these patients for testing before they died.

RVF virus belongs to the Bunyaviridae family, genus *Phlebovirus* (*2*). RVF outbreaks in animals are characterized by a large number of spontaneous abortions in pregnant animals (*3*). Human cases typically occur after RVF disease in animals. In humans, RVF symptoms can range from an asymptomatic or mild influenza-like illness to a severe disease with hepatitis, retinitis, or encephalitis (*4*). Approximately 1% of RVF cases progress to hemorrhagic disease. RVF transmission to humans can occur through direct contact with an animal's infected tissue or body fluid, particularly during spontaneous abortion of an infected animal, as well as via fomites. Mosquitoes also transmit the virus to humans and animals (*3*). Populations at high risk for infection include herdsmen, butchers, and abattoir workers (*5*). Previous large RVF outbreaks have occurred throughout Africa and the Arabian Peninsula, recently including South Africa, Kenya, Sudan, Saudi Arabia, Tanzania and Yemen (*3*).

Prevention of RVF includes measures such as recognition of sick animals to avoid spread to other animals or humans, use of personal protective equipment, and thorough cooking of meat and milk before consumption. Use of mosquito nets and wearing long sleeves and pants can help prevent transmission by mosquitoes. After this RVF outbreak in March 2016, a multidisciplinary investigation was initiated in coordination with the Uganda Ministry of Health, Uganda Ministry of Agriculture Animal Industry and Fisheries, the Uganda Virus Research Institute, and CDC. Surveillance for RVF in mosquito and animal populations in Kabale and neighboring districts, as well as a knowledge, attitudes, and practices survey for persons living in the region, are underway. In addition, a multisectoral national task force was organized to train health care workers on recognition of RVF signs and symptoms in humans and animals. The task force also began a social mobilization and health information campaign in Kabale and surrounding districts to increase RVF awareness through community discussions, radio messaging, and informational pamphlets developed by the World Health Organization, as well as distribution of informational posters targeting community members, health care providers, veterinarians, farmers/herdsmen, and abattoir workers.

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