Rift Valley Fever in Sudan

The first reports of the extensive outbreak of Rift Valley Fever (RVF) in Sudan appeared on ProMED-mail at the beginning of November 2007 (ProMed-mail archive number 20071103.3570). There have been regular postings since, and according to the WHO update issued on 22 November 2007 (http://www.who.int/csr/don/2007_11_22/en/index.html), a total of 436 human cases of RVF, including 161 deaths, have been reported from the States of Gazeera, White Nile and Sennar. Gazeera State has been worst affected. In this state, many cases are in an area close to irrigation canals and are linked to naturally occurring cycles involving livestock and mosquitoes. In Khartoum State, there were an additional 15 cases including 3 deaths, but these cases were thought to have been infected in the other affected areas.

RVF is a viral zoonosis that primarily affects animals, but can also infect humans. The RVF virus circulates between ruminant animals (cattle, sheep, goats and camels) via mosquitoes, and animal infections usually precede human disease. The most significant risk factor for human infection during an outbreak is close contact with infected domestic animals, particularly with body fluids (either directly or indirectly via aerosols), blood or organs. Transmission of the virus may occur through handling animal tissue during slaughtering or butchering, assisting with animal births, performing veterinary procedures, or from the disposal of carcasses or fetuses. Some evidence suggests that humans may become infected by ingesting unpasteurized or uncooked milk from infected animals. At times of high vector densities, the relative importance of mosquito-to-human transmission may increase.

The current situation in Sudan is being managed by an inter-ministerial Task Force, with the participation of the Federal Ministry of Health and the Federal Ministry of Animal Resources and Fisheries, amongst others. The WHO Eastern Mediterranean Regional Office and WHO headquarters is providing ongoing support to the Ministry of Health, mainly by providing technical support. State and Federal Ministers of Health met in support of the Task Force on 20 November to discuss the response activities. They called for systematic measures to control the spread of RVF in animal populations, including controlling animal movement. Social mobilization efforts are being emphasised, to ensure that at-risk communities are aware of the necessary measures to reduce the risk of human infection. There is no specific treatment and no effective human vaccine for RVF. Thus, intensive social mobilization to raise awareness of risk factors and improve individual protective measures, is the only way to reduce human infection and deaths.

Leptospirosis, Dominican Republic

Reports on ProMED-mail on 24 November 2007 stated that at least 25 people in the Dominican Republic had died from leptospirosis and almost 200 people were ill (ProMED-mail archive number 20071124.3804). The outbreak is thought to be associated with flooding due to Tropical Storm Noel in the previous month. Initially, cases of leptospirosis were limited to a region along the banks of the Ozama River north and east of the capital. However, later reports stated that there were confirmed cases from the Barahona beach resort on the southern coast.

As discussed on ProMED-mail, leptospirosis is a zoonosis, transmitted to humans by exposure of mucous membranes or skin abrasions to water or wet soil (such as after flooding due to heavy rainfall) that has been contaminated by urine from asymptomatic chronically infected animals, especially rodents. Leptospirosis was previously reported in the Dominican Republic in January 2006 (ProMED-mail archive number 20060110.0085). At that time, the infection was attributed to “sanitary problems and to deficiencies in municipal garbage collection”. Inadequate rubbish disposal provides a suitable habitat for rat infestation in urban settings.
Ebola Hemorrhagic Fever in Uganda

The death of a 33-year-old man from Kyenjojo district on 3 December 2007 will increase the total number of deaths due to Ebola virus infection if his infection is confirmed. The outbreak of Ebola virus infection in Uganda, which may have begun in September 2007, has (as of 28 November 2007) resulted in a total of 51 suspected cases, including 16 deaths according to the World Health Organization (WHO). Since then, additional suspected cases have been reported.

Cases are being hospitalized at Kikyo and Bundibugyo and two patients with Ebola symptoms were admitted in Buhinga Hospital in Fort-Portal, one of whom (the 33-year-old man noted above) has died. Although the epicenter of the outbreak has been in the Bundibugyo district, there is concern that recent suspected cases of the disease are geographically outside of the Bundibugyo district. A more recent report identifies two doctors in western Uganda who died of Ebola virus infection, which would bring the number of deaths due to the infection to 21 since the strain first appeared in September, an official said on 5 December 2007 (http://afp.google.com/article/ALeqM5i8F4hLjKXzjBL-guVQ5oixqppMjg).

"The sad news is that our doctor who was admitted in Mulago died last night and a senior clinic officer who had been in critical condition died this morning," said Samuel Kazinga, district commissioner for Bundibugyo.

According to the WHO (http://www.who.int/csr/don/2007_11_30a/en/index.html) "laboratory analysis undertaken at the National Reference Laboratories and the Centers for Disease Control and Prevention (CDC), Atlanta, USA has confirmed the presence of a new species of Ebola virus in samples taken from cases associated with the outbreak."

Dr Sam Zaramba, the Director General of Health Services noted that experts from WHO, the United States Centers for Disease Control and Prevention (CDC), and Médecins Sans Frontières are now in Uganda. In addition, a permanent laboratory will be established at the Uganda Virus Research Institute Entebbe to speed up the diagnosis of Ebola and other viral hemorrhagic fevers. Until then, the diagnosis of Ebola and other viral hemorrhagic fevers requires that samples be taken to South Africa or to the CDC in Atlanta in the United States.

In addition, State Health's Emmanuel Otaala noted the presence of cholera, plague, meningitis and hepatitis outbreaks in Uganda (http://www.abc.net.au/news/stories/2007/12/05/2110207.htm).

"As we are trying to contain Ebola, we came across four other outbreaks," he said. The Ugandan health ministry reported cholera in western Hoima and northeastern Nebbi districts, plague in Nebbi, meningitis in Nebbi and Arua district, and hepatitis in northern Kitgum district.