

Lassa fever

Identification

Lassa fever is a viral disease that is carried by rats. It is spread from rodents infected with the *Lassa* virus to humans. Lassa virus is a single-stranded RNA virus and is part of the Arenaviridae virus family. The virus can be transmitted through urine and droppings of an infected rat. Lassa fever was first identified in a Nigerian village in 1969; this is where the name originates.

Lassa fever is mainly found in Western Africa. Countries such as Nigeria, Sierra Leone, Liberia, and Ghana have had many cases of Lassa virus infection. The rodent reservoir — *Mastomys* or the multimammate rat — has large numbers of offspring and is widespread in the savannas and forests of Western, Central, and Eastern Africa. These rats also like to colonize human homes. The virus can be spread through airborne transmission: simply breathing in the excretions of the rats can infect a person with the Lassa fever. These conditions make the virus very efficiently spread from rats to humans.

Some of the symptoms of this virus are hemorrhagic fever above 38.5 degrees C, headache, sore throat, cough, nausea, and vomiting.

Infectious Agents

The infectious agent of Lassa Fever (LF) is the *Arena* virus.

Occurrence

The Lassa virus is usually found throughout the continent of Africa. Anyone who comes in contact with the Lassa virus rodents is prone to infection. Lassa virus infections per year in West Africa are estimated to be 100,000 to 300,000 with approximately 5,000 deaths per year. There is no difference in infection or death rates by sex, ethnicity, or age. Geographically, it is abundant in dry savannas and forests in Africa.

Approximately 15–20 % of hospitalized patients die from the Lassa virus. Pregnant women in their third trimester have almost a 95% chance of dying along with their fetuses.

Reservoir

The multimammate rat (*Mastomys*) is the chief reservoir. It sheds virus in its bodily wastes, and humans can be infected when they have contact with these wastes.

Mode of transmission

The Lassa virus is spread in many different ways. First it is spread from rats to the human by urine and fecal droppings. When humans come in direct contact with these materials, through touching objects or eating food contaminated with these materials, or through cuts and sores, they may become infected. Usually these rodents live thrive on human food remains or poorly stored food, so this type of transmission is common. Inhaling airborne particles of droppings or urine can also result in contamination.

Lassa fever can also be spread by human to human contact. This type of transmission occurs when a person comes in contact with the virus in the blood, tissue, secretions, or excretions of another human infected with this virus. This means coughing, sexual intercourse, kissing, and sneezing can all infect someone with the Lassa virus. It cannot be spread through casual contact (including skin-to-skin contact without exchange of body fluids).

Incubation Period

Incubation usually takes about 6 – 21 days.

Period of communicability

During the highest fever and sore throat phase this is when virus is present in the throat this virus is able to spread to other humans. Coughing, sneezing and headache usually notify that it is communicable at this time. It takes three to nine weeks before the virus is detected in the urine.

Susceptibility and Resistance

Mostly humans in West Africa should worry about getting this virus but not people in different countries unless they have traveled to this part of the world. Treatment consists of antiviral drugs, such as Ribavirin, to slow down the growth of the virus and to help the immune system to fight back.

Methods of Control

The Lassa virus can be treated with the anti-viral drug Ribavirin. Treatment of this virus is available using the anti-viral drug Ribavirin. Ribavirin slows down the virus so your immune system can catch up to it. Routine vaccinations would be probable in preventing the spread of the Lassa virus. There is no vaccine for this virus at this time. Another method of control would be reducing the number of “multimammate rats” around West Africa to prevent the spread of the Lassa virus.