

What is Paramyxoviridae?

Nipah virus was identified in 1999 after causing disease in animals and in humans. The virus is named after the location where it was first detected in Malaysia. Transmission of Nipah virus to humans may occur after direct contact with infected bats, infected pigs, or from other NiV infected people.

Hendra virus was first isolated in 1994 from specimens obtained during an outbreak of respiratory and neurologic disease in horses and humans in Hendra, a suburb of Brisbane, Australia. The natural reservoir for Hendra virus has since been identified as the flying fox

Who is at risk for Paramyxoviridae?

People of all ages are at risk for these viruses in locations where the virus is active in local animal populations.

Nipah virus: In Malaysia and Singapore, infection has been associated with close contact with infected pigs. In Bangladesh and India, infection has been associated with close contact with bats and consumption of raw date palm sap, a source of food for the local bat populations. Additionally, family and caregivers of Nipah virus-infected patients are also at risk.

Hendra virus: People at highest risk are those living within the distribution of the flying foxes and with occupational or recreational exposure to horses that have had potential contact with flying foxes in Australia.

What are the symptoms of Paramyxoviridae?

Nipah virus begins with fever and headache followed by inflammation of the brain (encephalitis), drowsiness and disorientation characterized by mental confusion. Some cases also experience respiratory symptoms. Some cases will have long term illness including persistent convulsions and personality changes and during one outbreak 40 percent of hospitalized neurological cases died.

Hendra virus can lead to respiratory illness with severe flu-like signs and symptoms. In some cases, illness may progress to encephalitis. Although infection with Hendra virus is rare, the case fatality is high: 4/7 (57%).

How soon do symptoms appear?

Symptoms usually appear five to 14 days after exposure to the Nipah virus and 9-16 days after exposure to Hendra virus.

How is Paramyxoviridae spread?

Transmission of Nipah virus has occurred in humans through direct contact with infected bats, infected pigs, and infected people. Person-to-person spread is most likely to occur in family members and caregivers of sick individuals.

Transmission of Hendra virus to humans can occur after exposure to body fluids and tissues or excretions of horses infected with Hendra virus.

When and for how long is a person able to spread the disease?

At this time, it is not known how long a person is able to transmit Nipah virus. Hendra virus is not spread from person to person.

How is a person diagnosed?

A variety of laboratory tests exist to test for both Nipah and Hendra viruses. These are usually done on blood or cerebrospinal fluid.

What is the treatment?

Currently, no drug treatment has been proven to be effective in treating Nipah infection. However, healthcare providers may offer supportive therapy (i.e., rest, fluid intake) to help manage symptoms.

Does past infection make a person immune?

This is unknown at this time.

Should children or others be excluded from child care, school, work or other activities if they have Paramyxoviridae virus?

Yes, for persons infected with Nipah virus, they should consult with state and local health department before attending child care, school, work or other activities.

No, for persons infected with Hendra virus. Infants, toddlers and school-aged children should not be excluded unless the staff determines the child is unwilling or unable to participate in activities. They also should be excluded if the staff determines that they cannot care for the child without compromising their ability to care for the health and safety of the other children in the group.

All others can attend work and other functions as long as they are well enough to do so.

What can be done to prevent the spread of Paramyxoviridae?

For both Nipah and Henda virus disease, people should avoid bats/flying foxes and animals that are known to be infected. Additionally to prevent Nipah virus, the use of appropriate personal protective equipment when necessary, as well as avoid eating or drinking date palm sap.

Additional Information:

Additional information is available by calling the North Dakota Department of Health at 800.472.2180.

This disease is a reportable condition. As mandated by North Dakota law, any incidence of this disease shall be reported to the North Dakota Department of Health.

Resources:

1. Centers for Disease Control and Prevention. (2014). www.cdc.gov/vhf/virus-families/paramyxoviridae.html
2. *Red Book: 2015 Report of the Committee on Infectious Diseases*. 30th ed. [Children in Out-Of-Home Care]. Kimberlin, DW; Brady, MT; Jackson, MA; Long, SS. American Academy of Pediatrics. 2015: 132-151.
3. Heymann, D. L. (2015). *Control of Communicable Diseases Manual, 20th Edition*. Nipah and Hendra viral diseases. American Public Health Association. 2015: 428-431.