

Hendra Virus Infection

Information for

Healthcare Workers

Version 2 – September 2013

Description

Hendra virus infection is a disease caused by Hendra virus. Initially named Equine Morbilivirus, Hendra virus is a member of the genus *Henipavirus*, a new class of virus in the *Paramyxoviridae* family. It is closely related to Nipah virus. It was first isolated in 1994 during an outbreak of acute respiratory disease among horses and humans in Hendra, Brisbane.

The natural host for Hendra virus is the flying fox. The virus can spread from flying foxes to horses, horses to horses and, rarely, from horses to people. In July 2011 a single dog on a property where three horses were infected with Hendra virus had a positive blood test that showed evidence of exposure to Hendra virus. The dog showed no signs of illness.

Symptoms

Disease in Humans

People infected by the Hendra virus have become unwell with:

- an influenza-like illness with symptoms such as fever, cough, sore throat, headache and tiredness (which led to pneumonia in one case) and/or
- encephalitis (inflammation of the brain) with symptoms such as headache, high fever and drowsiness, which progressed to convulsions and/or coma.

The time from exposure to a sick horse until the start of illness in humans has varied between 5 and 21 days.



Transmission

While the exact route of infection is unknown, it is thought that horses may contract Hendra virus infection from eating matter recently contaminated with flying fox urine, saliva or birth products. Spread of infection to other horses can then happen.

The seven confirmed human cases all became infected following high level exposures to respiratory secretions and/or blood of a horse infected with Hendra virus, such as assisting with post mortem examination of a dead horse without appropriate personal protective equipment (PPE), performing certain veterinary procedures or having extensive exposure to respiratory secretions without appropriate PPE.

There is no evidence of human to human transmission. People who have had contact with a person with Hendra virus infection, including health care workers and family members, have been tested and shown no evidence of the virus. There is no evidence that the virus can be passed directly from flying foxes to humans, from dogs to humans, from the environment to humans, from humans to horses or float in the air.

Hendra virus is killed by heat, drying and cleaning with detergents.

Treatment

There is no known specific treatment for Hendra virus infection. To date, antiviral medications have not been effective but three people have recovered from infections with general medical support.

People who have had high level exposures to the body fluids of an infected horse may be offered experimental treatment with a human monoclonal antibody that may prevent infection.

Infection Prevention and Control

Community

There is no human vaccine against Hendra virus. A vaccine for horses has been available through accredited veterinarians since November 2012.

If a horse becomes unwell and Hendra virus infection may be a possibility, as few people as possible should care for the horse until the infection is ruled out. Appropriate PPE which prevents contamination of the skin, eyes, nose or mouth of people by the horse's body fluids

should be worn if close contact with the sick horse is considered essential. After contact with an unwell horse, hand hygiene and environmental cleaning measures should be undertaken.

Healthcare Workers

There is no evidence of human to human transmission, however, contact and droplet transmission-based precautions should be applied when providing direct patient care to symptomatic persons suspected or know to be infected with Hendra virus.

Asymptomatic contacts of an infected animal or human should be managed using standard precautions.

Additional transmission-based precautions may be ordered at the discretion of the treating infectious diseases specialist.

For Further Information

Please contact your nearest Public Health Unit (<https://www.health.qld.gov.au/system-governance/contact-us/contact/public-health-units>) or your hospital's Infection Control team.

Additional information is available from the Australia Bat Lyssavirus fact sheet (<http://conditions.health.qld.gov.au/HealthCondition/condition/14/217/10/Australian-Bat-Lyssavirus>)

References

CSIRO. Hendra Virus [Internet]. 2012 [cited 2013 Aug 30]. Available from: <http://www.csiro.au/Outcomes/Food-and-Agriculture/Hendra-Virus.aspx>

NSW Department of Primary Industries. Hendra Virus Vaccine [Internet]. 2013 [cited 2013 Aug 30]. Available from: https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0019/310492/Hendra-Virus-Primefact-970-1.pdf

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