

SEOUL VIRUS

In late 2016, the US had its first outbreak of the Seoul virus that could be traced back to pet rats. The outbreak started at a home-based breeder in Illinois and spread to Wisconsin. When the CDC traced shipments of rats to and from infected facilities they found that the outbreak had spread to 31 facilities in 11 states. All of these facilities were put under quarantine to stop the spread of the outbreak. In total 24 people got sick and 3 spent some time in the hospital but one died.

CAUSE

The Seoul virus is a zoonotic disease caused by the old world RNA virus Bunyaviridae Hantavirus. It uses rats as a reservoir host to carry and spread the disease. Contact with infected rats can spread the disease to humans but these instances are very rare and generally caused by wild rats. The virus cannot be spread from human to human or through any other animal, it can only be transmitted through rats.

SYMPTOMS

In humans, symptoms usually appear 1 - 2 weeks after contact with an infected rat but can take up to 8 weeks to develop. Symptoms in humans include:

- fever
- nausea
- abdominal pain
- back pain
- blurred vision
- chills
- pink eye
- headache
- rash

In extreme cases, if the disease progresses it can cause a bleeding and kidney disease called hemorrhagic fever with a renal syndrome that has a 1% - 2% fatality rate. Some people may contract Seoul virus and develop no symptoms.

The Seoul virus does not negatively impact rats in any way and they show no symptoms. The only way to know if a rat is infected is to have them tested.

TRANSMISSION

Seoul virus is spread when a rat's infected blood, saliva, urine, or droppings comes in contact with an area of broken skin, eyes, nose, or mouth. The virus can also be transmitted through the air if dirt on bedding becomes aerosolized.



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DIAGNOSIS

Since rats are asymptomatic for the Seoul virus, a vet has to use a serological test to determine if antibodies are present in the rat's blood. They take a small sample of your rat's blood and send it to a laboratory to have it tested.

TREATMENT

There is no treatment for the Seoul virus in rats, once they have it they will carry it for life and spread it to any other rats they come in contact with. Because of this, it is important to keep any infected rats quarantined.

Most of the time humans don't need treatment for the Seoul virus, the body can kill off the virus on its own. Occasionally, if the infection gets worse, a patient may need to go to a doctor or the hospital to get supportive care such as oxygen and fluids.

PREVENTION

The best way to prevent the Seoul virus from spreading is to use good cleaning techniques. Don't stir up dust in the cage, don't clean cages and toys in food preparation areas, disinfect areas that have been in contact with rats using a 10% bleach solution, keep rats away from your face, don't eat or drink while playing with them, and always wash your hands after handling a rat.



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