

Hantavirus

Traveler Summary

Key Points

- | Hantavirus disease is a viral infection acquired through inhalation of aerosols of contaminated rodent urine and (possibly) feces.
- | Risk is low for travelers.
- | Hantavirus cardiopulmonary syndrome (HCPS) has symptoms that are often life threatening and include sudden-onset fever, headache, muscle aches, nausea, vomiting, cough, and shortness of breath. viral-hemorrhagic-fevers fever with renal syndrome (HFRS), caused by different hantaviruses, begins like HCPS but does not have lung involvement.
- | Consequences of infection include respiratory failure (HCPS) or kidney failure (HFRS) that is severe enough to cause death.
- | Prevention includes avoiding contact with rodents in the wild and avoiding accommodations that are contaminated with rodent droppings.
- | No vaccine or preventive drugs for travelers are available.

Introduction

Hantaviruses are viruses that are primarily carried by rodents. European and Asian hantaviruses can infect humans, causing HFRS, which is a febrile illness with kidney involvement that, for some types of hantaviruses, may include bleeding manifestations. The severity of HFRS can range from mild to life threatening. American hantaviruses cause HCPS, a severe infection affecting the lungs and the heart.

Risk Areas

Hantaviruses are found worldwide. China has the highest incidence of hantavirus disease. Within the European continent, European Russia accounts for most human infections. A mild form of HFRS, caused by the Puumala virus, is the most prevalent hantavirus disease in Western and Central Europe, predominantly in Finland, Sweden, Belgium, France, and Norway. HCPS is restricted to the Americas. Since HCPS was first recognized in the Four Corners region of the U.S. in 1993, confirmed cases have been reported in Argentina, Bolivia, Brazil, Canada, Chile, Panama, Paraguay, and Uruguay. Brazil has the highest annual hantavirus incidence in the Americas. In the U.S., most cases are sporadic and occur in the western and southwestern states, including Arizona, California, Colorado, and New Mexico. In South America, many HCPS cases have been associated with the spring cleaning of holiday cabins that have been contaminated with mouse droppings over the winter months. However, the incidence of disease is often highest during the summer or during fall and early winter.

Transmission

Hantaviruses are predominantly transmitted to humans via inhalation of aerosols of contaminated rodent urine and (possibly) feces. A few instances of transmission through rodent bites have been reported, usually in enclosed spaces such as grain silos. Person-to-person transmission appears to be rare.

Risk Factors

The main risk factor is exposure to rodents and their excreta. Activities associated with heavier exposure include agricultural work, camping, trekking, sleeping on the ground, staying in rodent-infested cabins, and military exercises. Indoor exposure also occurs, particularly during times of high rodent populations with declining food availability, when rodents tend to invade human dwellings more often.

Although adventure travelers can sometimes find themselves in any of the above situations, the risk for these persons seems to be low. Cases have occurred in visitors going to Yosemite National Park, California. Rare cases of imported HCPS and HFRS have been reported in travelers from Bolivia and Cuba.

Symptoms

HCPS symptoms appear 4 to 30 days following exposure and include sudden onset of fever, headache, muscle aches, nausea, and vomiting. Cough, shortness of breath, and rapid breathing may develop.

HFRS begins like HCPS, although sometimes a rash and flushing of the face and torso can occur.

Consequences of Infection

Most HCPS can progress to respiratory failure severe enough to result in death. The severe form of HFRS can progress to kidney failure and death.

Need for Medical Assistance

Individuals with severe forms of HCPS should seek immediate medical care. Even persons with mild symptoms who suspect that they have been exposed to hantavirus should seek prompt medical attention because the illness can escalate very rapidly.

Prevention

Avoid contact with rodents in the wild and, when appropriate, take measures to eradicate domestic rodent populations from human habitations.

When visiting endemic countries, it may be useful to check for local hantavirus activity at the destination. If active infection is being reported, it may be wise to limit outdoor activities and avoid staying in substandard facilities.

No vaccine or preventive drugs for travelers are available.

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