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Wildlife Diseases
FACTSHEET

Hantavirus in Deer Mice

Introduction

Hantaviruses are a group of viruses recently identified in North America as being a risk for human health. The importance of these viruses and the facts on their presence in Newfoundland are discussed.

First identified in the southwestern US

In 1993, a new respiratory illness in humans, called Hantavirus Pulmonary Syndrome (HPS), was described in the southwestern US (Four Corners Region). Though not a new disease it was only at that time that the actual virus that caused the disease was identified.

At first it was thought to be only associated with hot, dry areas though since then it has been found in other areas as well.

Strains of the Virus

There are different strains of hantavirus that can cause human illness. The most common one is called Sin Nombre virus but another strain that is also found in Canada is called Monongahela virus.

Spread by rodents

In different parts of North America different rodents may be responsible for the spread of this disease. In Canada, the most important one is the deer mouse (*Peromyscus maniculatus*, Figure 1). The deer mouse is usually dark gray on top with a whitish belly and round ears.

The mice themselves don't get sick but through their droppings, urine and saliva they can contaminate areas that humans can also frequent.

People commonly are exposed to this virus when cleaning or otherwise disturbing an area where deer mouse droppings have accumulated. This could include cabins, garages, sawmills, feed mills or through disturbing wild burrows.

Figure 1: *Peromyscus maniculatus*, the deer mouse

Illness in Humans

Animals are not known to get sick from this virus and other than the rodent species directly involved, no other animals are known to spread it. For example, a cat that eats an infected deer mouse will not get sick nor will it spread the disease.

People can get very sick from this virus and in some cases die. The symptoms include fever, chills, occasional headaches and possibly digestive problems. A few days later, breathing problems can start including coughing and a shortness of breath.

Copies of this and other publications may be obtained from the Department's Regional Offices, the factsheet author or by visiting our website at http://www.gov.nl.ca/agric/.

GOVERNMENT OF
NEWFOUNDLAND AND LABRADOR
Department of Natural Resources

Though the actual number of people affected since this disease was first described is quite low the percentage of these that died is fairly high. As of May 26, 2000, there have been 33 cases reported in Canada of which 13 died (39%). In the US, as of May 8, 2000, there have been 250 cases of which 101 (40%) died.

Canadian cases

Of the 33 cases reported in Canada, 20 were in Alberta, 6 in British Columbia, 5 in Saskatchewan and 2 in Manitoba.

The deer mouse however is known to live in all areas of Canada with the possible exception of the far northern areas of Quebec, Manitoba and the territories.

Testing has been done on deer mice collected across Canada and so far the virus was found in all regions except Nova Scotia, PEI, the North West Territories and Nunavut. In some of these areas there were only limited samples available so further testing might find it there as well.

Newfoundland and Labrador

Limited sampling in this province has shown the virus to exist on the southwest coast (Robinson's area). It is assumed though that wherever the deer mouse exists there is a chance that the virus is also there.

The deer mouse is seen in Labrador and has been on the island of Newfoundland since at least the 1950's. In Labrador it is thought to exist mostly to the north of Lake Melville while on the island it is common in Western Newfoundland and at least as far east as Badger. It has not been reported on the Northern Peninsula. It is expected that it could move across the island with time.

Precautions

As stated, the number of cases of this disease in Canada is very low and they have only been seen so far in the west. It is wise though to avoid exposure to mouse droppings by taking proper precautions. The Department of Health & Community Services has printed a brochure called ***"Keep Your Cabin Free of Rodents"*** which is available through local Community Health offices. In addition, the Canadian Federation of Humane Societies has put out a factsheet called ***"Living with Urban Wildlife - Mice & Rats"*** which describes humane ways of controlling all types of rodents.

More Information

For more information on hantavirus there are numerous websites such as those of Health Canada (www.hc-sc.gc.ca) and the US Centre for Disease Control (www.cdc.gov). The brochures identified can be found at local departmental offices or through contacting the author. The Canadian Federation of Humane Societies has all of its factsheets on its website (www.cfhs.ca).

Any concerns over personal health should be directed to your family doctor or Community Health Office.

Image Credit:

Figure 1: US Centre for Disease Control

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