

Date: July 2, 2010
To: Alberta Health and Wellness, Alberta MicroNet, Infectious Disease Physicians, ICU Physicians (via Dr. Boiteau and Dr. Gibney), Infection Prevention and Control, Laboratory Directors and Managers, Medical Officers of Health
From: ProvLab
Re: Hantavirus Testing in Humans

PLEASE POST OR DISTRIBUTE AS WIDELY AS APPROPRIATE

Background:

In the past month there have been two laboratory-confirmed cases of hantavirus in Alberta. Hantavirus causes a respiratory illness (hantavirus pulmonary syndrome [HPS]) through inhalation of infected rodent urine and faeces and contact with rodent saliva. The deer mouse is the primary zoonotic reservoir and is widely distributed in Alberta. Hantavirus belongs to the Bunyaviridae family which are enveloped single stranded segmented RNA viruses; Sin Nombre virus is the most common species identified from confirmed cases of hantavirus in Alberta.

The incubation period is approximately 2 weeks (ranging from a few days to 6 weeks), followed by a short febrile prodrome which can develop to a cardiopulmonary phase that may be fatal.

Laboratory Testing;

Serology and molecular assays are available from the National Microbiology Laboratory (Winnipeg) for the confirmation of suspected cases. Testing is not available for past exposure or “asymptomatic contact”. Collection of samples for serology and molecular testing will increase the success rate in making a diagnosis.

All test request submissions must be sent on a ProvLab requisition with the relevant clinical signs, symptoms and exposure history completed.

- For serology testing:
 - Collect one 5 mL serum vacutainer (SST gold top)
 - Request “Hantavirus serology” on the ProvLab requisition (testing includes IgM and IgG)
 - **Note:** At the onset of illness, IgM antibody levels can be low or absent. Therefore a convalescent sample should be collected 10 to 14 days after the acute sample for strongly suspected cases. On the requisition specify “convalescent hantavirus serology”.

- For molecular testing: (NEW testing available)
 - Whole blood collected in a 3 mL EDTA tube (lavender top)
 - Bronchoalveolar lavage fluid in a sterile container
 - Unfixed lung tissue or lung biopsies sent in a sterile container. For small tissue samples add a small volume of universal/viral transport medium to prevent desiccation.

- Autopsy Samples: Contact the Virologist-on-Call (VOC) prior to sending these samples

Rodents, rodent faeces or contaminated materials ARE NOT accepted for Hantavirus testing.

Questions & STAT Testing:

Edmonton Site – Ph: 780-407-7121 (ask for VOC)

Calgary Site – Ph: 403-944-1200 (ask for VOC)

This bulletin has been approved by Dr. Marie Louie.