



**Office of the
Chief Medical
Health Officer**

HANTAVIRUS

A reminder to consider **hantavirus** in the context of acute respiratory distress syndrome occurring in British Columbia.

Two cases of hantavirus pulmonary syndrome (HPS) occurred this summer in BC, marking 17 cases reported in BC since the pathogen was first discovered in the province in 1994. One case was a 17 year old male who was hospitalized and recovered. The second was a 44 year old male who progressed from ARDS to multi-organ failure and died in hospital. Both were from the Interior Health Region. Every year, 0-2 cases are reported and so far all but one case were exposed in BC. Cases were reported from all health regions but the majority of cases were from the Interior Health region (see attached map). The median age was 44 years (range of 14-69 years). 65% were male. The case fatality rate has been 50%. It is believed there is significant under-diagnosis and under-reporting because of the non-specific presentation.

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Clinical Presentation

Typically, the clinical course of HPS is different from most cases of respiratory disease. Patients usually have several days of milder symptoms such as myalgia, headache, nausea and diarrhea with few or no respiratory symptoms, and then become febrile and over 1 to 3 days develop acute symptoms and findings suggestive of noncardiogenic pulmonary edema and respiratory insufficiency.

Typical laboratory features include hemoconcentration, a marked left shift on blood smear (usually with a normal total white cell count), a decreased platelet count, and hypocapnia. Radiological studies show bilateral diffuse infiltrates more suggestive of acute respiratory distress syndrome than pneumonia.

If hantavirus is suspected, please consult with medical microbiology to order hantavirus testing and ensure correct specimens are collected.

Transmission

Hantavirus is believed to be endemic in deer mice throughout the province. The virus can become aerosolized from droppings, urine and nesting material and then inhaled or ingested. Transmission through direct bites is uncommon.

Prevention

Prevention is primarily through safe management of dust which may contain mice droppings. Wearing appropriate personal protective equipment (PPE) including an NIOSH approved 100-series mask or N95 mask, gloves and goggles and wetting down the area prior to cleaning potentially contaminated material is recommended.

For more information on hantavirus in BC, see: <http://www.bccdc.ca/health-info/diseases-conditions/hantavirus-pulmonary-syndrome-hps>, <https://www.healthlinkbc.ca/healthlinkbc-files/hantavirus-pulmonary-syndrome> and <http://www.bcmj.org/article/hantavirus-infection-british-columbia-atypical-case-history-and-epidemiological-review>

