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NUNAVIK PUBLIC HEALTH NEWSLETTER

CALL FOR VIGILANCE
Foodborne Botulism in Nunavik

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Context

In the past few weeks, two cases of botulism were reported to the Nunavik Department of Public Health (DPH). Both cases had consumed fermented marine products. It is important to note that these two cases are not linked to the same exposure. With the hunt for marine mammals being particularly active at this time of year and the increasingly warmer temperatures these past few years, the risk of botulism has risen. For that purpose, each summer, a public notice is issued by the DPH to remind Nunavimmiut of the importance of beginning the fermentation process in the fall, when temperatures are cooler.

The incidence rate observed in Nunavik is highest in Quebec and in Canada.

Older Nunavimmiut are generally well-informed about the disease and its symptoms, a disease they call “qasunniq,” which means “slackening.” It Is therefore important to be attentive to the concerns of the case or those of his or her family.

Botulism constitutes a medical and public health emergency that can lead to death if not identified and treated rapidly.

Incubation

The incubation period of foodborne botulism is, on average, from 8 to 36 hours but can be up to 10 days after consumption of the food in question.

Suspicion Criteria

Ingestion of fermented marine products (seal, beluga, whale or walrus) **or** any other food preserved under suboptimal conditions (for example, in plastic bags or plastic containers, at room temperature or under anaerobic conditions)

AND

Development, within 10 days of ingestion (especially between 8 and 36 hours), of:

- Symmetric, descending muscle paralysis or weakness with no other known etiology.

OR

- Ventilatory impairment, whether clinically apparent or not, with no other etiology (reduced % of O2 saturation and/or reduced peak expiratory flow rate).
- WITH OR WITHOUT gastrointestinal symptoms (nausea, vomiting, diarrhea, ileus).
- Normally WITHOUT impaired state of consciousness and WITHOUT hyperthermia.

Signs and Symptoms

- Vomiting, nausea, diarrhea.
- Weakness, hypotension.
- Dry mouth, troubled vision, diplopia, mydriasis, dysphagia, dysarthria, dysphonia, palpebral ptosis.
- Dyspnea, desaturation, reduced respiratory rate.

- Intestinal ileus, constipation, bladder atony.

* Symptoms usually progress rapidly and affect, in the following order, the cranial nerves, the neck, the upper limbs, the trunk and the diaphragm, and, finally, the hands and legs.

Laboratory Tests

- Serology (must absolutely be performed before administration of antitoxins).
- Gastric fluid.
- Stool (up to 10 days after administration of botulism antitoxin).
- Suspected food(s).

* Shipment details are outlined in the Guide d'intervention – Le botulisme au Nunavik, available in the tool kit on the NRBHSS Web site. The link is included at the end of the present newsletter.

Diagnosis

- Based on history and clinical presentation.
- Confirmation through detection of a strain of *C. botulinum* and/or botulism toxin.

* The period for obtaining test results is minimally two to four weeks. Treatment must therefore be initiated on a clinical basis.

Treatment

Treatment of botulism is essentially symptomatic and requires, for severe cases, intensive respiratory care with assisted ventilation. Administration of botulism antitoxin within hours or in the initial days after the onset of symptoms can contribute to reducing hospitalization time.

The decision whether or not to administer botulism antitoxin is a clinical one that must be made by the attending physician, who may be validated as needed by the infectious diseases specialist on duty at the McGill University Health Centre (MUHC).

Evolution

Although foodborne botulism is a potentially fatal toxicological condition, most affected individuals recover if the disease is diagnosed and treated rapidly. Recovery can, however, take from a few weeks to a few months.

Additional Public Health Actions

Jointly with the treatment team, the DPH:

- Ensures that the implicated food product is removed from circulation to prevent additional cases of intoxication.
- Identifies individuals who may have consumed the suspected food product and ensures that each receives an individual clinical assessment.

Botulism is a reportable disease (*MADO*) under extreme surveillance.

Any suspected case of botulism must be reported rapidly to the Department of Public Health as follows:

- **Contact the Department of Public Health physician on duty for infectious diseases at 1-855-964-2244 or 1-819-299-2990.**

These coordinates are reserved for health professionals and may not be communicated to the public.

Useful Links

Boîte à outils - Botulisme | Régie régionale de la santé et des services sociaux du Nunavik
Public Notice: BOTULISM POISONING: MARINE MAMMAL MEAT PRECAUTION