Possible Botulism Cases in Grant County

Home-canned food suspected as a source but investigation still early and ongoing.

Grant County Health Officer, Dr. Alexander Brzezny, has issued the following alert to the Grant County health care community: The Grant County Health District (GCHD) is currently investigating two possible botulism cases with the suspected source being home-canned food. It is still early in the investigation and the actual source has not been confirmed. Foodborne botulism is a potentially fatal paralytic illness caused by ingestion of neurotoxin produced by the spore-forming bacterium Clostridium botulinum. Historically, home-canned vegetables, fruits and meat products have been the most common cause of botulism outbreaks in the United States.

Botulism is very rare in Washington State. During the last 10 years, Office of Communicable Disease Epidemiology (CDE) has received annually 0–2 reports of foodborne botulism, 0–6 reports of infant botulism and 0–7 reports of wound botulism. Nationally infant botulism is most common.

Foodborne botulism is a public health emergency. With the ongoing investigation into the source of the possible botulism cases, the Grant County Health Officer is encouraging all medical staff to be alert to the signs and symptoms of botulism.

Signs and Symptoms
Classic symptoms of botulism are symmetrical cranial neuropathies including:
- double vision,
- blurred vision,
- drooping eyelids,
- slurred speech,
- difficulty swallowing,
- dry mouth,
- difficulty breathing or shortness of breath,
- muscle weakness.

Botulism may also cause gastrointestinal symptoms such as abdominal pain, nausea, vomiting and diarrhea.

If untreated, these symptoms may progress to cause paralysis of the respiratory muscles, arms, legs, and trunk and ultimately death. In foodborne botulism, symptoms generally begin 12 to 36 hours after eating a contaminated food, but they can occur as early as 6 hours or as late as 10 days.

Botulism Diagnosis
Consider the diagnosis if the patient's history and physical examination suggest botulism. Botulism should be suspected in any adult with a history of acute onset of cranial nerve (diplopia, dysarthria, dysphagia), autonomic nervous system (e.g., dry mouth, difficulty focusing) and gastrointestinal dysfunction, especially if ingestion of home-canned food within the prior 48 hours is ascertained. Botulism is frequently misdiagnosed, most often as a polyradiculoneuropathy (Guillain-Barre or Miller-Fisher syndrome), myasthenia gravis, or other diseases of the central nervous system. Proper clinical diagnosis requires a thorough history and physical examination and is
crucial for timely treatment. Clinicians should immediately contact GCHD to report suspected cases and inquire about testing and treatment.

Specimen Collection
Collect all clinical specimens (serum, feces, vomitus, gastric contents and suspected foods) in sterile leak-proof containers. Preferred specimens are serum and feces. GCHD will assist with the testing.

1. **For serum testing**, submit at least 5 ml of serum (not whole blood) is required; 10 ml or more is preferred, as it will permit typing of the toxin. If the patient has been taking any medication that might interfere with toxin assays or culturing the stool, the laboratory should be notified.

2. **For stool testing**, submit at least 15 grams of stool, if possible 50 grams (ping-pong ball sized). If the patient is constipated, as is common with botulism, a small amount (5-30 cc) of sterile, nonbacteriostatic fluid may be used for an enema. For post-mortem testing, collect multiple 15 gram specimens from different parts of the small and large intestine are preferred.

Treatment
- Prompt diagnosis is essential.
- Antitoxin is effective in reducing the severity of symptoms, if administered early. Supply of antitoxin against botulism is maintained by the CDC.
- Washington State Department of Health will contact CDC to arrange for a clinical consultation by phone, and (if indicated) the release of the antitoxin.
- Supportive care as needed, including mechanical ventilation.

Botulism Reporting Requirements:
Health care providers, health care facilities, laboratories: **IMMEDIATELY notifiable to GCHD within 24 hours.**
- Laboratories: *Clostridium botulinum* immediately notifiable to GCHD. Specimen submission is required: serum and/or stool; any other specimens available (i.e., foods submitted for suspected foodborne case; debrided tissue submitted for suspected wound botulism) (within 2 business days)

Resources
- [www.ncbi.nlm.nih.gov/pmc/articles/PMC1471988/table/t1/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1471988/table/t1/)

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