



Bulletin No. 15
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Botulism Fells Three in Sitka Outbreak

On August 17, a 48-year-old Native man was admitted to the Sitka Community Hospital complaining of drowsiness, diarrhea, dry mouth, shortness of breath, double vision, dizziness, weakness, sore throat, and abdominal pain. Earlier in the day, he had fainted while vomiting. His initial blood pressure at the time of admission was 70/50, and rales were detected over both lung fields. A gastric aspirate, which smelled strongly of fish oil, was positive for occult blood. Physical findings included dilated, non-reactive pupils. A spinal tap was normal. The admission diagnosis was aspiration pneumonia and hypotension secondary to gastrointestinal bleeding. The patient was treated with IV fluids, antibiotics, and dopamine. When his wife appeared at the hospital the next day complaining of double vision, dry mouth, and weakness, an alert physician suspected botulism and called the Epidemiology Office.

After consultation with the epidemiologists and with internists at the Alaska Native Medical Center, Anchorage, the patient was intubated, appropriate diagnostic specimens collected, and botulism antitoxin administered. A detailed food history was obtained from the wife of the first patient. Both patients had eaten fermented fish heads prior to the onset of symptoms. The silver salmon heads were washed and placed in a plastic bucket, then covered with water on August 9. The bucket was sealed with a tight-fitting, plastic lid and set outside, out of the sun, until one week later. The fish heads were eaten on August 16. At no time were the fish heads cooked.

On further questioning it was learned that a third person also shared the implicated meal. He had since returned to Ketchikan. The State public health nurse in Ketchikan was notified; she contacted the individual, a 49-year-old Native man. He had seen a physician earlier in the day with complaints of nausea and feeling bloated. His physician was informed of the botulism outbreak in Sitka and the patient was admitted on the evening of the 18th. By that time, he had developed dry mouth, vomiting, and weakness. His blood pressure was 80/50. Bowel sounds were decreased, as was his lung capacity, but he did not require intubation. His gastric fluid was also positive for occult blood. The patient was treated with 2 vials of antitoxin at 1:00 a.m. on August 19, after collection of diagnostic specimens.

This is the second reported outbreak of botulism in Alaska during 1986. All known Alaskan outbreaks since 1947 have been associated with traditionally prepared, fermented Native food. All health care providers in Alaska need to maintain a high index of suspicion for the diagnosis of botulism.

Botulism toxin primarily affects the nervous system. Symptoms may begin a few hours to 8 days after eating contaminated, inadequately cooked food. Most patients will have at least three of the following five symptoms: double vision, dilated pupils, dry mouth, difficulty swallowing, and nausea or vomiting.

Other symptoms that may be present include shortness of breath, constipation or diarrhea, blurred vision, weakness, and abdominal pain. Physical findings may include weakness; dilated, non-reactive pupils; low blood pressure; decreased pulmonary vital capacity; and urinary retention. In severe cases, shortness of breath may progress to respiratory paralysis and death. All the symptoms are not always present, but the diagnosis should be considered in anyone who presents with neurologic signs and symptoms, especially if there is a history of recent ingestion of traditionally prepared Native foods.

In this outbreak, rapid epidemiologic investigation identified persons at risk, provided consultation on diagnosis and clinical management, supplied botulism antitoxin, and assured that no other persons would be exposed to the contaminated food. All cases of suspected or diagnosed botulism should be immediately reported to the Epidemiology Office, 561-4406, or to Sue Anne Jenkerson, 279-1021, Gary Hlady, M.D., 345-2065, or John Middaugh, M.D., 333-9349.

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