

Epidemiology Bulletin

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Two Outbreaks of Botulism in Aborigines Associated with Home-Preserved Meats – Nantou and Ilan Counties

First Outbreak

On January 11, the Department of Health was notified by a physician at Chang Hwa Christian Hospital about a 27 year-old aborigine male from Nantou County hospitalized with symptoms of acute botulism intoxication. The patient became ill on January 4 with nausea, vomiting, and abdominal cramps. Within two days, he developed ptosis, diplopia, blurred vision, dysphonia, dysphagia, and dysarthria. He, and 10 other family members and neighbors, ate home-preserved deer meat on January 2. Three of 11 persons who ate deer meat developed symptoms of botulism intoxication; all persons had at least one piece of meat; and there was no association between illness and the quantity of meat eaten. A serum specimen from the hospitalized patient collected 10 days after exposure was positive for type B botulin toxin. The hospitalized patient was treated with supportive care and was discharged on January 27. The suspect meat came from a wild mountain deer trapped on about December 10. The animal was slaughtered the same day, and 1 kg of

meat was placed in a plastic container with partially cooked rice and salt. The container was sealed with an air-tight lid, and allowed to stand at room temperature ($\cong 20^{\circ}\text{C}$) for about 3 weeks. On January 2, the meat was removed from the container and eaten raw. No left-over meat was available for laboratory testing.

Second Outbreak

On February 28, the Department of Health was notified by the Food and Drug Laboratory Bureau about a suspect case of botulism in Chang Gung Hospital in Lin Ko. An epidemiologic investigation revealed that a 17 year-old female aborigine from Ilan County, became ill on February 18, two days after eating raw home-preserved goat meat. Her symptoms included ptosis, diplopia, blurred vision, dysphonia, muscle weakness, vomiting and diarrhea. Her parents, who had also eaten goat meat, were also ill with similar symptoms, but were not hospitalized. Three other family members who lived in the same household and did not eat goat meat were well ($p=0.05$; Fisher's Exact Test, one-tailed). Serum from the three persons with symptoms were all negative for botulinal toxin; however, these specimens were collected two weeks after exposure. Results from an electromyogram on the hospitalized girl were consistent with botulism intoxication. The girl was treated with supportive therapy, showed signs of regaining her strength, and was discharged on March 9.

The goat meat associated with illness was prepared from an animal slaughtered on about February 10. Approximately 3 kgs of fresh meat was placed in a large plastic container with about one-half kg of salt. The container was sealed with an air-tight lid and left to stand at room temperature ($\cong 20^{\circ}\text{C}$) for about one week. On February 16, the meat was removed from the container and eaten raw. No left-over meat was available for laboratory testing.

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Editorial note: These are the first two reported outbreaks of botulism in Taiwan due to home-preserved meats. Previous outbreaks have probably occurred, however, they were either unrecognized, or were not reported to public health authorities. The recent outbreak of type A botulism due to commercially preserved peanuts¹ received widespread media attention, which probably help to increase public awareness about botulism. How the practice of home-preserved meats is among aborigines or other ethnic groups in Taiwan is unknown. If the practice among certain ethnic groups is common, these population may be at high risk for botulism outbreaks, and physicians practicing among these communities should be aware of how to diagnose, treat, and report suspect cases. Home-