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**Bulletin No. 9**  
**July 22, 1977**

### **Botulism in Palmer**

Friday morning, July 8, a 35-year-old Native man was admitted to Alaska Native Medical Center in Anchorage with botulism. The patient complained of waking Thursday morning with nausea and vomiting, double vision, blurred vision, and muscle weakness. Symptoms progressed throughout the day to include staggering, photophobia, droopy eyes, and a change in voice. The patient ascribed his symptoms to Wednesday evening's meal when he and six others ate fermented salmon eggs and salmon heads. Epidemiologic investigation was immediately begun. Upon visiting the patient's home near Palmer, we discovered that the patient's 60-year-old father had been admitted Thursday evening to the Palmer Hospital with symptoms of nausea, vomiting, extremely dry mouth, change in voice, difficulty swallowing, shortness of breath, and severe generalized weakness. After consultation with Palmer physicians, the father was transferred to Alaska Native Medical Center in Anchorage. Within two hours of the patient's arrival in Anchorage, he required tracheostomy and artificial respiratory support.

Two of the five remaining participants in the Wednesday evening meal were located and were asymptomatic. They were driven to Anchorage and treated with botulism trivalent antitoxin. Local police, State Troopers, and radio stations joined in the effort to contact three missing people so that they could be examined and treated. Several hours later a 17-year-old girl, D.W., appeared at Alaska Native Medical Center in response to radio messages. Although non-Native, she reported attending a party Wednesday evening where she ate salmon eggs, salmon heads, beef stew and had some beer. She reported some abdominal discomfort and skin testing proceeded preparatory to the administration of botulism trivalent antitoxin. However, her story revealed several discrepancies related to the events of Wednesday evening. Confrontation between this 17-year-old, D.W. and four patients already at Alaska Native Hospital produced mutual non-recognition. As attempts were being made to sort through this perplexing development, the three missing persons appeared at the Hospital. In a remarkable coincidence, two 17-year-old girls with identical names, D.W., ate similar meals on Wednesday evening between 6 p.m. and 10 p.m. at nearby locations. Fortunately the false D.W. was not treated with botulism trivalent antitoxin.

All seven people who ate the fermented salmon eggs were treated with trivalent botulism antitoxin. Five of the seven remained asymptomatic. Botulism Toxin, type E, was recovered from the sera of the two symptomatic patients and was also recovered from the fermented salmon eggs epidemiologically incriminated in causing the outbreak. Both asymptomatic patients are recovering.

Further interviewing has now established that the elder patient knows the victims of last year's botulism outbreak which occurred at Glennallen. The outbreak resulted in a total of eight cases, three requiring artificial respiratory support. The Glennallen outbreak was caused by fermenting salmon eggs and fish heads in a closed, plastic bucket. The Palmer patient had hoped to avoid a similar problem by not using a lid on the plastic bucket in which he fermented his salmon eggs.

All botulism outbreaks in Alaska dating back to 1947 have been caused by Native-prepared foods. The fermentation process involved provides ideal growth conditions for the *Clostridium botulinum* organism which forms the botulism toxin during its growth phase. As long as these foods continue to be consumed in Alaska, botulism outbreaks will continue to occur. Prompt medical therapy is essential and may prevent death. We urge all

health care providers to familiarize themselves with the symptoms of botulism so that treatment may be started early. Any patient suspected of having botulism should be immediately reported to John Middaugh, Medical Epidemiologist, 272-7534 (work) or 333-1935 (home).

(Reported by: Dave Barrett, M.D., ANMC; James Ivey, Jr. M.D., and David Werner, M.D.; Palmer Valley Hospital; Edna Mothershead, PHN, Palmer; Rugh Ward, PHN, Municipality of Anchorage.)