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Paralytic Shellfish Poisoning

Paralytic shellfish poisoning (PSP) occurs worldwide and results from ingestion of a variety of shellfish that have themselves ingested toxic species of dinoflagellates. The potent neurotoxin elaborated by the dinoflagellate is concentrated in the digestive glands of the shellfish. This toxin has been referred to as a saxitoxin, having been extracted from the Alaska butterclam, *Saxidomus giganteus*.

In Alaska, PSP occurs in Southeast Alaska where it is primarily caused by butter clams or mussels. Periodically clams are tested for toxin and clams from Southcentral Alaska have been found safe. The last cases reported in Alaska occurred in August, 1973 involving two families from Tenekee Springs.

When toxin is present, symptoms may appear soon after the clam is eaten, perhaps in less than an hour. Tingling of the lips and tongue often is the first symptom and may develop a few minutes after the clam has been eaten. Numbness of the legs, arms and neck may follow. The toxicity may then cause general lack of muscular coordination. The person may feel lightheaded. Other symptoms which may occur are dizziness, weakness, drowsiness, and incoherence. Death from respiratory-muscle paralysis may occur in three to 12 hours after the clams are eaten.

Anyone diagnosing PSP in an individual should communicate immediately with the health department.

Botulism

On September 15, a 38 year old Eskimo male from Stebbins, Alaska became ill with abdominal pains, diarrhea, vomiting and dry throat. In addition, the patient's wife developed symptoms of botulism. Both patients' condition worsened and as botulism antitoxin could not be obtained, they were evacuated to Anchorage. Both patients recovered.

An epidemiological investigation was undertaken in Stebbins to ascertain whether other individuals were ill and to determine the implicated food. Food history revealed that the evening prior of onset of illness, the patients had approximately four strips of salmon dipped in seal oil. The seal oil was reputed to have come from a seal which had partially rotted. Contained in the seal oil jar were hunks of decomposed seal meat. Type E botulinum toxin has been identified in the husband's and wife's pre-treatment serum and Type E toxin has been identified in the seal oil.

This is the first reported case of botulism resulting from seal oil in Alaska.

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