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TRICHINOSIS OUTBREAK - BARROW

Alert physicians at the P.H.S. Hospital in Barrow recently diagnosed Trichinosis in eight Barrow residents. Epidemiologic investigation revealed that all eight patients were among a group of twelve people who shared a meal on December 20, 1980. During the meal, quaq (frozen raw meat) was served. All persons eating the frozen raw meat developed Trichinosis for an attack rate of 100%. A total of 12 people attended the dinner, but four of the 12 did not eat quaq. Thirty other relatives of the patients who were not present at the dinner all remained well.

All of the patients, including those who prepared the dinner on December 20, were well informed about Trichinosis and were aware of the risk of developing Trichinosis from consuming undercooked bear or walrus meat. While cleaning up after the dinner on December 20, it was discovered that grizzly bear meat had been mistakenly served in place of caribou. The usually distinctive taste of the bear meat was disguised by the seal oil in which the meat had been dipped.

The sick people included five women and three men, ranging in age from 32 to 76 years. Symptoms began 2 to 16 days after the dinner. All persons experienced weakness, fatigue, and edema, and most complained of myalgia, rash, fever, chills, and periorbital edema as well. Four patients were hospitalized but none developed notable neurologic or cardiologic complications. All patients are doing well and can expect full recovery. Laboratory examination revealed maximum eosinophilia ranging from 14 to 51 percent. Bentonite flocculation tests for Trichinosis are pending at the Centers for Disease Control, Atlanta, Georgia. Specimens of the implicated food, which proved to be grizzly bear, were found to contain 70 *Trichinella* larva per gram of meat, a very high larval load for bear.

Trichinosis is a disease caused by eating insufficiently cooked meat infested with *Trichinella spiralis*, a microscopic round worm. The encysted larvae are liberated in the acid stomach, and develop into mature adults in the small bowel. About five days after ingestion, each female begins producing about 1500 immature progeny. These enter the intestinal lymphatics and eventually the systemic circulation, causing generalized symptoms. Most of them lodge in tiny muscle capillaries and eventually enter individual muscle cells where they encyst. The cells react vigorously against them, walling them off with a layer of protein and calcium. Over a course of months the reaction dies down and the victim usually recovers completely. Severe infection can cause involvement of the heart, lung, and central nervous system and rarely can be fatal.

Thiabendazole, 25 mg/kg, twice daily for one week may eliminate the intestinal parasite and may also be effective against larvae. However, once symptoms are well established, thiabendazole has not been shown to shorten the duration of illness, and may cause nausea and vomiting. Corticosteroids are recommended if serious complications develop. The mainstays of treatment in most cases of Trichinosis are analgesia, rest and observation.

This is the fourth outbreak of Trichinosis in Barrow since 1975. Eating uncooked walrus led to 29 cases in 1975 and 4 in 1976. A single case thought to be from walrus occurred in June, 1980. Since 1975, the Alaska Department of Health & Social Services has maintained a program to test walrus for Trichinosis. The residents of Barrow were encouraged to submit specimens of meat from all walrus taken so that animals infected with Trichinosis can be identified. All cases of Trichinosis should be reported immediately to the Section of Communicable Disease Control, 272-7534. Prompt epidemiologic investigation is essential to identify the source. Clinical consultation is available upon request.

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