



Bulletin No. 18

September 28, 1979

TULAREMIA - FAIRBANKS, ALASKA

On September 5, 1979 a 49-year-old male Caucasian presented to his physician in Fairbanks, Alaska, with a febrile illness. The patient informed his physician that he had been seen four days previously in a local emergency room with a fever of 105° F, accompanied by nausea and vomiting, and begun on dicloxacillin 250 mg QID. However, fever had continued in the range of 102° F - 105° F and axillary swellings had developed. Furthermore he stated that his fever had begun abruptly on August 31, three days after he had dressed a rabbit killed by his dog. The man also recalled that he had a small laceration on his left index finger at the time he dressed the rabbit, and that two sores had developed over the last few days just proximal to this laceration. He denied cough or other respiratory symptoms. The patient volunteered that he had noticed many dead rabbits recently in the area of his home near Fairbanks.

Physical examination on September 5 revealed that the man had a temperature of 103° F and pulse of 88. Tender, bilateral, 6-8 cm axillary adenopathy was noted, however cervical and inguinal nodes were not remarkable. His lungs were clear and hepatosplenomegaly was not present. Two papular, slightly ulcerated, erythematous lesions forming a linear pattern conforming to lymphatic drainage were noted proximal to a partially healed laceration on the patient's left index finger. A white blood count revealed 10,900 cells/cu. mm and an unremarkable differential. One cc. of serosanguinous fluid was aspirated from a node in the left axilla and submitted for culture. Tetracycline 500 mg QID for 14 days was initiated.

The patient returned five days later afebrile for the previous two days with constitutional improvement and objective evidence of decreased adenopathy. The aspirate yielded a tiny gram negative pleomorphic rod on culture identified as *Francisella tularensis*. This organism has been forwarded to the CDC for confirmation. Serologic test results are pending.

Conversations with Alaska Department of Fish and Game personnel substantiated the occurrence of enzootic tularemia among Arctic hares in the Fairbanks area. Only ten cases of human tularemia, nine of which were of the ulcero-glandular form and one pneumonic (in a laboratory worker), have been reported in Alaska (1). Nine of these occurred in the Fairbanks area and all were in Caucasians. However, serologic studies suggest more widespread human exposure is occurring in Alaskan Natives even though no cases have been reported in this population (1).

Clinical forms of tularemia include ulcero-glandular, glandular, oculo-glandular, typhoidal, and pulmonary. Diagnosis is made by recovery of *Francisella tularensis* and demonstration of significant serologic titer change. The most common mode of transmission is inoculation of skin or conjunctiva with blood or tissue of infected animals - usually rabbits, hares or rodents. It can also be spread by tick or arthropod bite, or by ingesting insufficiently cooked infected meat. The incubation period is usually 3 days and the illness is not directly transmitted man to man. Streptomycin is considered the drug of choice, however, tetracycline or chloramphenicol are reasonable alternatives. The use of rubber gloves when skinning potentially infected wild animals and thorough cooking of wild meats are effective preventive measures.

Reference

1. Miller LG: Further studies on tularemia in Alaska: human tularemia, *Can. J. Microbiology*. 20:1539-1544, 1974