State of Alaska Epidemiology **Bulletin**

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Psittacosis

On May 30, 1991 the Section of Epidemiology was contacted about a patient being evaluated for possible psittacosis by a Wasilla physician. Subject 1, a 32-year old woman, was first seen on May 25 with a one week history of fatigue and weakness. On May 30, at a follow-up visit, she had increasing fatigue, diarrhea, low-grade fever, cervical adenopathy, pharyngitis, cough, and chest tightness. The patient owned an African gray parrot which was being treated for psittacosis. A blood specimen was obtained from subject 1 and she was treated presumptively for psittacosis with doxycycline.

The parrot was noted to be ill in late April 1991. In May, a veterinarian examined the bird and obtained a positive serum ELISA for *Chlamydia psittaci* antibody. For three weeks ending in mid April, the bird had stayed with five other birds in another household. These (or other) birds had been in this household for many years and one bird each died in 1989 and 1990 of unexplained causes. In early June, a bird in the household tested positive for both *C. psittaci* serum antibody and cloacal antigen.

Subject 2, a 31-year-old woman, lived in the second household. She had an illness in late 1989 characterized by a 20 pound weight loss, extreme fatigue, low-grade fever, shortness of breath, and cough. Subject 1's two children (subjects 3 and 4) were ill in mid May 1991 with mild respiratory symptoms; her husband (subject 5) was asymptomatic.

Antibody titers to Chlamydia group antigen and *C. pneumoniae* (formerly termed TWAR strain, an agent which can cause upper or lower respiratory tract infection) for the five persons in the two households are shown in Table 1. Convalescent titers (not shown) were also obtained for subject 1. Chlamydia group antibody can result from exposure to either *C. psittaci* or *C. pneumoniae*. Infection with the sexually transmitted pathogen C. trachomatis generally does not result in detectable humoral antibody. Thus, the presence of Chlamydia group antibody with absent *C. pneumoniae* antibody implies *C. psittaci* infection. Surprisingly, the results indicated that subjects 1 and 2 had not had *C. psittaci* infection; that subjects 1, 4, and 5 had previous *C. pneumoniae* infection; and that subject 3 had previous psittacosis.

Psittacosis is an acute febrile respiratory tract infection which may have systemic manifestations. Presentation is extremely variable - some patients have only a mild cough while others (especially older adults) can have severe pneumonia. Other common symptoms include headache, fever, myalgia, and chills. The chest x-ray may show extensive interstitial infiltration out of proportion to the respiratory symptoms. Myocarditis, pericarditis, endocarditis, thrombophlebitis, hepatitis, thyroiditis, and central nervous system involvement are possible complications.

The infectious agent, *C. psittaci*, is most often transmitted to people from an infected bird(s). Person-to-person transmission is rare. Psittacosis should be considered in the differential diagnosis of a patient with compatible illness who has a history of contact with birds (for example, veterinarians, workers in pet stores or aviaries, and bird owners). Generally, treatment is with a tetracycline-group antimicrobial for 10-14 days after defervescence. Children <9 years='"' of='"' age='"' and='"' pregnant='"' women='"' should='"' be='"' treated='"' with='"' erythromycin.='"'>

Between 1983 and 1990, only six cases of psittacosis were reported to the Section of Epidemiology; the case reported here is the first since 1988. It is generally believed that infections are frequently not recognized since many cases are clinically indistinguishable from influenza and other viral respiratory infections. Laboratory diagnosis of acute infection requires a four-fold rise in antibody titer or isolation of *C. psittaci*. The Public Health Laboratory, Fairbanks (474-7017) will culture sputum specimens for Chlamydia free-of-charge; however, a special transport medium is required.

Psittacosis is a public health concern because infection may be transmitted to people by infectious birds at pet stores or aviaries. The Section of Epidemiology investigates reports of psittacosis to determine if birds at a pet store or aviary should be quarantined and treated. **All cases of human psittacosis should be reported to the Section of Epidemiology.**

(Thanks to Darlene Reed, PHN, for coordinating specimen collection. Contributed by Michael Beller, MD, MPH, Section of Epidemiology.)

| Subject | Age/Sex | Illness Onset | Titer Date | IFA (1) | TWAR (2) |
|---|---|---|---|---|---|
| 1 | 32/F | 5-18-91 | 5-30-91 | <> | 256 |
| 2 | 31/F | 9-89 | 6-4-91 | <> | <> |
| 3 | 7/M | ~5-91 | 5-30-91 | 2048 | <> |
| 4 | 6/F | ~5-91 | 5-30-91 | 32 | 32 |
| 5 | 49/M | asymptomatic | 5-30-91 | 128 | 128 |

Notes

1. Indirect fluorescent antibody (IFA) test for Chlamydia group antibody. A reciprocal titer ≥ 32 is considered evidence of previous infection.

2. IFA test for antibody to Chlamydia pneumoniae (TWAR strain). A reciprocal titer ≥ 8 is considered positive.