EPIDEMIOLOGY SECTION

CONNECTICUT EPIDEMIOLOGIST

State of Connecticut Department of Health Services
Susan S. Addiss, MPH, MUrS, Commissioner

March 1991
Volume 11 NO. 2

INFLUENZA UPDATE

In December 1990, the first cases of influenza were confirmed by the State Laboratory. In December 1990 through February 1991, 630 throat swabs were submitted for culture to the Virology Section at the State Laboratory (Table 1). During that time, 77 (12%) specimens yielded isolates of influenza type B. The isolates were similar to the B/Yamagata/16/88 - like strain contained in this year's influenza vaccine.

Three isolates of influenza type A were identified in February. These isolates have been sent to the Centers for Disease Control for further identification. The number of throat swabs cultured and the number of influenza isolates by age group are given in Figure 1 (see page 8).

TABLE 1. Influenza Isolates by Month, December 1990 - February 1991, Connecticut.

Month	# Specimens	A Isolates (%)	B Isolates (%)
December	102	0 (0)	14 (13.7)
January	366	0 (0)	41 (11.2)
February	162	3 (1.9)	22 (13.6)
TOTAL	630	3 (0.5)	77 (12.2)

LYME DISEASE STUDY

In 1990, investigators from the University of Connecticut School of Medicine and the State of Connecticut Department of Health Services conducted a study to determine the incidence and cumulative frequency of Lyme disease in a school-aged population living in an area endemic for Lyme disease. All of the 1107 middle and high school students in the area were invited to participate in this study. Serum specimens were obtained from each subject before (May, 1990) and following (Nov, 1990) a single deer tick season. These specimens were later tested simultaneously in pairs for IgM and IgG antibodies against Borrelia burgdorferi by ELISA (borderline results were confirmed by immunoblot). Subjects were questioned regarding tick bites, tick avoidance procedures, and symptoms of Lyme disease at each blood drawing and during an interim phone call.

A total of 260 students completed the study. Both the initial and follow-up serum specimens were positive for IgG antibodies against B. burgdorferi (suggesting previous Lyme disease) in 10 students. Of these 10 seropositive students, 9 (90%) had a history of disease. One student had a negative initial serum specimen and a follow-up specimen positive for IgG antibodies to B. burgdorferi in the absence of any

signs or symptoms of Lyme disease. One student had negative initial and follow-up specimens, but was diagnosed by a physician as having Lyme disease with erythema migrans and was treated with antibiotics during the study period. Of the 260 students, 24 (9%) reported having been bitten by a deer tick during the study period (none were treated with antibiotics), and 137 (53%) reported using tick avoidance procedures.

BABESIOSIS, 1990

Babesiosis, a relatively uncommon protozoal infection of red blood cells, is transmitted by the bite of Ixodes dammini ticks and by blood transfusion. The first documented endemic case of babesiosis in Connecticut was reported from Stonington in 1988. In 1989, eight cases of babesiosis were acquired in Connecticut; seven by residents of Stonington or Old Lyme, and one by blood transfusion to a central Connecticut resident[1]. Babesiosis was added to the list of reportable diseases in January, 1990. In 1990, four cases were reported; three from Stonington and one from Montville. Infected mice were captured near the patient's home in all of the cases.

The elderly, immunocompromised, and people who lack a functioning spleen are particularly susceptible to babesiosis. Of the 13 cases documented in Connecticut, one patient was asplenic. Of the remaining cases, all 12 were aged 60 years or more. Infection is seasonal, with most cases occuring when Ixodes ticks feed in summer and early fall.

The illness is generally mild or subclinical in healthy children and adults; others may present with symptoms that include fever, chills, headache, and weakness accompanied by findings of anemia, thrombocytopenia, microscopic hematuria, and mild elevations of bilirubin, lactic dehydrogenase, and hepatic transaminases. Intraerythrocytic parasites are often observed on careful examination of peripheral blood smears, though their absence does not exclude the diagnosis.

So far all endemic tick-borne cases have been acquired in New London County. In 1989, a serosurvey was done in the New London area, using antibodies to Borrelia burgdorferi (the causative agent of Lyme disease) as a marker for Ixodes tick exposure.[2] Of the 74 persons tested by IFA for anti-Babesia antibodies, 11 (15%) had positive antibody titers ($\geq$1:64).

Persons who lived in the same town as a clinical babesiosis case were 5 times more likely to be seropositive (37% vs 7%, relative risk 5.1, 95% confidence interval 1.7, 15.4). Another Connecticut study found a 9.5% seropositivity rate for Babesia microti antibody among persons who were seropositive for Lyme disease.[3]

Since 1976, the Connecticut Agricultural Experiment Station has captured and tested rodents for B. microti. To date, the parasite has been recovered from mice in six towns; Stonington, Old Lyme, Lyme, and Montville in New London County; East Haddam in Middlesex County; and from a single mouse from West Hartford, Hartford County (personal communication, J. Anderson).

Physicians and laboratory personnel should consider babesiosis in patients with fevers, chills, and anemia of unknown origin, and should report all suspected cases to the Epidemiology Program (566-5058).

An immunofluoresence test for antibodies to Babesia can be obtained through the State Bureau of Laboratory Services.

REFERENCES:

1. Mintz ED, Anderson JF, Cable RG, Hadler JL. Transfusion-transmitted babesiosis: A case report from a new endemic area. Transfusion 1991; in press.

2. Mintz ED, Anderson JF, Hadler JL, Cartter ML. Cluster of Babesiosis in Connecticut, 1989. Presented at Epidemic Intelligence Service 39th Annual Conference; April 23-27, 1990; Centers for Disease Control; Atlanta, GA.

3. Krause PJ, Telford SR, Ryan R, et al. Geographical and temporal distribution of babesial infection in Connecticut. J Clin Micro 1991; 29: 1-4.

Reportable Diseases, 1991

The Commissioner of the Department of Health Services is required to declare an annual list of reportable diseases. The list of reportable diseases for 1991 is the same as the list for 1990.

Each report (by mail or telephone) should minimally include: the full name and address of the person reporting and the attending physician, the disease being reported, and the full name, address, race/ethnicity, sex and occupation of the person affected. The reports should be sent in envelopes marked "CONFIDENTIAL."

Category I: Reportable immediately by telephone on the day of recognition or strong suspicion of disease. On weekdays, reports are made to the local and State health departments; on weekends, to the Department of Health Services. A Confidential Disease Report form (PD-23) should also be mailed to both the local and State health departments within 12 hours.

Anthrax
Botulism
Cholera
Diphtheria
Measles
Meningoccocal disease
Outbreaks involving 3 or more persons
(Foodborne, Institutional, Daycare, other)
Pertussis
Plague
Poliomyelitis
Rabies (human and animal)
Rubella
Tuberculosis
Yellow Fever

Category II: Reportable by mail within 12 hours of recognition or strong suspicion to both local and State health departments.

Acquired Immunodeficiency Syndrome
(CDC case definition)
Babesiosis
Brucellosis
Haemophilus influenzae type B disease, invasive
(meningitis, epiglottitis, and bacteremia, both primary and secondary)
Hansen's Disease
Hepatitis, Viral type A, type B, type C, type D, (Delta agent), type non-A/non-B, unspecified
Lead Toxicity (blood level $\geq$ 25 ug/dl)
Leptospirosis
Listeriosis
Lyme Disease
Malaria
Mumps
Psittacosis
Reyes Syndrome
Rheumatic Fever
Rocky Mountain Spotted Fever
Salmonellosis
Sexually transmitted diseases:
Chancroid
Chlamydia (C. trachomatis) infections (all sites)
Gonorrhea
Neonatal herpes (less than 1 month in age)
Syphilis
Shigellosis
Silicosis
Tetanus
Trichinosis
Typhoid Fever
Typhus

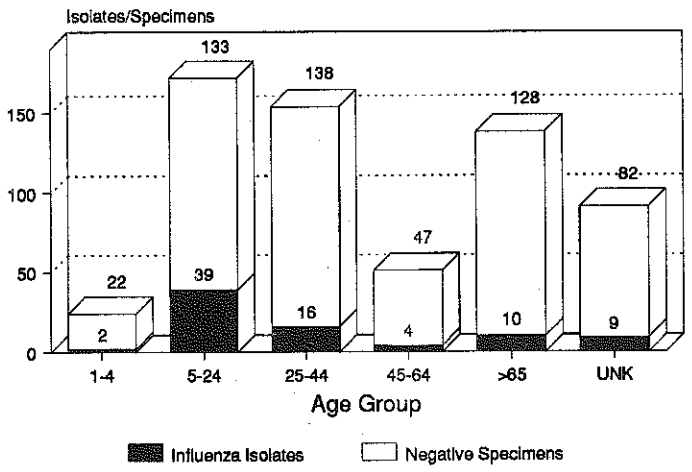
How to Report: There are several standard forms for reporting. These include the Confidential Disease Report (PD-23), the Acquired Immunodeficiency Syndrome (AIDS) Case Report, the Sexually Transmitted Disease Confidential Case Report (STD-23), and the Tuberculosis Case Report (TB-86). The PD-23 is the most generally used form and can be used if the other special forms are not available.

Forms may be obtained from the Epidemiology Section, State Department of Health Services, 150 Washington Street, Hartford, CT 06106; Telephone: 566-2540. The disease-specific report forms may be obtained by calling or writing the specific program at the same address: the Epidemiology Unit/AIDS Section (566-1980), the Sexually Transmitted Diseases Program (566-4492), or the Pulmonary Diseases Program, (566-3099).

Telephone reports of Category I diseases should be made to the local department of health of the town in which the patient resides and to the State Epidemiology Program (566-5058). Tuberculosis cases should be directly reported to the Pulmonary Diseases Program (566-3099).

For public health emergencies, an epidemiologist can be reached nights and weekends through the Department's emergency number (566-4800).

FIGURE 1. Number of Throat Swabs Cultured and the Number of Influenza Isolates by Age Group, December 1990 - February 1991, Connecticut.



Fourth Annual Yale Rheumatology Symposium

LYME DISEASE

Wednesday, May 22, 1991

Sponsored by the Section of Rheumatology at Yale School of Medicine. The symposium is directed toward primary care physicians, internists, pediatricians, rheumatologists, and other health care professionals interested in Lyme disease.

FOR FURTHER INFORMATION, CONTACT:
Office of Postgraduate & Continuing Medical Education, 333 Cedar Street, Post Office Box 3333, New Haven, CT 06510, Telephone: (203) 785-4578

REPORTS OF SELECTED COMMUNICABLE DISEASES, CONNECTICUT, FINAL SUMMARY, 1989 - 1990

DISEASE	1990	1989	% CHANGE FROM 1989
AIDS	427	444	-3.8%
GONORRHEA	8,621	10,291	-16.2%
SYPHILIS P&S	874	1,139	-23.3%
MEASLES	196	229	-14.4%
RUBELLA	3	0	-
TUBERCULOSIS	164	160	+2.5%
HEPATITIS A	137	320	-57.2%
HEPATITIS B	257	240	+7.1%
SALMONELLOSIS	916	1,055	-13.2%
SHIGELLOSIS	227	336	-32.4%

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