Tick-borne Disease Surveillance in Florida, 2003

Colleen O'Fallon, MPH candidate, University of Florida; Rebecca Shultz, MPH, Florida Department of Health

Lyme disease

In 2003, forty-five cases of Lyme disease were reported in Florida. As Figure 1 shows, 14 (31.1%) of the cases were acquired in Florida, 26 (57.8%) were acquired in the United States but not in Florida, 1 (2.2%) occurred out the United States, and for 4 cases (8.9%) the location where the disease was acquired is unknown.

Figure 1



Among the individuals reported as having acquired the disease in Florida (14 cases), there were more females (85.7%) than males (14.3%). The average age of individuals was 42.9 years old (range 7-87 years). Of the individuals, 9 (64.4%) were white non-Hispanic, 2 (14.3%) were white Hispanic, 1 (7.1%) was white with the ethnicity being unknown, 1 (7.1%) was non-Hispanic with the race being unknown, and for 1 case (7.1%) both the race and the ethnicity were unknown. Seven cases (50%) resided in the central region* of Florida, 4 (28.4%) resided in the northern region, and 3 (21.6%) resided in the southern region of Florida. All the cases met the case definition for confirmed Lyme disease. As Figure 2 shows, 2 (14.3%) symptom onsets occurred in the following months: February, April, May, September, November, and December and 1 (7.1%) occurred in the following months: July and October.





Among the fourteen individuals that acquired Lyme disease in Florida, 5 (35.7%) were diagnosed as having erythema migrans of at least 5cm in diameter, 4 (28.6%) were not diagnosed, and for 5 cases (35.7%) it was not specified (Table 1). Four (28.6%) of the cases were diagnosed with having arthritis that is characterized by brief attacks of joint swelling, 5 (35.7%) were not diagnosed with arthritis, and 5 (35.7%) it was not specified. Of the cases, 2 (14.3%) were diagnosed with Bell's palsy or other cranial neuritis, 7 (50%) were not diagnosed, and 5 (35.7%) it was not specified. Two (14.3%) individuals were diagnosed with radiculoneuropathy, 6 (42.9%) were not diagnosed, 5 (35.7%) it was not specified, and for 1 case it was unknown if symptoms were experienced. For both lymphocytic meningitis and encephalitis/encephalomyelitis there were 9 (64.3%) individuals who were not diagnosed with symptoms and there were 5 (35.7%) where it was not specified. In eight (57.2%) of the cases there was no 2^{nd} or 3^{rd} degree atrioventricular block, in 1 case it was unknown, and in 5 cases it was not specified.

| Symptom | Present | Not present | Unknown | Not specified |
|---|-----------|-------------|----------|---------------|
| Erythema Migrans | 5 (35.7%) | 4 (28.6%) | 0 | 5 (35.7%) |
| Arthritis | 4 (28.6%) | 5 (35.7%) | 0 | 5 (35.7%) |
| Bell's Palsy or other cranial | 2 (14.3%) | 7 (50%) | 0 | 5 (35.7%) |
| neuritis | | | | |
| Radiculoneuropathy | 2 (14.3%) | 6 (42.9%) | 1 (7.1%) | 5 (35.7%) |
| Lymphocytic meningitis | 0 | 9 (64.3%) | 0 | 5 (35.7%) |
| Encephalitis/encephalomyelitis | 0 | 9 (64.3%) | 0 | 5 (35.7%) |
| 2 nd or 3 rd atrioventricular block | 0 | 8 (57.2%) | 1 (7.1%) | 5 (35.7%) |

Table 1.

Rocky Mountain spotted fever

In 2003, seventeen cases of Rocky Mountain spotted fever were reported. Of these, 12 (70.6%) were acquired in Florida, 3 (17.6%) were acquired in the United States but not in Florida, and for 2 cases (11.8%) where the disease was acquired is unknown. Of the twelve cases that were acquired in Florida, 7 (58.3%) were female and 5 (41.7%) were male. The average age was 45.6 years old (range 16-79 years). Five individuals (41.7%) were white non-Hispanic, 4 (33.3%) were white with the ethnicity unknown, 2 (16.7%) the race and ethnicity were unknown, and for 1 (8.3%) the race was unknown but the ethnicity was Hispanic. The largest portion (58.3%), of the individuals resided in the northern region*, 3 (25%) of the individuals resided in the panhandle region, and 2 (16.7%) resided in the southern region of Florida. Slightly over half (58.3%), of the cases met the case definition for probable Rocky Mountain spotted fever while 5 (41.7%) of the cases had an onset of symptoms that occurred in September, 3 (25%) occurred in January, and 1 (8.3%) occurred in each of the following months: March, July, August, October, and November.

Figure 3



Human Monocytic Ehrlichiosis

In 2003, seven cases of Human Monocytic Ehrlichiosis (HME) were reported in Florida. Of those cases, 6 (85.7%) were acquired in Florida and 1 (14.3%) was acquired in the United States but not in Florida. Of the six cases that were acquired in Florida, 4 (66.7%) were female, 1 (16.7%) was male, and for 1 case (16.7%) the gender was unknown. The average age of the individuals was 53.3 years old (range 20-70 years). Four individuals (66.7%) were white non-Hispanic, 1 (16.7%) was white with the ethnicity being unknown, and for 1 (16.7%) the race and the ethnicity were unknown. Half of the individuals resided in the panhandle region* of Florida, 2 (33.3%) resided in the northern region, and 1

individual resided in the central region. Half of the cases met the case definition for confirmed HME and the remaining half met the case definition for probable HME. Two cases (33.3%) occurred during the month in each May and June, while 1 (16.7%) occurred in each July and November.

Anaplasmosis

In 2003, four cases of Anaplasmosis (formerly Human Granulocytic Ehrlichiosis) were reported in Florida. Of those cases, 3 (75%) were acquired in Florida and for the remaining case where the disease was acquired is unknown. Of the three cases that were acquired in Florida, 2 were female and 1 was male. The average age of individuals was 45 years old (range 35-63 years). Two individuals were black and non-Hispanic, while the remaining case was white and non-Hispanic. One individual resided in each of the following regions* of Florida: central, southern, and northern. One case met the case definition for confirmed Anaplasmosis and 2 met the case definition for probable Anaplasmosis. Two cases occurred in May and 1 occurred in October.

*For the purpose of this analysis, Florida counties were divided into regions as follows:

North- Alachua, Baker, Bradford, Citrus, Clay, Columbia, Dixie, Duval, Flagler, Gilchrist, Hamilton, Hernando, Lafayette, Lake, Levy, Madison, Marion, Nassau, Orange, Pasco, Putnam, Seminole, St. Johns, Sumter, Suwannee, Taylor, Union, Volusia.

Central- Brevard, DeSoto, Hardee, Highlands, Hillsborough, Indian River, Manatee, Okeechobee, Osceola, Pinellas, Polk, Sarasota, St. Lucie.

South- Broward, Charlotte, Collier, Glades, Hendry, Lee, Martin, Miami-Dade, Monroe, Palm Beach.

Panhandle- Bay, Calhoun, Escambia, Franklin, Gadsden, Gulf, Holmes, Jackson, Jefferson, Leon, Liberty, Okaloosa, Santa Rosa, Wakulla, Walton, Washington.