1998 CSTE ANNUAL MEETING

CSTE/NASPHV POSITION STATEMENT: # ID 6

COMMITTEE: Infectious Diseases

TITLE: Adding Ehrlichiosis as a Condition Reportable to the National Public Health Surveillance System (NPHSS)

ISSUE: Ehrlichiosis is an emerging infectious disease with different agents responsible for infection in the south and south central states (Human Monocytic Ehrlichiosis or HME) and the north central and north eastern states (Human Granulocytic Ehrlichiosis or HGE). Passive surveillance data for ehrlichia infections are sparse, collected from relatively few regions of the United States. Although ehrlichiosis is currently reportable in over 20 states, it is not a nationally notifiable disease, and few statewide summaries for ehrlichiosis contain large enough data sets for meaningful analysis.

POSITION TO BE ADOPTED:

1. CSTE recommends that ehrlichiosis be added as a condition reportable to the National Public Health Surveillance System (NPHSS).

2. CSTE, with the assistance of the Centers for Disease Control and Prevention (CDC), should review and finalize the provisional surveillance case definition for ehrlichiosis that was adopted at the 1996 CSTE Annual Meeting (CSTE Position Statement #17).

3. CDC, with the assistance of CSTE, should integrate the reporting of ehrlichiosis with the reporting of other tick-borne rickettsial diseases. This should include the development of a generic tick-borne rickettsial disease national report form.

BACKGROUND AND JUSTIFICATION: In the United States, the ehrlichioses represent two clinically indistinguishable, yet epidemiologically and etiologically distinct diseases, caused by Ehrlichia chaffeensis, and a bacterium similar or identical to Ehrlichia equi. Over 450 cases of ehrlichiosis have been confirmed by the CDC since 1985. The occurrence of these diseases mirrors the seasonal activities and geographic distributions of the tick vectors. Ehrlichia chaffeensis infections occur most frequently in southeastern and mid-western US, where Ixodes scapularis is the principal vector of the HGE agent and B. burgdorferi, including Connecticut, Minnesota, New York, and Wisconsin.

Relatively few population-based investigations have pursued the fundamental question of how many persons become ill from infection with ehrlichiae. Passive surveillance data for these infections are sparse, collected from relatively few regions of the United States where Ehrlichia
spp. are endemic. Although ehrlichiosis is currently reportable in over 20 states, it is not a nationally notifiable disease, and few statewide summaries for ehrlichiosis contain large enough data sets for meaningful analysis. Passive and active surveillance for the ehrlichioses are in progress in Connecticut and New York as part of the Emerging Infections Program. In addition, CDC’s Tick-Borne Diseases Initiative is supporting active, population-based surveillance for these diseases in Connecticut, Missouri, and Wisconsin.

GOALS FOR SURVEILLANCE:
1) to define the epidemiology of ehrlichia infections in the United States; 2) to monitor incidence trends and changes in the geographic distribution of these infections over time; 3) to identify risk factors for ehrlichia infections; and 4) to monitor the effectiveness of control measures.

METHODS FOR SURVEILLANCE: Clinician and laboratory reporting.

CASE DEFINITION:
Ehrlichiosis

Clinical description
A tick-borne febrile illness most commonly characterized by acute onset, accompanied by headache, myalgia, rigors and/or malaise; clinical laboratory findings may include: intracytoplasmic microcolonies (morulae) in leukocytes of peripheral smear, cerebrospinal fluid or bone marrow aspirate or biopsy, cytopenias (especially thrombocytopenia and leukopenia), and elevated liver enzymes (especially alanine aminotransferase or aspartate aminotransferase).

There are two clinically similar but serologically distinct forms of ehrlichiosis: human granulocytic ehrlichiosis (HGE) caused by infection with an Ehrlichia equi-like agent and found primarily in the upper midwest and northeast, and human monocytic ehrlichiosis (HME) caused by Ehrlichia chaffeensis infection and found primarily in the southeastern quadrant of the U.S.

Laboratory criteria for diagnosis
All laboratory testing must be conducted by experienced personnel with appropriate training and include appropriate controls and reagents necessary for accurate etiologic diagnosis.

- Fourfold or greater change in antibody titer to Ehrlichia spp. antigen by immunofluorescence antibody (IFA) test in acute and convalescent specimens ideally taken four weeks or more apart. HME diagnosis requires E. chaffeensis antigen and HGE diagnosis currently requires E. equi or HGE-agent antigen; or
- Positive polymerase chain reaction (PCR) assay. Distinct primers are used for the diagnosis of HGE and HME; or
- Intracytoplasmic morulae identified in blood, bone marrow or CSF leukocytes and an IFA antibody titer >=1:64
Case Classification
Confirmed: a clinically compatible case that meets the laboratory criteria for diagnosis
Probable: a clinically compatible case with a single IFA serologic titer >=1:64 or intracytoplasmic morulae identified in blood, bone marrow or CSF leukocytes
DATA TO BE COLLECTED: NETSS core data and supplemental information.
PERIOD OF SURVEILLANCE: Permanent, with review of reporting need every five years.
COORDINATION WITH OTHER ORGANIZATIONS:
Agencies for Response: Centers for Disease Control and Prevention
Council for State and Territorial Epidemiologists
Agency for Information: Association of Public Health Laboratories (APHL)

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