

Bacteria in the genus *Ehrlichia* cause two recently recognized and potentially fatal tick-borne diseases. *E. chaffeensis*, discovered in 1990, causes human monocytic ehrlichiosis (HME). A species of *Ehrlichia* closely related to *E. phagocytophilia* and *E. equi* causes human granulocytic ehrlichiosis (HGE). Nonspecific clinical findings make these diseases difficult to diagnose; they may account for many cases of unexplained tick-associated fevers of unknown origin.

Most cases of HME reported in the US occur in adults from rural areas of southern states between April and September. The most likely tick vector is *Amblyomma americanum*. The spectrum of illness ranges from asymptomatic infection to death. Most cases have a nonspecific febrile illness without rash, with over 60% hospitalized. About 15% have severe infections, including renal failure, disseminated intravascular coagulation, seizures and coma, and 2 to 5% die. Laboratory findings often include leukopenia, thrombocytopenia, and elevated serum hepatic enzymes and bone marrows are most hyperplastic. Early diagnosis is rare because morulae of *E. chaffeensis* are seldom found in peripheral blood, seroconversion does not occur until convalescence, and *in vitro* cultivation is rare. HME is easily treated with doxycycline; delayed therapy increases the risk of severe disease and *E. chaffeensis* is not susceptible to chloramphenicol *in vitro*. Since 1990, at least 50 patients in Wisconsin, Connecticut, New York, Maryland, Florida, and Arkansas have been infected with an, as yet unnamed, *Ehrlichia* species that causes HGE. Infected ticks including *Ixodes scarpularis* have been found in regions where this disease occurs. HGE is clinically similar to HME, and usually presents as an undifferentiated fever without rash. Leukopenia, thrombocytopenia and mildly elevated liver function tests are frequent. Serologic tests for HGE do not cross-react with tests for HME, although peripheral blood smears reveal intraneutrophilic morulae in many patients.

In 1996, Florida added Human Ehrlichiosis to its list of notifiable diseases. That year, DOH CHDs reported six people with confirmed HME including two deaths. All but one of these was exposed in northeastern or panhandle counties (Nassau, Clay, Duval, Taylor and Wakulla Counties). The other was probably infected in Georgia. The locally acquired cases were white and mostly male (80%) with ages ranging from 11 to 54 years (mean 42). There were also four probable cases, all were white and, except for a six-year old girl, adult males (31-41 years of age). All were also probably infected in northeastern or panhandle counties. Most of the cases acknowledged being bitten by a tick with onset of disease occurring between mid-April and November with a peak in May and June. Not all cases were exposed in their county of residence and some were associated with occupational or recreational activities. Florida reported 2 confirmed and 3 probable cases in 1997 and 2 confirmed cases during 1998. The 4 confirmed cases were white men aged 43-55 from Alachua, Liberty, Wakulla and Duval counties. All were diagnosed in May or June. Two of the three probable cases were men who were residents of Lake and Sarasota counties. The third case was thought to have acquired her infection from North Carolina.

**References****10/26/99**

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2. Walker DH, Dumler JS. Emergence of ehrlichioses as human health problems. Emerging Infectious Diseases 1996;2:18-29.