Eastern Equine Encephalitis

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Eastern Equine Encephalitis (EEE) virus circulates in nature primarily in a bird-mosquito cycle with man, horses and exotic gamebirds (Pheasants and Chukar partridges) as dead end hosts.[1] The virus appears to be confined primarily to states along the Atlantic and Gulf coasts causing clinical cases in unvaccinated equines every summer. Epidemics in humans are quite rare; occurring only in Massachusetts 1938,1956), Louisiana (1947) and New Jersey (1959). The virus is usually circulated throughout the year in fresh-water swamps by *Culesita melanura*, a mosquito that prefers feeding on wild birds. An incubation period of 3 to 7 days is usually followed by acute onset of fever, headache, nuchal rigidity, disorientation, and lethargy, convulsions, and other signs of encephalitis sometimes followed by coma and death.[2]

EEE or "blind staggers" was recognized annually as a cause of morbidity and mortality among equines by Florida cattlemen many years prior to the first human case documented in 1952.[3] Ecological studies conducted in 1957-58 identified many of the mosquito vectors and birds species involved in the circulation of EEE in the state.[4] Between 1955 and 1974, 25 (1.3 per year) confirmed cases of EEE were reported in Florida.[5] Of these 13 (52%) were <11 years old and an additional 5 cases (20%) were 11 to 20 years old. Most cases were male (65%) and white (68%). While onset occurred through out the year, the majority (76%) were reported between June and August. Eight cases (32%) were fatal and five (29%) of the 17 survivors had residual sequelae. Geographically, 10 cases (40%) were from northeastern counties, 5 (20%) from the panhandle, 9 (36%) central counties and only one (4%) from south Florida.

In the 20 year period between 1975 and 1994, 32 (1.6 per year) cases of EEE have been reported and the epidemiologic profile remains essentially the same. Only one case was reported each year in 1995 and 1996. Equine and human cases continue to occur annually in identified foci of infection in north and central Florida where EE virus is known to circulate year round.[6] However, isolation of EEE from migrant birds suggests that some cases, particularly those from south Florida may be the result of annual introductions of the virus from the Caribbean, South America or northern states.[5] Also isolation of EEE from a wide variety of mosquitoes, including urban and salt marsh species known to feed on humans suggests that infection can occur without exposure to fresh water swamp and lake habitats.

References **10/26/99**

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