

Everglades Virus

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Serologic evidence of Venezuelan equine encephalitis (VEE) virus was first documented in 1960 during a survey of Seminole Indians from the Big Cypress and Brighton reservations.¹ Follow-up investigations conducted by the CDC in 1963 & 1964 resulted in the isolation of Florida's VEE virus from mosquitoes (Culex melanoconian), cotton mice (Peromyscus gossypinus), and cotton rats (Sigmodon hispidus).² Virulence studies showing distinct differences between the endemic Florida strain (Fe-37c), and the more virulent epizootic strains of VEE found in Central and South America led to the classification of the Florida strain of VEE as a separate Group A arbovirus now known as Everglades encephalitis virus (EVE).^{3,4}

In the late 1960's the CDC and State Board of Health conducted ongoing arbovirus studies in the Everglades National Park and monitored SLE and EVE virus activity throughout the remainder of south Florida.^{5,6} In September of 1968 the first documented human case of EVE virus ever reported in the United States was reported from the Homestead-Florida City area in southern Dade County.⁷ To date, only three human cases have been reported in the state; two from Dade county (1968 & 1971) and one from Brevard County, near Vero Beach (1968).⁸ Everglades encephalitis virus only causes a very mild flu-like illness in most people. Clinical disease in the reported cases, which ranged in age from 51 to 75 years, began with a gradual onset and prolonged prodrome with respiratory symptoms, progressing to profound obtundation followed by a gradual recovery with few residua. No new cases have been reported in over 25 years.

Epizootic studies conducted in the early 1970's documented the circulation of EVE virus in mosquitoes, rodents, and human populations and defined mechanisms for periodic reintroduction into amplification of the virus in urbanized areas,^{8,9}. All studies suggest that a virulent strain of VEE introduced from Central or South America may be able to amplify in south Florida.

References

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