

MOPH instituted a JE vaccination program providing two doses of killed JE vaccine (18 and 24 months) and a booster (2.5-3 years) without a “catch-up” component. Between 1990-91, routine childhood JE vaccination began in all northern provinces. Characterization of encephalitis in southern Thailand, and subsequent institution of routine JE vaccination was delayed. The authors hypothesized there was endemic JE in Southern Thailand.

Methods: From 1989-90, all febrile children hospitalized with CNS signs and symptoms unrelated to a bacterial infection were evaluated at Surat Thani Hospital, a regional medical center in Southern Thailand. Hospital course and outcome were recorded; serum and CSF specimens were obtained for JE, dengue, and rickettsial serology.

Results: 119 patients had complete evaluations: 53 in 1989 and 66 in 1990. Of 119 cases, 94 (79%) were diagnosed as encephalitis and JE was the etiology in 53 (45%). JE accounted for 52% of encephalitis cases and the frequency of sequelae or death was 50%. By 1994, JE vaccination was occurring in 36 provinces and by 1999 there was a coverage rate of 84% for children between 2.5-3 years of age. Surat Thani encephalitis data published by the MOPH reports that from 1981-88 there were 254 encephalitis and 2 JE cases. During the 1989-90 study period, the MOPH reported 85 encephalitis cases and no JE. The author’s investigation revealed 94 encephalitis cases, 53 due to JE. During the 7 year period (1995-2001) following the introduction of routine JE vaccination, the MOPH reported 94 encephalitis cases, 8 as JE.

Conclusions: 1) JE was the main cause of pediatric non-bacterial CNS infections in the Surat Thani region between 1989-90; 2) JE caused significant morbidity and mortality; and 3) in contrast to the authors' data, MOPH data for the Surat Thani region fails to indicate a benefit to routine JE vaccination. Additional research is required to: a) confirm JE transmission patterns, b) confirm vaccination rates, c) confirm the availability of JE diagnostics, and d) discover reporting deficiencies.

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JAPANESE ENCEPHALITIS VIRUS: ECOLOGY AND EPIDEMIOLOGY

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Japanese Encephalitis (JE), a mosquito-borne arboviral infection, is recognized throughout much of Asia and is considered the most important mosquito-borne viral encephalitis, with an estimated worldwide incidence of 45,000 cases each year primarily in children. Approximately 25 percent of cases die and 50 percent develop permanent neurologic and psychiatric sequelae. The magnitude of the problem is even more impressive when it is considered that the disease often occurs in epidemics that are somewhat predictable and that Japanese encephalitis is a vaccine preventable disease. Cycle of Japanese encephalitis in nature is discussed. Pig and ardeid birds are the most important hosts for maintenance, amplification, and spread of the virus. The primary vector species are Culex mosquitoes. Study on Ecology in Japan in 1964, and in Bangkok by AFRIMS 1985 is also discussed. Countries officially reporting Japanese Encephalitis to WHO are presented. Countries reporting cases include JE countries at-risk, reporting cases of JE, not reporting cases of JE, and inconsistent reporting cases. Distribution of JE cases by age-group

is discussed. Problems of epidemiologic data are : most national disease reporting systems report the total numbers of encephalitis cases, the lack of diagnostic precision has increased difficulty of undertaking focused disease control programs for Japanese encephalitis, as long as all ecologic components required for transmission remain in the environment and the risk of acquiring the disease will continue, vaccine should be made widely at low cost to prevent disease.

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EVALUATION OF AN IMMUNOCHROMATOGRAPHIC ASSAY FOR THE RAPID DIAGNOSIS OF ACUTE HEPATITIS E INFECTION

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There is an urgent need for a rapid and reliable diagnostic assay for acute hepatitis E virus (HEV) infection in endemic areas, particularly for outbreak situations. At present, there is no gold standard for the diagnosis of acute HEV infection. Most cases are diagnosed using an anti-HEV IgM ELISA or RT-PCR. A rapid, immunochromatographic assay for anti-HEV IgM (Genelabs Diagnostics) was evaluated on acute HEV serum samples characterized by positive HEV RT-PCR and anti-HEV IgM > 100 WRAIR Units (n = 200) obtained from patients with clinical hepatitis in Indonesia and Nepal, healthy blood donors in Thailand (n = 100) and acute hepatitis A (n = 80), acute hepatitis B (n = 45) and acute hepatitis C (n = 50) in Thailand, Nepal, Cambodia and Indonesia. The assay performed with 93% sensitivity and 100% specificity for the diagnosis of HEV infection in acute hepatitis samples with no false positives when performing the assay on the acute hepatitis A, B C samples and on samples from healthy blood donors. This data suggests that this assay may be a valuable tool for the rapid diagnosis of acute HEV infection. Additional evaluation in HEV endemic regions with varying antigen concentrations may improve the testing sensitivity without compromising specificity.

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A BLUNTED BLOOD PLASMACYTOID DENDRITIC CELLS RESPONSE IN AN ACUTE SYSTEMIC VIRAL INFECTION IS ASSOCIATED WITH INCREASED DISEASE SEVERITY

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At least two distinct human dendritic cell (DC) subsets are produced in the bone marrow and circulate in the peripheral blood-precursor myeloid DCs (pre-mDCs) and plasmacytoid DCs (PDCs). Both lineages of DCs are instrumental in antiviral innate immunity and shaping Th1