

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

adaptive immune responses. PDCs are the most potent IFN- α -producing cells to viral pathogens. Dengue, an acute flavivirus disease, provides a model to study DC responses to a self-limited human viral infection. We analyzed circulating DC subsets in a prospective study of children with dengue across a broad range of illness severities: healthy controls; mild, nondengue, presumed viral infections; moderately ill dengue fever; and, the most severe form of illness, dengue hemorrhagic fever. We also examined PDC responses in monkeys with asymptomatic dengue viremia and to dengue virus exposure *in vitro*. The absolute number and frequency of circulating pre-mDCs early in acute viral illness decreased as illness severity increased. Depressed pre-mDC blood levels appeared to be part of the typical innate immune response to acute viral infection. The frequency of circulating PDCs trended upward and the absolute number of circulating PDCs remained stable early in moderately ill children with dengue fever, mild other, nondengue, febrile illness, and monkeys with asymptomatic dengue viremia. However, there was an early decrease in circulating PDC levels in children who subsequently developed dengue hemorrhagic fever. A blunted blood PDC response to dengue virus infection was associated with higher viremia levels, and was part of an altered innate immune response and pathogenetic cascade leading to severe disease.

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CLINICAL PRACTICE. PROPHYLAXIS AGAINST RABIES

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Once symptoms develop, rabies is almost invariably fatal. The overarching public health goals are to educate the public about the disease, prevent exposures, offer vaccination to those at increased risk, and administer postexposure prophylaxis appropriately. The child described in the first vignette should be examined thoroughly for any evidence of a small lesion compatible with a bite wound. If the bat is available, the carcass should be sent to a diagnostic facility. Postexposure prophylaxis is unnecessary if test results in the bat are negative. However, prophylaxis is needed if the bat is found to have been rabid. If the bat is unavailable, consultation with the local or state health department is appropriate, and prophylaxis should be considered if it is likely that the child was exposed.

In the second vignette, the owner has not been exposed, even if his puppy had contact with the raccoon sometime that morning. Actions should focus on diagnostic testing of the raccoon and pet management, depending on the results and depending on the immune status of the puppy.

In the last vignette, the action to be taken depends on the specific circumstances. If the suspicion of rabies is low (i.e., the dog appeared healthy; the attack was provoked; the woman was bitten on an ankle through her clothing; there were only minor abrasions, which were washed well; and the episode occurred in a major city free of canine rabies in recent years, such as Rio de Janeiro or Montevideo, Uruguay) or if the dog is found alive, prophylaxis is not indicated. If the bite occurred in an area where canine rabies is endemic, immediate postexposure prophylaxis is warranted, either with locally produced biologic agents or those obtained from the closest major urban area or country.

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