

Abstract

More than 100 arboviruses can cause a systemic febrile illness with headache, arthralgia and rash. In March 2012, Bureau of Epidemiology was notified about a cluster of maculopapular rash with fever and poly-arthritis/-arthralgia in Ratchaburi Province. New cases were increasing although the local team implemented prevention and control measures. A joint investigation was later initiated to confirm the diagnosis of the outbreak. An active case finding was conducted, including an environmental survey and laboratory investigation. A case was defined as a person in 4 affected villages who developed undifferentiated maculopapular rash, with/without fever or joint symptoms during 1 February-23 March 2012. Of 33 cases identified, the first case developed symptoms on 11 February followed by his family members. Number of cases rose in 4 villages within a month, with attack rates between 0.1 percent and 2.5 percent. The first affected village was in the center of these villages. Eighty percent of cases were adults. Main clinical manifestations included generalized maculopapular rash (100%), fever (55%) and joint involvement (52%). In an environmental survey, the thicket, many mosquito breeding containers, abundant mosquitoes and no gathering activities of people in these 4 villages were reported. The villagers did not use Temiphos or *Poecillia* and any mosquito repellent. ELISA antibody test was positive for dengue virus IgM in 11 of 18 cases (61.1%). Entomological investigation found that 37 of 40 collected mosquitoes (93%) were *Aedes aegypti* and the RT-PCR identified dengue serotype 2 (DEN-2) in mosquitoes in 2 of 4 houses (50%). This unusual outbreak was in late summer and most likely caused by dengue infection, yet mostly affected adults. After strengthening prevention and control measures, the outbreak was subsided. Dengue prevention and control measures are very important because the people who previously infected with prevailing DEN-1 virus can develop the severe form of dengue hemorrhagic fever if they are re-infected with DEN-2 virus.

Key words: dengue, mosquito, maculopapular rash, poly-arthritis, poly-arthralgia