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SIRIPORN NASOMJAI : SEROEPIDEMIOLOGY OF ARBOVIRUS INFECTIONS AMONG SOME GROUPS OF THAI HILL TRIBE PATIENTS WITH PYREXIA IN CHIANG MAI PROVINCE. THESIS ADVISORS : CHARNCHUDHI CHANYASANHA, Ph.D., TIMOTHY P. ENDY, M.D., M.P.H., Board Certified Infectious Disease, DUSIT SUJIRARAT, M.Sc. 216 p. ISBN 974-664-205-7.

Dengue hemorrhagic fever, Japanese encephalitis (JE) and Chikungunya infection are arbovirus diseases in Thailand which are transmitted by mosquitoes. The objectives of this study were to know the seroepidemiology of arbovirus infections by serological assay, and to find the factors related to arbovirus infections in hill tribe patients with pyrexia who took treatment at four hospitals in Chiang Mai Province, namely, Samoeng Hospital, Mae Taeng Hospital, Phrao Hospital and Chiang Dao Hospital. A total of 393 cases were studied during May 1997-April 1998. Each patient was interviewed and blood samples were collected (190 cases of single sera and 203 cases of paired sera). The antibody levels were detected by the hemagglutination inhibition (HI) test and the IgM antibody capture ELISA (MAC ELISA). Results showed that 87 cases were positive for arbovirus; 131 cases were negative and 175 cases were uninterpreted. The prevalence of Dengue infection was 25.7% (56/218 cases), Chikungunya virus infection was 11.5% (25/218 cases) and JE virus infection was 7.3% (16/218 cases). In conclusion, prevalence of arbovirus infections was 39.9% (87/218 cases), composed of Alphavirus infection 11.5% (25/218 cases) and Flavivirus infection 37.2% (81/218 cases). The prevalence of arbovirus infections were found to be higher in age group < 15 years old (OR = 3.1), occupation; business men, employees, students and unemployed people (OR = 1.9), income of  $\leq$  2000 baht per month (OR = 6.7), history of being bitten by mosquitoes 1 week before sickness (OR = 2.3) and having containers or ground water pits for mosquitoes breeding place close to the house (OR = 4.4). All factors were found to be significant ( $p$ -value < 0.05). The result of this study will be useful for prevention and control the arboviral diseases, planning and vaccination program.