

Abstract

Hepatitis C virus, a causative agent of non-A, non-B hepatitis, is commonly transmitted by parenteral exposures. Although, sexual contact seems to be a route of transmission, it is still unclear. To investigate the sexual transmission of HCV, we decide to study in the group of commercial sex workers (CSW) and non-intravenous drug user(IVDU) HIV infected patients. Sera from 333 CSW from 3 provinces of the Northern part of Thailand and 201 HIV-infected patients who enrolled at Maharaj Nakorn Chiang Mai Hospital were collected and assessed for HCV antibody by ELISA and for HCV subtypes by RT-PCR method using NS5 and/or 5'-UTR primer sets. The prevalence of HCV antibody positive CSW in Chiang Mai, Lumpoon and Chiang Rai were 5.98, 3.92 and 2.63 percent respectively, with an average of 4.2. Fifty percent CSW from Chiang Mai and 53% CSW from Chiang Rai are Burmese whereas eighty percent CSW from Lumpoon are local. In addition the prevalence of HCV antibody positive was found in CSW with longer duration of working in the sex trade and more age. By RT-PCR, 57% CSW from Chiang Mai and Lumpoon were detected against HCV primer sets of NS5 and 5'-UTR and found HCV-1a subtype prevailing , followed by the subtypes of HCV-3a and HCV-1b. All HCV antibody positive CSW from Chiang Rai were not detected against these primer sets. In non-IVDU HIV-infected patients, the prevalence of HCV antibody positive was 5.93%, of which 83 percent was men. Eighty three percent of HIV-infected sera were positive to the HCV primer sets, showing that HCV-3a was the most common subtype(40%) followed by HCV-1a, HCV-1b and HCV-3b. In the HIV-infected patients, we found that the symptomatic patients have higher prevalence of HCV antibody than asymptomatic HIV-infected patients. Taken together, the prevalence of HCV antibody positive CSW in three provinces * CCSW and non-IVDU HIV-infected patients was significantly higher than that of the prevalence in normal female blood donors(0.99%) and pregnant women (1.5%). These studies suggest that the HCV antibody screening in CSW of the Northern area of Thailand should be performed for the advantages of controlling the spreading of HCV infection by sexual transmission.