

MOLECULAR EPIDEMIOLOGY DATABASE OF HIV, HBV, HCV, HDV, HTLV-1/2, AND TTV IN CENTRAL OF JAVA, INDONESIA

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ABSTRACT

Since 2009 an active surveillance has been performed by collecting epidemiological and clinical data and blood specimens from the high risk communities for human blood borne viruses infections (correctional facilities, injecting drug users, men who have sex with men, etc) to build a molecular epidemiology database of human blood borne viruses in Indonesia focusing on HIV, HBV, HCV, HDV, HTLV-1/2 and TTV. The 2009's samples (518 blood specimens) were screened by serological assays for anti-HIV, HBsAg, anti-HCV, anti-HDV, anti-HTLV-1/2. In total, 4.8 % (25/518), 3.3 % (17/518), 26.3 % (136/518), 0.2 % (1/518), 2.9 % (15/518) were positive for anti-HIV, HBsAg, anti-HCV, anti-HDV, and anti-HTLV-1/2, respectively. Nucleic acid were extracted from all samples, followed with nested RT-PCR for HIV, HDV, and HTLV-1/2 and nested PCR for TTV and HBV detection, respectively. The PCR product for HIV and HCV already sequenced and have been analyzed. Briefly, 13 HIV RNA were successfully amplified with nested RT PCR for part of HIV pol region. For HCV, 31 HCV RNA were successfully amplified with nested RT PCR for part of HCV E1-E2 and NS5B region. All HBsAg positive samples were successfully detected using nested PCR for part of HBV HBsAg gene and HBV promoter region and precore gene. The isolat was failed detected by molecular assay. In point of HTLV-1/2, 8 HTLV-1/2 RNA were successfully amplified by nested RT PCR for part of HTLV-1/2 LTR and VS region. Also, 104 TTV isolates were detected using nested PCR addressing the part of TTV N22 region. The phylogenetic analysis of HIV and HCV isolates revealed that all of our isolates were different with all HIV and or HCV previous isolated in Indonesia. In 2010 we also collected 400 more samples, and already detected by serological assay for HIV and HCV. We are going to continue analyse the 2010's samples in 2011 as previously described as previously scheduled.

Key words: HIV, HBV, HCV, HDV, HTLV-1/2, TTV, Indonesia