ABSTRACT

Analysis of HIV Subtype and Clinical Stage of HIV/AIDS in East Java

Human Immunodeficiency Virus type 1 (HIV-1) known to cause Acquired Immune Deficiency Syndrome (AIDS) are divided into several subtypes (A, B, C, D, F, G, H, J, K) and Circulating Recombinant Form (CRF). Different characteristics of subtype of the virus and its interaction with host can affect the severity of the disease.

The aims of this study was to analyze HIV-1 subtypes circulating in HIV/AIDS patients from the East Java region and to analyze its relationship with clinical stage of HIV/AIDS.

Blood plasma from the patients who came to the Intermediate Care Unit of Infectious Disease (UPIPI) Dr. Soetomo Hospital Surabaya from various area representing the East Java regions who tested to be HIV positive was used. HIV gp120 env gene region was amplified by using specific primer and then the PCR product was purified, sequenced and analized its homology and phylogenetic.

It was found that the most dominant subtype in East Java was in one group of Circulating Recombinant Form (CRF) that are CRF01_AE, CRF33_01B, and CRF34_01B. In the the phylogenetic tree was done by neighbour-joining method, the result were most of HIV samples (30 samples) were in the same branch with CRF group, except one sample (HIV40) was in the same branch with subtype B group. HIV subtypes was not significantly associated with clinical stage where samples from different stages of HIV/AIDS have the same HIV subtypes.

Keywords:
HIV/AIDS, phylogenetic analysis, subtype, clinical stage.