

**ABSTRACT****Detection of Human Herpesvirus 6 (HHV-6) and HHV-8 Infection among HIV-positive Patients in Surabaya, and Its Correlation towards HIV Viral Load****Devi Oktafiani**

**Introduction:** Indonesia had the second-highest acquired immunodeficiency syndrome (AIDS)-related death among Asia and the Pacific countries in 2018. Mortality from AIDS is often associated with the reactivation of a herpes virus infection. Human herpesvirus-6 (HHV-6) and HHV-8, is not usually associated with disease in the immunocompetent, but a major cause of opportunistic infection in HIV-infected individuals.

**Aims:** To determine the presence of HHV-6 infection among HIV-infected individuals residing in Surabaya, Indonesia and its correlation with HIV viral load.

**Methods:** A total of 85 whole blood samples of HIV positive patients and 85 healthy controls were collected. Detection of HHV-6 used gB gene and subtyping used the IE1 gene by PCR methods. Detection of HHV-8 using ELISA to detect antigens and antibodies against HHV-8 while the PCR using ORF 26, and ORF K1 genes and subtyping by sequencing. RNA of HIV positive samples were subjected to qRT-PCR to quantification of viral load HIV.

**Results:** This study was to analyze the presence of HHV-6 and HHV-8 in two sample groups. Eighty-five samples from HIV-positive groups and HIV-negative groups, respectively. The results of this study were found 17.6% (15/85) and 3.53% (3/85) from each group. This study showed that HHV-6 subtypes found were predominant subtype B. There were variant A 13.3% (2/15) and B 80% (12/15) and variant A and B 6.6% (1/15). HHV-8 detection showed that in the samples 8,2% positive antibodies and 10,58% positive antigen of HHV-8. Viral load HIV was correlated to the presence of HHV-8 ( $p < 0,001$ ), but not with HHV-6 ( $p > 0,05$ ).

**Conclusions:** Infection of HIV increased the risk factor of HHV-6 and HHV-8, but no correlation among HHV-6 to HIV viral load. These results may help the clinicians for continued the therapy

**Keyword:** HIV patients, HHV-6, HHV-8, HIV viral load, Surabaya