

Sero- and molecular epidemiology of HIV-1 in Papua Province, Indonesia / Muhammad Q. Yunifiar, Tomohiro Kotaki, Adiana M. Witaningrum, Siti Q. Khairunisa, Dwi W. Indriati, Meilani Meilani, Tigor Yeheskiel, Shuhei Ueda, Nasronudin Nasronudin, Masanori Kameoka

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Abstrak

ABSTRACT

Background: human immunodeficiency virus (HIV) infection and acquired immune deficiency syndrome (AIDS) cause serious health problems and affect the Indonesian economy. Papua province has the highest prevalence of HIV infection in the country; however, epidemiological data are limited. Therefore, in order to reveal the current situation of HIV/AIDS in Papua province, sero and molecular epidemiological studies of HIV were conducted. Methods: serological tests were conducted on 157 healthy individuals from the general population residing in Paniai, Papua. In addition, a molecular epidemiological study was then conducted on HIV type 1 (HIV 1) genes derived from infected individuals. Peripheral blood samples from HIV 1 positive individuals and 15 additionally enrolled, previously confirmed HIV 1 positive individuals were subjected to a genotypic analysis. Results: serological tests revealed that 2 out of 157 (1.27%) healthy individuals were HIV positive. In addition, HIV 1 subtyping revealed that subtype B and CRF01_AE were the major subtype and circulating recombinant form (CRF) of HIV 1 prevalent in the region, while subtype A1 and a recombinant form including viral gene fragments of CRF01_AE and subtype B was also detected. In addition, HIV drug resistance-associated major mutations were detected in the reverse transcriptase gene derived from infected individual on antiretroviral therapy. Conclusion: these results provide important information for clearer understanding on the current situation of HIV/AIDS in Papua province in Indonesia.