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Prevalence of HIV-1 subtypes - 1/Northeast region of Brazil

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Analysis of genetic HIV-1 diversity has been an important tool for monitoring the geographical, epidemiological and clinical changes of the HIV/AIDS pandemic. In Brazil, studies have shown an increased prevalence of subtype C in Southern and Southeastern regions and a higher prevalence of subtype B in the other regions. While in the Northeast region, there is an increased prevalence of subtype F and BF recombinants, especially in the state of Pernambuco. Our objective was to investigate the prevalence of HIV-1 subtypes in the state of Pernambuco, Northeast of Brazil, from January 2010 to June 2012. A retrospective study based on epidemiological and laboratory data obtained from request forms of genotyping assay for HIV-1 from 445 patients failing antiretroviral therapy seeking at the Central Public Health Laboratory of the State of Pernambuco (LACEN-PE) according to the criteria by the national network of HIV genotyping of the Brazil's Ministry of Health. The test consisted in extraction of viral RNA from plasma using the QIAamp RNA Mini Kit Kit[®] (Qiagen, Germany), followed by PCR and gene sequencing using the TRUGENE HIV-1 Genotyping System[®] (Siemens Diagnostics, USA). Genetic sequences generated were analyzed by the system OpenGene DNA Sequencing System[®] and later identification of HIV subtypes by Brazilian genotyping algorithm. Three hundred and forty-seven patients were infected with subtype B (78%), 93 with subtype F (21%) and 5 with subtype C (1%). Sociodemographic, clinical and laboratory characteristics were similar in subjects infected with subtype B and non-B. The study showed that the profile of circulating subtypes in the state of Pernambuco has remained stable over the last decade. Data on the molecular epidemiology of HIV-1 assist the scientific community and healthcare managers in prevention and treatment of HIV/AIDS.

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