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Dengue infection in HIV-1 positive patients with highly active antiretroviral therapy

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The association of Human Immunodeficiency Virus and Dengue virus has been little described. Previous studies have shown that dengue virus infection in HIV positive patients does not lead to serious clinical complications. However, multiples mutations of Dengue virus genome may generate an unknown clinical course. This study analyzes the course of HIV viremia of HIV-1 positive patients during a dengue infection in a tropical area from Mexico, and assesses the interaction among these pathogens in the context of HIV disease progression. 7 HIV-1-infected patients with dengue infection were analyzed. Dengue serotype was determined by RT-PCR. HIV viral loads were measured using COBAS AmpliPrep/COBAS TaqMan HIV-1 Test during dengue infection and six months after co-infection. HIV viremia prior to dengue infection was analyzed. All patients provided informed consent, and the protocol was approved by the Ethical Review Committee of the Center for Biomedical Research, University of Colima. Dengue virus serotype 1 was identified during these co-infections. A significant modification of HIV viral loads was not observed. CD4+ cells levels remained >200 cells/µl. Progression of HIV disease was not observed during the time of monitoring. This is the first report that shows the course of HIV viremia during a dual infection with DENV1. Severe clinical complications were not observed. Little has been reported about these co-infections, and the effect of the antiretroviral therapy during a co-infection among these pathogens remains unknown. The lack of evidence of HIV-DENV co-infections in tropical areas shows a real panorama about restrictions and a difficult problem of timely diagnosis, therefore, the presence and significance of these viral co-infections should be studied more thoroughly.

Biography

Uriel A. Lopez-Lemus is completing a PhD program at the University of Colima. He has contributed in several projects for detecting risks of dengue virus transmission in Colima State-Mexico as part of his graduate studies. He has published one manuscript and three are in process. At this moment, he is a visiting scientist at Beckman Research Institute of City of Hope, CA, EUA. His main desire is to apply for a postdoctoral position in the field of gene therapy for treating HIV infection. One of his principal goals is to contribute for a new treatment against HIV infection using specific sequences of dengue virus genome.

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