

INFECTION CONTROL AND CLINICAL MICROBIOLOGY

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Seroepidemiology of HIV-1 and HTLV I/II in Afghanistan

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Background: Two distinct families of human retroviruses, the HIV-1 and HTLV I/II, cause significant infections worldwide. Currently, the HIV prevalence in Afghanistan is apparently highest among injects drug users (IDUs) with prevalence between 0.3-13.3 percent. It has been estimated that the conditions that cause high prevalence of HIV within high risk groups are increasing and spreading among the general population. There is no data about prevalence of HTLV I/II viruses in Afghanistan. This study aims to evaluate the prevalence of these two different families of human retroviruses in general population of Afghanistan.

Methodology: In collaboration with the Afghanistan National Public Health Institute 500 samples selected randomly from Nangarhar, Herat, Mazar-e Sharif, Kandahar and Kabul with age group of 25-70 years old. Among the participants 263 (52.6%) were female while 237 (47.4%) were male. Respectively, 489 and 466 samples screened for HIV and HTLV seropositivity by Elisa assay on the Abbott Architect automated platform.

Results: Among screened samples 7 cases (1.43%) were positive for HIV with 6:1 male to female ratio and 3 cases (0.64%) for HTLV respectively. One sample with HIV and HTLV coinfection also was found. The seropositivity of HIV in Herat was significantly high comparing to other cities ($Z=1.7472$, $p\text{-value } 0.04006$). Prevalence of HTLV in Herat was determined as 2% that was high comparing to other regions.

Conclusion: Prevalence of HIV and HTLV I/II in Herat are high and need more study to assess risk factors. More attention should be paid to health education and awareness programs. As well screening for HTLV may need for blood donors. Since HTLV- I/II shares a similar transmission route with HIV, recommend investigating the rate of co-infection of HTLV and HIV among IDUs in Afghanistan.

Biography

Abbas Ali Hussein has completed his PhD at Ankara University. His research interests lie in the area of infectious disease. He has researched on epidemiology and molecular profile of HIV, HTLV, HBV, HCV and HDV. He has experience of designing different NA isolation kits and HBV, HCV, HIV and CMV quantitative real time PCR Kits.

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