Appearance of ART drug resistance mutations, mental health problems and social issues among people living with HIV in earthquake-affected area in Nepal

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A great earthquake on 25th of April 2015 in Nepal claimed more than 8,600 lives and severe damage in infrastructures disrupted health service delivery. Impact of the disaster on persons living with HIV/AIDS (PLHAs) who actually need more than 95% ART adherence to prevent treatment failure and drug resistance was unknown. Therefore, we assessed impact of earthquake on PLHAs focusing on adherence to antiretroviral therapy, treatment failure and ART drug resistance including other social issues. 305 PLHAs were interviewed and 40 blood samples from ART treatment failure cases were taken. Logistic regression analysis was done for measuring associations among variables while HIV-1 genomic fragments were amplified to identify subtyping and drug resistance mutations (DRMs). Findings revealed that around 13% of the PLHIV's reported treatment failure while only 8% of participants were <95% adherent to ART. Around 44% of the participant had posttraumatic stress disorder symptoms and 49.8% were experienced stigmatized. Around 4% had never disclosed their HIV status to anyone. HIV-1 gene sequencing analysis revealed that subtype C (84.2%, 32/38) was the major subtype prevalent in the region. Moreover, major mutations appeared were M41L (3.1%), D67N (3.1%), E138K (6.3%), Y181C (3.1%), M184V (12.5%), Y188L (6.3%), L210W (3.1%) and T215Y (3.1%), while minor mutations were V90I (3.1%) and A98G (3.1%). This study showed 21.9% (7/32) had major drug resistance mutations indicating the possible emergence of HIV-1 drug resistance in earthquake affected area of Nepal.

Biography
Bharat Singh Negi Negi, a graduate of the University of Tokyo, is currently a public health researcher at Kobe University in Japan. His research areas of interest are HIV/AIDS, access to health care services in developing countries, disability health, post-disaster psychological problems in South Asian countries. He has more than ten years of experience in public health field especially in developing countries.

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