Case Report

Sustained Viremic Control in HIV-Infected Patient: Case Report from Nepal

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Received 15 January 2018; Accepted 18 February 2018; Published 13 March 2018

A case of human immunodeficiency virus (HIV) infection is described from Nepal with constant maintenance of CD4 count and HIV-RNA level below the lower detection threshold for more than ten years. The case was diagnosed of HIV positive in the year 2008. He had his viral load estimation performed every year since then which was always below lower detection limit and remained healthy without treatment. The patient also had not any kinds of opportunistic infection till date. He is married now and has not transmitted the disease to his wife.

1. General Background

The incidence of HIV infection is increasing globally. WHO reported 34 million people living with HIV at the end of 2011 [1]. The prevalence of HIV infection among adults was reported to be 0.20% in the year 2014 in Nepal [2]. It is estimated that 7,400 new cases of HIV are added each day worldwide. In the year 2011, 1.7 million deaths occurred due to HIV-AIDS, and in the same year, 2.5 million new cases were diagnosed of HIV-AIDS [3].

Many attempts have been made to control as well as provide successful treatment to the deadly disease, yet there is not an easy-to-follow strict regimen for treatment. One of the major causes of the situation the unclear understanding about the various complicated modes of HIV pathogenesis. Different research works suggest that the previously known and newly emerging HIV pathogenesis is somehow different due to which some people can constantly control over viral replication thus resulting in long-term nonprogressors and elite controllers [4].

Elite controllers are those HIV-positive individuals that show plasma HIV-RNA value persistently below 50 copies/ml or below the lower detection threshold of clinical assays without antiretroviral therapy throughout the course of infection or for at least 12 months [4–7]. On the other hand, long-term nonprogressors are those individuals showing low-detectable plasma viremia, that is, less than 5000 HIV-RNA copies/ml [4].

Here, we presented a case that has an extraordinary control over HIV replication with constant maintenance of CD4 count and HIV-RNA level below the lower detection threshold for more than 10 years. The case was diagnosed of HIV positive in the year 2008. He had his viral load estimation performed every year since then which was always below lower detection limit and remained healthy without treatment. The patient also had not any kinds of opportunistic infection till date. He is married now and has not transmitted the disease to his wife.

2. Case Description

A 40-year-old male resident from Kathmandu, Nepal, was tested positive for HIV infection by the ELISA method in 2008. In addition to ELISA, supplementary testing for HIV serology was done by using rapid test kits (Determine, Uni-Gold, and...
We present a case who had sustained viremic control over HIV infection and maintenance of plasma RNA viral load below 50 copies/ml for more than 10 years. The strong evidence in identifying this case is the laboratory report of viral load and CD4 count with the patient. We found that during the course of 10 years, the patient had constantly maintained the plasma HIV-RNA viral load less than 50 copies/ml and possessed increasing slope of CD4 count (Table 1 and Figure 1). We noted that the patient had decreasing slope of CD4 count in the years 2011 and 2012 though the HIV-RNA viral load was less than 50 copies/ml. We also noted that during such period, the patient had comparatively high percent of CD4 cells. This might be due to some kinds of infection in the patient that have decreased the total WBC count and CD4 count as well.

Several studies have been performed in developed countries regarding elite controllers as well as pathogenesis and host factors but yet have not been able to find any kind of single case from a developing country like Nepal. Probably, this is the first case reporting the evidence of an elite controller in Nepal.

4. Conclusions

Detection of elite controllers in HIV-infected patients is a boon for such patients as they could live a normal life without antiretroviral therapy despite HIV infection. On the other hand, this type of cases added further challenges to the researcher in understanding the pathogenesis of HIV as well as other factors responsible for sustained control of viremia in HIV-infected patients. Furthermore, this type of individuals could be used in near future for the development of vaccines and other therapeutics.
Consent
Written consent was obtained from the patient for publication of this case report.

Conflicts of Interest
The authors declare they have no conflicts of interest.

Authors’ Contributions
All authors read and approved the final manuscript.

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