

Original Paper

Multiplex RT-PCR assay for detection of Co-infection HIV-1 and HCV viruses in plasma samples

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Abstract

Background and Objective: HIV-1 and HCV infections especially in co-infected forms are among the most important infections transferred during blood transfusion. The screening of the blood products is valuable for preventing the transmission of infections. The aim of this study was to evaluate multiplex RT-PCR assay for detection of Co-infection HIV-1 and HCV Viruses in plasma samples.

Materials and Methods: This laboratory study was done to evaluate the use of multiplex RT-PCR assay for simultaneous detection of HIV-1 and HCV genomes in plasma samples. The amplified genomes were detectable in 3% agarose gel base on difference in the numbers of nucleotides. The sensitivity and specificity of this assay was determined on healthy and infected subjects whome simultaneously exhibit HIV-1 and HCV co-infection using plasma samples.

Results: The specificity results showed that the primers used in this assay have no interaction with each other and other possible interfering agents. The clinical sensitivity and specificity of the assay has been considered as 90% and 100%, respectively.

Conclusion: Multiplex RT-PCR can be used for screening of blood donors due to high sensitivity and specificity.

Keywords: HIV-1, HCV, Multiplex, RT-PCR

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