Abstract

This research was organized to investigate concentration of abundant metals (As, B, Pb, Sr, Zn) in human blood and there correlation with viral infection. Instrumental analysis was used to determine the elevated level of metal concentration was performed by ICP-OES. We determine the presence of viral antibodies by ELISA and viral load analysis by RT_PCR. The excess amount of heavy metal induces immunity in body. Human samples showed variable calculations of concentrations of these metals. The Mean±SD of As, B, Pb, Sr and Zn in negative RT-PCR samples of H1N1 were (141.9±47.3), (417.6±119.3), (149.1±37.5), (6.2±1.6), (535.6±104.7) ppb respectively, the Mean±SD of As, B, Pb, Sr and Zn in negative RT-PCR samples of HIV were (12.5±0.9), (169.8±35.2), (138.2±34.5), (8.12±1.3), (421.4±40.1) ppm respectively, the Mean±SD of As, B, Pb, Sr and Zn in negative RT-PCR samples of HBV were (122.3±21.6), (160.7±23.6), (40.9±8.5), (53.7±7.7), (1459.4±90.1) ppb respectively, the Mean±SD of As, B, Pb, Sr and Zn in negative RT-PCR samples of HCV were (4.9±1.8), (3.7±1.34), (123.2±31.7), (60.9±22.5), (180.2±55.6) ppb respectively. The As, B, Pb, Sr, Zn concentrations in all the samples were above the permissible limit, however, the P-value= ($\leq$0.05) all the samples was shown positive correlation against viral infections, but the P-value of B, Pb, Sr, Zn in HCV samples shown no correlation of immunity against HCV due to metals P-value= (0.000) This study can be used as a foundation and reference for future studies. These investigations reveal that accumulation of metals in body for a long time provides immunity against many viral diseases (H1N1, HIV, HBV, and HCV).