

Relationship between HBV viral load and HBeAg immune status in chronic hepatitis B patients

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The diagnosis and clinical monitoring of HBV infection are based on the detection of viral antigens, antibodies to viral proteins and circulating viral genome. The “e” antigen is a protein secreted by hepatitis B viruses that are actively replicating in liver cells. Some people who have had hepatitis B for many years lose the “e” antigen, develop “e” antibodies, but continue to have moderately high viral load and elevated ALT levels, which indicates liver damage. Hence, though useful, serological testing in chronic hepatitis B infection may not always give an accurate picture to the physician. The number of HBV DNA in the blood indicates how rapidly the virus is reproducing in the liver. An accurate quantitative assay for plasma/serum HBV DNA may monitor residual viral load during treatment and allow timely detection of flares of viral replication that accompany the emergence of variants. In recent years, several Real-Time PCR detection assays have been used for quantification of HBV DNA in serum or plasma. Our aim was to correlate Hepatitis B Viral loads quantified on two different Real Time PCR methods with the immune status of HBe antigen in Chronic Hepatitis B patients. Patient samples were tested for the presence of HBeAg, anti-HBeAb and HBV DNA. HBV DNA was quantified using Cobas® Taqman® and artus® HBV Real-Time PCR. Correlation between the two Real Time methods (r) was found to be 0.997, regression coefficient (r^2) was found to be 0.99 and correlation significance was also high ($P < 0.05$). 24.56% cases were HBeAg-negative but had HBV DNA detected. Fifty per cent of these cases had undergone HBeAg seroconversion. The study and the use of different Real Time PCR systems for HBV viral load estimation will be discussed during the talk.

Biography

Arnab Roy obtained his MBBS from Calcutta Medical College and MD in Clinical Biochemistry & Genetics from Institute of Medical Sciences (IMS), Banaras Hindu University, India. Currently he works as a senior research scientist at SRL Ltd in its R&D division and in the additional capacity of knowledge management lead. His area of focus is molecular diagnostics with emphasis on viral load testing and metabolic genetics. He has more than 5 publications to his credit in his field of expertise.

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