HEPATITIS B VIRUS REPLICATION MARKERS: COMPARISON OF MOLECULAR BIOLOGICAL, SEROLOGICAL AND IMMUNOHISTOCHEMICAL METHODS

Assessment of viral load in hepatitis B virus infection has been subject of many researches. There are evidences that HBV persists for long time periods even after HBsAg/HbsAb seroconversion. This may be involved in relapses of hepatitis and in hepatocarcinogenesis. Detection and quantification of HBV-DNA are useful to predict risk of relapses after organ transplantation.

Serologic markers do not reproduce evolution of disease during treatment with nucleosides analogs. More sensitive methods have been used. Until now, there isn’t agreement about what method must be used to quantify HBV-DNA.

In order to assess the performance and correlation of molecular biological, serological and immunohistochemical methods in evaluation of hepatitis B virus replication, we compared viral load measurement by an in house polymerase chain reaction method, Amplicor (Roche), bDNA (Chiron) and Hybrid Capture (Digene) in serum of 66 chronic HBV carriers. The results were compared to HbeAg in serum, HbcAg in liver tissue and liver biopsies.

The methods based on polymerase chain reaction technique are more sensitive to detect viral replication. The PCR in house method presented agreement with Amplicor. BDNA and hybrid capture also presented agreement, but no relationship was found between PCR methods and bDNA or hybrid capture.