

## Summary

The present study was carried out from October 2011 to the end of September 2012 to detect the diagnostic value of the HBe Ag in the Iraqi patients/ Al-Diwaniya in cases of HBs Ag positive and quantification of the viral load in different disease stages.

The study included 90 subjects of both sexes, comprising 60 subjects as patients group, consisting of 36 males, 24 females with age ranged between 2-80 years, and 30 subjects randomly selected as control group consisting of 16 males, 14 females with age ranged between 2-70 years.

The markers of HBV (HBs Ag, HBe Ag, & HBe Ab) were detected by the application of ELISA technique. The molecular marker of HBV (viral load) was detected by using the real time PCR technique. The results show positive sera of 58, thus a total of 60 individuals were divided into: acute HBV infection (5%), chronic HBV infection (91.7%), and HBs Ag negative patients (3.3%). Chronic infection was further subdivided into: immune tolerance group (8.3%), immune clearance group (5%), inactive carrier group (53.4%), and reactivation group (25%).

The RT-qPCR analyses of the positive samples show that the viral loads were ranged from  $1.13 \times 10^2$  to  $4.98 \times 10^7$  IU/ml in both acute and chronic phases with high significance difference ( $P < 0.01$ ).

The biochemical tests included in this study were ALT, AST, ALP and TSB. ALT, AST, and ALP showed increase values in the acute, immune clearance and reactivation with high significant differences ( $P < 0.01$ ) and normalized in the immune tolerance and inactive carrier groups with high significant differences

( $P < 0.01$ ). Whereas the TSB increased in the acute , immune clearance and reactivation groups with significant differences ( $P < 0.05$ ) while normalized in immune tolerance and inactive carrier groups with significant differences ( $P < 0.05$ ).

The present study show that married patients (81%) show high significance ( $P = .000$ ) from unmarried individuals. Also (94.8%) non-vaccinated patients were more susceptible to the infection with high significance differences ( $P = .007$ ) in acute and chronic phases, in addition to the non-treated patients (89.7%) with high significance differences ( $P = .053$ ) in chronic patients. The age period between (40-49), (50-59) and ( $\geq 60$ ) was high significance prone to the infection ( $P = .003$ ). Big portion (75.86%) of both phases of patients have history of previous surgery, particularly male patients ( $P < 0.05$ ), a statistically significant group of patients include those who had have blood transfusion (41.37%) (with  $P < 0.05$ ) and those on hemodialysis (13.79%)( $P = .005$ ). the remainder sector (17.24%) have no identifiable source of infection.