ABSTRACT

Background: Hepatitis B Virus (HBV) infection is a worldwide problem and reaches endemic proportion in developing countries including Nigeria, where an estimated 18 million people are infected. The sequelae of HBV infection including liver cirrhosis, and primary liver cell carcinoma are serious and account for about 25% to 40% of the mortality from chronic HBV infection. The real hope for the control of HBV infection is prevention and treatment which starts with identification of the population at risk.

Aims and Objectives: The general objective of this study was to determine the pattern of serological markers of chronic HBV infection and prevalence of serological and biochemical markers of virulence and pathogenicity in asymptomatic subjects with HBV infection.

Study design: The study was a prospective cross-sectional one.

Subjects and method: Consecutive adult subjects with HBsAg in serum who met the study criteria were recruited from the Gastroenterology clinic of the University of Nigeria Teaching Hospital, Enugu, Nigeria from May 2004 to August 2005. Subjects were clinically evaluated and the biochemical tests (liver function
tests, and serum proteins) were done by autoanalyzer. The serological markers (HBsAg, anti HBc IgG, anti HBc IgM, HBeAg and anti HBe) were assayed by immunochromographic method.

**Results:** One hundred and fifty one subjects comprising 103 (68.2%) males and 48 (31.8%) females completed the study. The mean age of the study population was 33.66±12.43 years (range 18-73 years). One hundred and twenty three (81.5%) were in the age range 15-44 years. Seventy three (48.3%) of the study population were single while 70 (46.4%) were married. Thirty eight percent of the population had multiple sexual partners. None of the subjects was positive for anti HBc IgM antibody indicating that none of the subjects had acute infection. Ninety seven percent were positive for anti HBc IgG antibody, confirming chronic infection. Thirteen (8.6%) were HBeAg positive while 114 (75.5%) were positive for antiHBe antibody indicating a low prevalence of viral replication and infectivity. There was strong association between elevated serum alanine aminotransferase and the presence of HBeAg.

**Conclusions:** It is concluded from this study that the prevalence of HBeAg positivity is low (8.6%), while the prevalence of HBeAb is high (75.5%), indicating
low level of active disease. The presence of HBeAg is associated with high levels of serum alanine aminotransferase.

*Recommendations:* Further studies should be done to determine the presence of HBV DNA and genetic studies for precore mutant to HBe antigen. Public awareness campaigns about the risk factors, complications, and the benefits of prevention and immunization for HBV should be carried out.