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## Hepatitis B virus epidemiology, molecular characterization and novel appearance of genotypes B and mixed infection with B and E genotypes in Nigeria

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The progression of hepatitis B virus (HBV) infection to cirrhosis and liver cancer and response to treatment are associated with the infection status of the host and infecting viral genotype. With the dearth of such information in Nigeria for a successful halt to progression and treatment, this study was carried out to determine the epidemiology, infection status and viral genotypes circulating in Nigeria. Blood samples from 350 consenting apparently healthy youths were screened for HBV infection serological markers (HBsAg, anti-HBs, HBeAg, anti-HBe and anti-HBc) using the 5-panel HBV profiling diagnostic kit (Qingdao High Top Biotech Co. Ltd Hangzhou, China). Based on the absence or presence of the respective seromarkers, 1.1% of the participants were found to have chronic infection with high viral replication, 2.6% with acute infection and high viral replication, 4.6% were carriers with low viral replication, 38.3% were immune, 52.0% were susceptible and 1.4% had recently been vaccinated. Twenty-nine samples that were positive for both HBsAg and HBeAg were selected for genotyping by Polymerase Chain Reaction using type-specific primers. The prevalence of infection based on the presence of HBsAg was 9.7%. This study also reported the circulation of genotype A(13.8%), B(13.5%), E(44.8%) and mixed infection with B and E(6.9%) in this group. The predominance of genotype E was confirmed and to the best of our knowledge, this is the first public report of genotypes B and mixed infection with genotypes B and E in Nigeria. This may improve the current knowledge of epidemiological, clinical and virologic patterns of HBV in Nigeria. However, the implication of the mixed infection is the resultant emergence of a hybrid strain.

### Biography

Grace Pennap is a Microbiology Lecturer with Nasarawa State University, Keffi, Nigeria. She holds a PhD in Microbiology and has the special interest in Medical Virology. She has published 47 peer-reviewed articles in reputable journals and has attended and presented papers in several Conferences. She is a member of Nigerian Society for Microbiology and American Society for Microbiology.

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