

Laboratory-Based Monitoring of Hepatitis B Virus Vaccination Status in North Central Nigeria

Authors : Nwadioha Samuel Iheanacho, Abah Paul, Odimayo Simidele Michael

Abstract : Background: The World Health Assembly through the Global Health Sector Strategy on viral hepatitis calls for the elimination of viral hepatitis as a public health threat by 2030. All hands are on deck to actualize this goal through an effective and active vaccination and monitoring tool. Aim: To combine the Epidemiologic with Laboratory Hepatitis B Virus vaccination monitoring tools. Method: Laboratory results analysis of subjects recruited during the World Hepatitis week from July 2020 to July 2021 was done after obtaining their epidemiologic data on Hepatitis B virus risk factors, in the Medical Microbiology Laboratory of Benue State University Teaching Hospital, Nigeria. Result: A total of 500 subjects comprising males 60.0%(n=300/500) and females 40.0%(n=200/500) were recruited. A fifty-three percent majority was of the age range of 26 to 36 years. Serologic profiles were as follows, 15.0%(n=75/500) HBsAg; 7.0% (n=35/500) HBeAg; 8.0% (n=40/500) Anti-Hbe; 20.0% (n=100/500) Anti-HBc and 38.0% (n=190/500) Anti-HBs. Immune responses to vaccination were as follows, 47.0%(n=235/500) Immune naïve {no serologic marker + normal ALT}; 33%(n=165/500) Immunity by vaccination {Anti-HBs + normal ALT}; 5%(n=25/500) Immunity to previous infection {Anti-HBs, Anti-HBc, +/- Anti-HBe + normal ALT}; 8%(n=40/500) Carriers {HBsAg, Anti-HBc, Anti-HBe +normal ALT} and 7% (35/500) Anti-HBe serum- negative infections {HBsAg, HBeAg, Anti-HBc +elevated ALT}. Conclusion: The present 33.0% immunity by vaccination coverage in Central Nigeria was much lower than the 41.0% national peak in 2013, and a far cry from the global expectation of attainment of a Global Health Sector Strategy on the elimination of viral hepatitis as a public health threat by 2030. Therefore, more creative ideas and collective effort are needed to attain this goal of the World Health Assembly.

Keywords : Hepatitis B, vaccination status, laboratory tools, resource-limited settings

Conference Title : ICAC 2023 : International Conference on Antimicrobial Chemotherapy

Conference Location : New York, United States

Conference Dates : May 15-16, 2023