

Prevalence of hepatitis B virus (HBV) and hepatitis C virus (HCV) and their effects on serum albumin and liver aminotransferases in pregnant women in JosFestus Chukwuemeka Onwuliri¹, Onwuliri E A² and Mgbachi N P²¹Federal University Lafia, Nigeria²University of Jos, Nigeria

Infections due to hepatitis B and hepatitis C viruses are significant health problems around the globe, Nigeria inclusive. Asymptomatic hepatitis B and C infections are common and when occurring in pregnancy can be transmitted to the new born. To determine the prevalence rate of asymptomatic hepatitis B and C infections among pregnant women, 406 pregnant women attending antenatal clinic at University Health Centre and Our Lady of Apostle Hospital, all in Jos, Plateau State were recruited for the study. The study was also carried out to determine whether liver aminotransferases and serum albumin can be affected by hepatitis infection during pregnancy. Demographic and past clinical histories were obtained using a questionnaire. Serum samples from each study subject were tested using third-generation enzyme immunoassay kits for hepatitis B surface antigen (HBsAg) and antibodies against hepatitis C (HCV). Serum Alanine Aminotransferase (ALT) and serum aspartate aminotransferase (AST) activities were also estimated in all subjects using Reitman-Frankel method. Also serum albumin was measured in all subjects using Bromocresol green (BCG) method by Teitz. The results showed that 10.0% and 1.2% of the 406 blood samples tested positive on HBV and HCV, respectively. Furthermore, 1.2% of the 406 blood samples tested positive with both HBV and HCV. The mean AST levels for HBsAg negative and positive subjects were 10.55 ± 0.05 and 12.16 ± 0.29 , respectively while the mean ALT levels were 5.54 ± 0.005 and 8.01 ± 0.01 , respectively. The mean AST for anti-HCV negative and positive subject were 10.67 ± 0.01 and 9.01 ± 0.05 , respectively while ALT were 5.71 ± 0.01 and 4.01 ± 0.05 , respectively. There was a significant increase in levels of AST and ALT between the HBsAg positive and negative pregnant subjects ($P < 0.05$). Furthermore, the mean serum albumin levels for HBsAg positive and negative pregnant subjects were 30.60 ± 2.75 and 35.58 ± 3.82 , respectively. Also, the mean albumin levels for HCV positive and negative pregnant subjects were 28.5 ± 2.12 and 35.55 ± 3.7 , respectively. There was a significant increase in albumin level between HBsAg and HCV positive and negative pregnant subjects ($P < 0.05$). HBV and HCV infection can be present in pregnant women and can alter liver aminotransferases and serum albumin. Routine screening of pregnant women for HBV and HCV should be instituted in order to detect infection early and prevent or reduce vertical or prenatal transmission.

Biography

Festus Chukwuemeka Onwuliri has completed his PhD from University of Jos. He has completed his BSc, MSc and AIML from the University of Nigeria Nsukka, University of Jos and Medical Laboratory College Vom, Nigeria respectively. He was the Head of Department of Plant Science and Technology, University of Jos and Director of Victory Medical Laboratory Service, Jos, Nigeria. He has published about 65 papers in both national and international journals. He has several memberships including Association of Medical Laboratory Scientists of Nigeria, Nigerian Society for Microbiology, Nigerian Mycological Society, Botanical Society of Nigeria and Nigerian Society for Parasitology, Biotechnology Society of Nigeria and International Biotechnology.

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