

Gastro Congress 2019: HBsAg and Anti-HCV Prevalence among Pregnant Women Accessing Antenatal Care in a Tertiary Healthcare Facility in Central Nigeria

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Abstract

Background: Hepatitis B and C viral infections during pregnancy are associated with high risk of maternal complications and mortality. Almost 40,000 children are born every year to HCV-infected women, resulting in up to 4000 new perinatally infected children yearly [6]. Several studies have shown an improvement in the biochemical markers of liver damage in HCV infected women during pregnancy. HLs phenomenon was seen during hemo dilution in pregnancy because the transaminase levels returned to pre-pregnancy levels shortly after delivery. However, changes in the immune response during pregnancy can possibly play a role in HCV interaction [8]. Contrary to the improved indices of liver dysfunction, a linear increase in HCV viremia has been reported throughout pregnancy [9], a fact that may be compatible with impaired immune reactivity. Several studies around the world have recommended that pregnant women should be screened for hepatitis B and C before delivery, as this reduces another generation from being infected by the viruses. The sexual transmission of hepatitis B and C has also been described, and the transmission of the hepatitis B virus has been found to be the more prevalent in this regard [12]. Many countries have already adopted proper blood screening procedures that have minimized the risk of such viruses being transmitted through blood transfusion. HBV and HCV positive mothers with an HBsAg and anti-HCV positive status can vertically transmit the infections to their infants. There is high prevalence of vertical transmission causing fetal and neonatal hepatitis which can have serious effects on the neonate, leading to impaired physical and mental health later in life. This study was aimed at evaluating HBsAg and Anti-HCV prevalence of these viruses among pregnant women accessing antenatal care in Federal Medical Centre, Keffi, Nigeria.

Materials and methods: Study area and population. The study area for this research was Keffi. It is approximately 68 Km from Abuja, the Federal Capital Territory and 128 Km from Lafia, the capital of Nasarawa State. Keffi is located between latitude 8°5'N of the equator and longitude 7°8'E and situated on an altitude of 850 M above sea level [17]. A total of 200 pregnant women accessing antenatal care at Federal Medical Centre Keffi participated in this prospective cross sectional study. After an informed consent was obtained from each participant, her demographic information was obtained

by oral interview before sample collection. Sample collection. About 5 ml of blood was collected from each participant by venipuncture into a labeled plain tube. The sample was allowed to clot at room temperature and spun for 5 minutes at 3000 rpm. The sera were harvested into well labeled cryovials and stored at -200°C until ready for use. This prospective cross sectional study took place between May-July 2016. A total of 200 blood samples were collected from pregnant women after informed consent and self-administered questionnaires were completed. Blood samples were analyzed using HBsAg and anti-HCV immunochromatographic screening kits (Fastep Polymed Therapeutics Inc, USA). Chi square test (Smith's Statistical Package Version 2.80, California, USA) was used for assessing the association of risk factors with the infections.

Results: The overall level of positivity for both viruses in the study population was 14.0%. The prevalence of HBsAg was 8.0% while Anti-HCV was 6.0% and no woman was coinfected with the 2 viruses. The infection rate was highest among those aged 21-30 years old and 31-40 years old for HBV and HCV respectively ($p > 0.05$). These might be attributed to socio-demographic differences, cultural and behavioural differences for the risk factors of HBV infections, methodological difference and natural difference linked with various geographical situations. Of note is also the fact that the prevalence reported in this study did not account for occult HBV infection. Similarly, the anti-HCV detection in this study was 6.0. It helps in making useful decision and sourcing of information concerning health and healthy living. More improved level of hygiene is related to higher levels of education. Mutagoma et al. [8] in Rwanda and Desai et al. [18] in Ethiopia reported same in a similar study. The infections were not associated with stage of pregnancy ($p > 0.05$). It was highest (15.6%) in 2nd trimester pregnant women for HBV infection while HCV prevalence was highest among pregnant women on their 1st trimester (8.6%). HLs might be due to vertical transmission which is thought to be a major route of transmission among pregnant women in endemic areas. Such was also reported in similar study in Tanzania [19,21] and in Ghana [16]. Types of marriage, parity and surgical/dental procedure are not possible predictors for Hepatitis B and C viruses among the study population ($p > 0.05$) although surgical/dental procedure was a predictor for HCV infection ($p < 0.05$). There was a statistically significant association between the viral infections and history of blood transfusion ($p < 0.05$).

Surgical/dental procedure was also a predictor for HCV infection ($p < 0.05$) and was not a predictor for HBV infection ($p > 0.05$) in this study. However, educational status, stage of pregnancy, type of marriage, parity and scarification marks did not show any statistically significant association with HBV and HCV infections ($p > 0.05$), although there were arithmetic differences among the studied risk factors ($p > 0.05$).

Conclusion: The study confirms a high prevalence of HBsAg and Anti-HCV among pregnant women in Central Nigeria which is a serious public health problem that cannot be downplayed. Therefore, there is need for establishment of public health measures in order to reduce disease burden and vertical transmission, including routine screening of all pregnant women for these viruses.

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