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Prevalence of Viral Hepatitis Among Pregnant Women Attending Traditional Birth Homes in Southern Nigeria

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Abstract
Despite emerging infections and diseases that are transmissible through poor gynaecology/ obstetrics care, preference for traditional birth attendants over conventional caregivers still exist. Laboratory diagnosis remains essential for detection of new cases as well as overall management of infected persons. Pregnant women accessing care at traditional birth homes constitute a vulnerable group since laboratory testing for hepatitis is lacking at the centers, hence the present study. This study employed a descriptive cross-sectional study design. The study participants were pregnant women accessing care at traditional birth homes in Uyo, Akwa Ibom State of Nigeria. The subjects were each screened for the presence of antibodies to HBV and HCV using immunochromatographic methods. Data processing was carried out using SPSS version 22.0. Results are presented as numbers and frequencies expressed as percentages. Socio-economic variables including education and income were seen to be disproportionally distributed among the pregnant women accessing care at traditional birth homes. Five (5) out of 88 enrolled pregnant women were reactive to either of both viral hepatitis screened. The prevalence of HBV (4.5%) was higher than that of HCV (1.1%). Six out of the seven (85.7%) centers informed the attendees of the need to undertake laboratory screening for transmissible infections. However, none of the centers made it mandatory for laboratory test results to be obtained. One center out of seven (14.3%) ensured that sharps used during child delivery were not shared. This study observed the prevalence of hepatitis B and C virus infections among pregnant women attending traditional birth homes in Uyo, Nigeria to be 4.5% and 1.1% respectively.

Key words: Hepatitis, transmission, traditional birth homes, traditional birth attendants

Introduction

Viral hepatitis infections, particularly hepatitis B virus (HBV) and hepatitis C virus (HCV) remain prevalent within sub-Saharan Africa in which Nigeria is included. Currently Nigeria has an estimated twenty million people living with viral hepatitis infection at a prevalence of 8.1% and 1.1% respectively for HBV and HCV as observed from the National AIDS Indicator and Impact Survey (WHO, 2020). Hepatitis B and C virus infections may occur as acute or chronic infections with the risk of fibrosis, liver cirrhosis and hepatocellular carcinoma although the condition can be self-limiting (WHO, 2019). Sexual transmission and the use of contaminated needles/ sharps contribute to the horizontal transmission associated with adulthood, while mother-to child transmission otherwise referred to as vertical transmission affect children. The existing structures for detecting hepatitis B and C virus infections are largely situated in conventional health settings. Yet, it is interesting to know that not all pregnant women in Nigeria currently access antenatal care in hospitals or health centers (Ugochi *et al*., 2018). Despite emerging infections and diseases that are transmissible through poor gynaecology/ obstetrics care, preference for traditional birth attendants over conventional caregivers still exist. To this end, detection of new cases of viral

hepatitis infection should not be restricted within the hospital setting. Effort should be made towards reaching the proportion of the general population that opt for services of traditional caregivers.

Effective control and possible eradication of transmissible viral hepatitis involve both prevention and treatment for already infected persons. Whereas hepatitis B vaccination serves as recommended prevention for hepatitis B infection, hepatitis C vaccine is not yet available. Consequently, its prevention is achieved basically by reducing the risk of exposure in medically-related settings and among vulnerable individuals (WHO, 2019). Against this backdrop, series of preventive measures have been recommended which among others include early and appropriate medical management as well as identifying vulnerable groups for interventions such as population screening. Invariably, laboratory diagnosis remains essential for detection of new cases as well as overall management of infected persons. The present study considered pregnant women accessing care at traditional birth homes as a vulnerable group due to compromising practices at the centers and the disproportionate burden of transmissible infections among women of reproductive age (Akwiwu *et al*., 2020; Ekanem *et al*., 2018; Madhivanan, 2010; Bassey *et al*., 2007). Consenting subjects were therefore enrolled and screened for both hepatitis B and C with the aim of ascertaining prevalence among this group of persons.

Materials and Methods

This study employed a descriptive cross-sectional study design. The study participants were pregnant women accessing care at traditional birth homes in Uyo, Akwa Ibom State of Nigeria. Ethical approval was duly sought and obtained from The Ministry of Health, Akwa Ibom State in Nigeria. Informed consent was obtained from each study participant.

The subjects were each screened for the presence of antibodies to HBV and HCV using immunochromatographic methods (Clinotech Diagnostics, Richmond, Canada). A structured questionnaire was administered by two trained interviewers to obtain biodata and socio-demographic characteristics. Data processing was carried out using SPSS version 22.0. results are presented as numbers and frequencies as percentage.

Results

The socio-demographic characteristics of the enrolled pregnant women revealed that participants were majorly married, multiparous and aged 21-30 years. More than half of the subjects completed only primary level of education with not more than fifty thousand naira per month personal income (Table 1).

Table 2 shows that out of 88 enrolled pregnant women, 5 persons were reactive to either of both viral hepatitis screened. The prevalence of HBV (4.5%) was higher than that of HCV (1.1%).

Table 3 indicates the measures against transmission observed at the traditional birth homes. Although the pregnant women were informed about testing, there was no follow up on obtaining laboratory reports for screening as at the time of the study

Table 1. Socio-demographic characteristics of participants

Variables	Number = 88	Percent (100%)
Age range		
< 21 years	11	12.5
21 – 30 years	56	63.6
31 – 40 years	21	23.9
Marital Status		
Married	85	96.6%
Single	3	3.4%
Parity		
Nulliparous	32	36.4%
Multiparous	56	63.6%
Highest Level of Education		
Primary	49	55.7%
Secondary	31	35.2%
Tertiary	8	9.1%
Occupation		
Traders/Artisans	52	59.1%
Civil Servants /Entrepreneurs	9	10.2%
Housewife	27	30.7%
Husbands Occupation		
Traders /Artisans	75	85.2%
Civil Servants /Entrepreneurs	10	11.4%
Not Married	3	3.4%
Monthly Income		
10-50k	57	64.8%
50-100k	4	4.5%
100k >	0	0%
Not Working	27	30.7%

Table 2. Prevalence of HBV and HCV among the pregnant women

Parameter	Number N = 88	Percent % = 100
HBV	4	4.5%
HCV	1	1.1%
Total	5	5.6%

Table 3. Measures employed at the Traditional Birthing Centers

Measures	Number of Centers N = 7	Percent 100%
Use of Gloves		
Examination	0	0%
Delivery	7	100%
Request for Laboratory		
Testing	6	85.7%
Follow up on Laboratory result and documentation	0	0%
Laboratory Testing at center	0	0%
Non-sharing of sharps	1	14.3%
Provision of care for infected pregnant women	0	0%

Discussion and Conclusion

Socio-economic variables such as education and income were seen to be disproportionally distributed among the pregnant women accessing care at traditional birth homes. More than half of the subjects completed only primary level of education with not more than fifty thousand naira per month personal income. These are pointers to the persistence of patronage for traditional caregivers in our society. Maternal healthcare remains an area of concern in the health sector as it continues to suffer from inadequate structure and coverage (Ndem *et al*., 2021; Akwiwu *et al*., 2019; Egbe *et al*., 2018). Five (5) out of 88 enrolled pregnant women were reactive to either of both viral hepatitis screened. The prevalence of HBV (4.5%) was higher than that of HCV (1.1%). Although these rates are within the national prevalence rates (WHO, 2020), these subjects had no prior knowledge of their status and could have remained undetected. This finding has implications for sustained transmission within the general population despite efforts at combating viral hepatitis. Under the circumstance of undetected infection, both horizontal transmission to sexual partners and prospective vertical transmission to their children are part of the inherent risks. This is rather unfortunate as campaign for prevention of mother-to-child transmission has long been launched (WHO, 2010). An earlier study on human immunodeficiency virus infection transmission in a related cultural setting, as the present study, reported a higher proportion of vertical transmission as the route of infection among children who were incidentally delivered by TBAs (Ugochi, 2018).

It is interesting to observe that six out of the seven centers informed the attendees of the need to undertake laboratory screening for transmissible infections. However, none of the centers made it mandatory for laboratory test results to be obtained. There is an apparent high level of awareness on transmissible infections in coexistence with reluctance for uptake of voluntary testing in our society except for existing structures such as screening during antenatal visit and blood donation (Akwiwu and Akpotuzor, 2018; Akpotuzor *et al*., 2013). Thus, despite the efforts at sustaining public awareness campaigns, the actual testing and detection are not commensurate. This identified gap could be accounting for the persistence of these infections, decades after their discovery. Again, only one center out of seven ensured that sharps used during child delivery were not shared. Generally, no structure was observed for detection of hepatitis B and C virus infections. As such, there were also no provisions for the management of infected

attendees either in the form of treatment or referral. In conclusion, the presence of TBAs within our current healthcare delivery is undeniable. Therefore, findings of the present study on the prevalence of hepatitis B (4.5%) and C (1.1%) virus infections among those patronizing them as well as the none-existing structure for detection and management demands necessary intervention.

Conflict of interest

All Authors declare no conflict of interest

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