Keywords: Hepatitis B virus; Pregnant women; Seroprevalence; Surface antigen

Background

Viral hepatitis type B is a common, serious disease caused by Sub-Saharan Africa and the Amazon basin, the HBV carrier rate is over 8%. In low endemic regions, like the United States, Northern Europe, Australia and parts of South America, HBsAg prevalence is less than 2% [3]. e Middle East, some Eastern European countries and the Mediterranean basin are considered areas of intermediate endemicity with a carrier rate between 2% and 8% [3]. Globally, perinatal HBV transmission accounts for an estimated 21% of HBV-related deaths, while regionally it ranges from 13% in the Eastern Mediterranean region to 26% in the Western Paci c region [5].

e prevalence of HBV among pregnant women in sub-Saharan Africa is moderate to high. In Nigeria, according to Mbamara and Ombiechina, the prevalence of HBV among pregnant women was 2.2% [6]. However, in Mali it was found to be 8% [7] and in Ghana among pregnant women during delivery it was demonstrated at 16% [8]. In Rwanda and Uganda, HBV among HIV positive pregnant women were shown to be 2.4% and 4.2%, respectively [9-11].

Associated risk factors for HBV in pregnancy have been investigated in various set-ups. For example in Singapore and India, it was found that gravida two or more, a history of blood transfusion and a history of HBV infection in family members, history of tattooing, previous surgical procures including dilatation and curettage for miscarriage were signi cant risk factors for HBV infection [12]. In 2006, Obi et al. in Nigeria found that increasing parity, higher number of sexual partners, polygamy and history of previous STIs were positively associated with HBV in pregnancy [13]. Tattooing/scari cation, history of jaundice or contact with a patient with jaundice, contact with blood products or history of blood transfusion were not found to be predisposing factors. Five years later, in the same region, Eke et al. demonstrated a strong correlation between HBsAg positivity in pregnancy with tribal marks/

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Discussion

To our knowledge this is among the rst Hepatitis B prevalence

Level of formal education						
None	1 (4.3%)	22 (95.7%)	0.6 (0.05-7.48)	0.719		
Primary	4 (1.7%)	232 (98.3%)	0.2 (0.04-1.38)	0.110		
Secondary	5 (5.2%)	91 (94.8%)	0.8 (0.14-4.18)	0.761		
University/college	2 (6.7%)	28 (93.3%)	Reference			
Occupation						
House wife	6 (3.2%)	180 (96.8%))	1.1 (0.34-3.39)	0.905		
Employed	6 (3.0%)	193 (97.0%)	Reference			
Gravidity						
1st	7 (5.6%)	118 (94.4%)	2.9 (0.35-24.26)	0.324		
2nd-4th	4 (1.9%)	206 (98.1%)	0.9 (0.10-8.70)	0.965		
5 and above	1 (2.0%)	49 (98.0%)	Reference			
History of gestational diabetes						
Yes	2 (22.2%)	7 (77.8%)	10.5 (1.93-56.81)	0.001	10.9 (1.87-63.52)	0.008
No	10 (2.7%)	366 (97.3%)	Reference			
History of jaundice						
Yes	1 (5.9%)	16 (94.1%)	2.0 (0.25-16.69)	0.502		
No	11 (3.0%)	357 (97.0%)	Reference			
Ever received blood transfusion						
Yes	1 (6.2%)	15 (93.8%)	2.2 (0.26-17.92)	0.461		
No	11 (3.0%)	358 (97.0%)	Reference			
Ever had surgery						
Yes	2 (2.6%)	75 (97.4%)	0.8 (0.17-3.70)	0.769		
No	10 (3.2%)	298 (96.8%)	Reference			
HIV status						
Not done	2 (5.7%)	33 (94.3%)	2.2 (0.45-10.46)	0.335		
Positive	1 (5.3%)	18 (94.7%)	2.0 (0.24-16.56)	0.525		
Negative	9 (2.7%)	322 (97.3%)	Reference			
Ever lived with someone diagnosed with Hepatitis B						
Yes	3 (12.0%)	22 (88.0%)	5.3 (1.34-21.05)	0.008	2.9 (0.62-13.79)	0.174
No	9 (2.5%)	351 (97.5%)	Reference			
Ever worked in hospital						
Yes	2 (22.2%)	7 (77.8%)	10.5 (1.93-56.81)	0.001	12.7 (2.21-72.57)	0.004
No	10 (2.7%)	366 (97.3%)	Reference			
Tribal marks						
Yes	2 (1.5%)	128 (98.5%)	0.4 (0.08-1.77)	0.203		
No	10 (3.9%)	245 (96.1%)	Reference			
History of tattoo or body piercing						
Yes	6 (3.6%)	163 (96.4%)	1.3 (0.41-4.07)	0.665		
No	6 (2.8%)	210 (97.2%)	Reference			
History of vaginal discharge						
Yes	4 (2.5%)	159 (97.5%)	0.7 (0.20-2.27)	0.521		
No	8 (3.6%)	214 (96.4%)	Reference			
History of genital ulcer						
Yes	2 (2.9%)					

e prevalence of this infection among healthcare workers, a high risk group for acquiring blood borne infections following occupational exposure to with infectious body uids, depends upon HBV prevalence in the general population. It has been previously demonstrated that in high endemicity areas, transmission of HBV to health care workers (HCWs) is of great public health concern [39-41]. Similarly in India, an intermediate endemic zone where the estimated prevalence rate of HBV in the healthy general population is around 4.7% and 5% HBsAg positivity among other HCWs, but alarmingly high seropositivity of around 40% among laboratory technicians [39]. With lack of universal pre-natal HBsAg screening in Rwanda, the health care workers especially the delivery and laboratory sta is also at increased risk of percutaneous infection.

e other factor independently associated with HBsAg in this study was history of gith HBsAg i.1 (den)19 (t)-6 (l)7 (y a)3 (s)5 (s)-8 (o)7ay of

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