High seroprevalence and factors associated with Hepatitis B virus infection: A snapshot from HIV-1 infected population in Mtwara region, Tanzania

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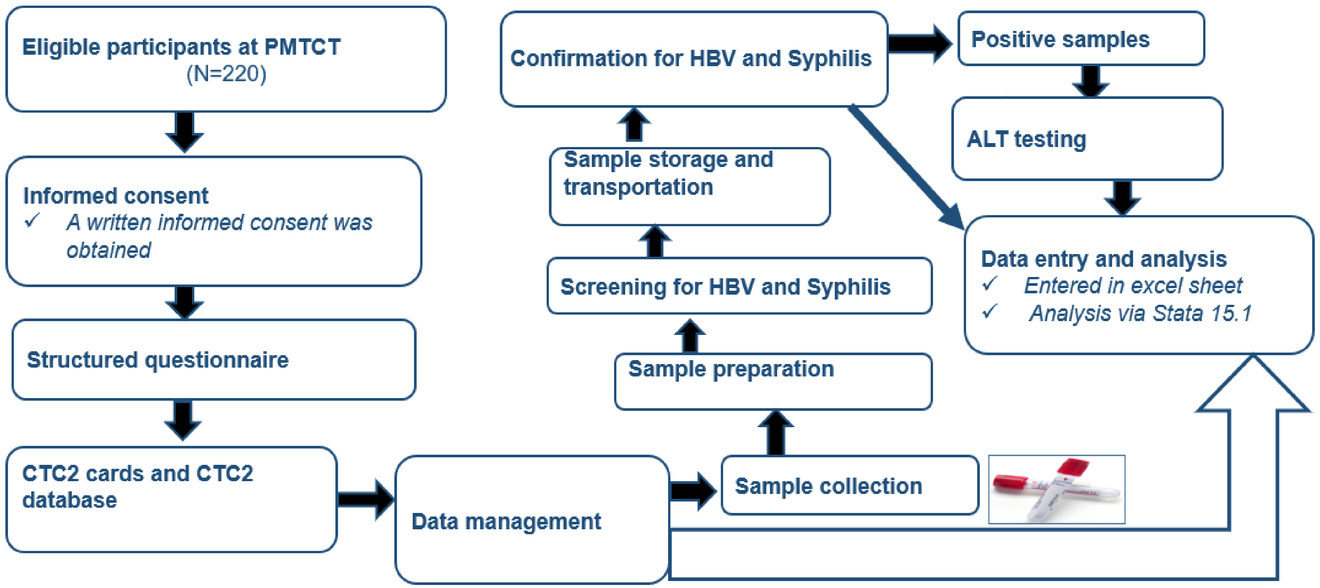
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Introduction

- HBV infection is a public health problem and accounts for 80% of all cases of HCC. As of 2019, there were 296 million people chronically infected with 1 million deaths
- In Tanzania, 5.5-20% (general population) and 3.8-8.03% (pregnant women). HIV-HBV co-infected mothers have a higher rate of MCT and failure to respond to HBV vaccines
- HIV-HBV coinfected, have higher levels of viremia. Studies have reported the HBV burden among blood donors and the general population
- MoH and other stakeholders on interventional measures. Align with GHSS-VH to reduce mortality and morbidity associated with viral hepatitis by 2030

Methods

- *Study design*: A health facility-based cross-sectional study in 2022 Conducted in selected health facilities, Mtwara region
- *Inclusion criteria*: The HIV-infected pregnant women (≥18 years old), and *exclusion* of *w*omen with prior history of HBV vaccination
- *Sampling*: Systematic random sampling approach. (SF=2), N=220, PPS



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Results

- The study participants' median age was 32.7 years (IQR: 27.6-37.6)
- 71.4% (157/220) of all participants attained only a primary school level of education
- 88.2% (194/220) were on a first-line ART regimen (HIV) >12 months
- Most of the participants with HBV infection had normal ALT levels (91.3% (21/23))

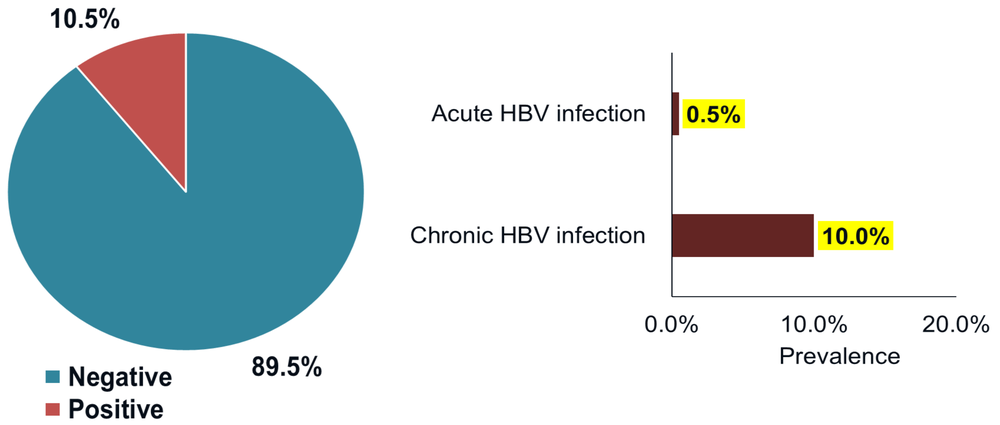


Figure 1. ***Seroprevalence of HBV among participants in the Mtwara region, Feb-April, 2022 (N=220).***

Table 1. Factors associated with HBV infection among pregnant women Living with HIV attending PMTCT in the Mtwara region, Tanzania, Feb-April 2022 (N=220)

Variable	HBV infection		Bivariate		Multivariate	
	Negative n(%)	Positive n (%)	cOR (95% CI)	*p*-value	aOR (95% CI)	*p*-value
HVL status within last 6 months (in number of copies/ml)						
<50	181 (91.4)	17 (8.6)	1 (Ref)		1 (Ref)	
50-999	10 (83.3)	2 (16.7)	2.13 (0.43-10.52)	0.354	3.52 (0.54-22.86)	0.187
≥1000	2 (40.0)	3 (60.0)	15.97 (2.49-102.28)	0.003	16.00 (1.70-150.63)	0.015
ART regimen						
First line	194 (89.8)	22 (10.2)	1 (Ref)			
Second line	3 (75.0)	1 (25.0)	2.94 (0.29-29.49)	0.359		
Duration on ART (in month)						
6 to 12	17 (89.5)	2 (10.5)	0.97 (0.21-4.49)	0.968		
>12	173 (89.2)	21 (10.8)	1 (Ref)			
Syphilis status						
Negative	186 (94.9)	10 (5.1)	1 (Ref)		1 (Ref)	
Positive	11 (45.8)	13 (54.2)	21.98 (7.89-61.23)	<0.001	27.65 (9.07-84.30)	<0.001
Number of live children						
One	66 (93.0)	5 (7.0)	1 (Ref)		1 (Ref)	
Two-three	113 (87.6)	16 (12.4)	1.87 (0.65-5.34)	0.243	2.02 (0.48-8.46)	0.337
Four or more	18 (90.0)	2 (10.0)	1.47 (0.26-8.20)	0.166	11.99 (1.11-129.01)	0.040

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Conclusion

- This study revealed that the seroprevalence of HBV infection among pregnant women LWHIV in Mtwara region is 10.5% (High endemicity) .
- Being multiparous, infected with Syphilis, and higher HIV viral load are factors independently associated with HBV infection among pregnant women LWHIV in Mtwara region.
- We recommend scaling up of screening program of HBV and other OI's including Syphilis to all pregnant women LWHIV at PMTCT clinics
- Limitation: Did not include more advanced testing methods – DNA PCR

Acknowledgement

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