

High viremia among a sample of HBsAg-positive pregnant women in Vanuatu

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Background: Among hepatitis B surface antigen (HBsAg)-positive pregnant women, a high viremia significantly increases the risk of mother-to-child transmission. WHO recommends peripartum antiviral prophylaxis (PAP) for HBsAg-positive pregnant women with high viremia ($\geq 200,000$ IU/ml), and universal peripartum antiviral prophylaxis in settings without access to viral load testing. A 2024 systematic review reported that 21% of HBsAg-pregnant women globally had high viremia with significant regional variation; the Western Pacific Region having the highest proportion of HBsAg-positive pregnant women with high viremia (32%). Around 9% of the ~300,000 population in the Pacific Island Country of Vanuatu are living with chronic hepatitis B, however there is limited access to viral load testing and therefore the proportion of HBsAg-positive pregnant women with high viremia is unknown.

Objectives: To describe HBsAg-positive pregnant women with a high maternal hepatitis B viral load to inform policy making and implementation of strategies to prevent mother-to-child transmission.

Methods: Participants were recruited as part of the ongoing Protektem Pikinini Blong Yu field trial in Vanuatu, which aims to assess the effectiveness of universal PAP to prevent mother-to-child transmission of hepatitis B. Inclusion criteria included HBsAg-positive pregnant women, aged 18+ years and recruited before week 28 of pregnancy. Participants provided a blood sample as part of the recruitment process which was shipped to the Victorian Infectious Diseases Reference Laboratory (VIDRL) for hepatitis B virus DNA viral load testing. Viral load of $\geq 200,000$ IU/mL was considered high.

Results/Outcomes: Results for 32 participants are currently available and included in this analysis; collection dates ranged from 26 July 2024 to 26 May 2025. The median age was 27.8 years (range 18-43 years) and median parity was 1 (range 0-4). HBV DNA viral load was detectable in 29 (90.6%) samples and 14 (43.8%) participants were considered to have high viral load.

Conclusion/Lessons Learnt: The proportion of samples with high viral load was higher in our study than the global estimate (21%) and the estimate for the Western Pacific region (32%). These findings support the importance of implementing universal PAP to prevent mother-to-child transmission in Vanuatu, without requiring laboratory evidence of high viremia, given this test is often not available. The study is limited by a small sample size however it suggests high viremia among HBsAg-positive pregnant women in Vanuatu, and this may be similar in neighbouring Pacific Island Countries in the Western Pacific Region with a high prevalence of hepatitis B.

Disclosure of Interest Statement:

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AI declaration

AI has not been used to prepare this abstract.