High incidence of HBV infection in HIV co-infected patients accessing art care

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Background

- Hepatitis B virus (HBV), Human Immunodeficiency virus (HIV) and Tuberculosis (TB) are common infections in South Africa
- HBV vaccination has been included in the country's childhood immunization schedule since 1995; however, less is known of the current burden of HBV in adults
- We utilized the opportunity of care provision or HIV-TB co-infected patients to determine the magnitude of, and the relationship between HIV and HBV, and identify risk factors for HBV infection in HIV infected patients with and without TB in urban and rural KwaZulu-Natal, South Africa.

Methods

- This retrospective cohort analysis was undertaken in 2018.
- In-care HIV infected patients were included in the analysis.
- Results from clinical records were analysed to determine the prevalence, incidence, persistence and factors associated with HBV infection in HIV infected patients with or without TB co-infection.

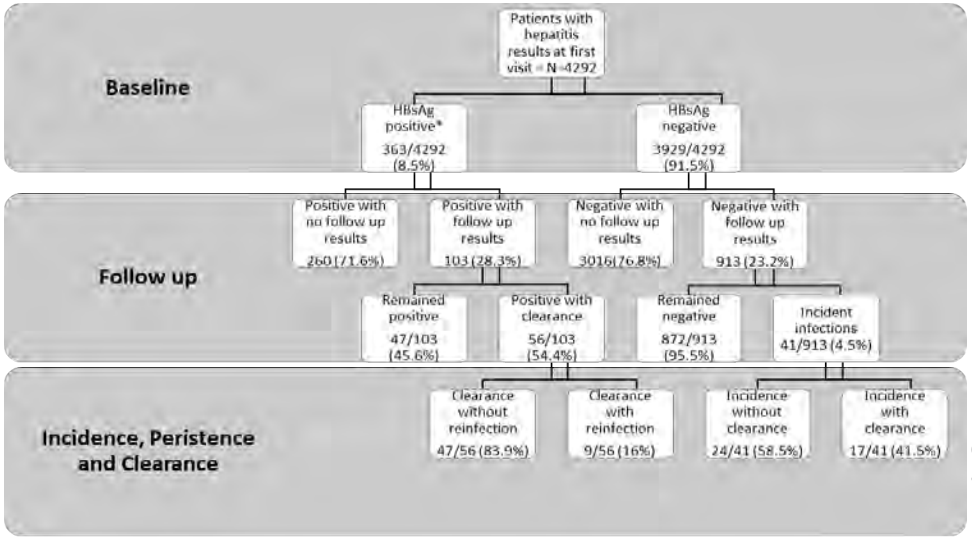


Figure 1. *Flowchart depicting the prevalence, incidence, clearance and persistence of HBV among HIV infected patients*

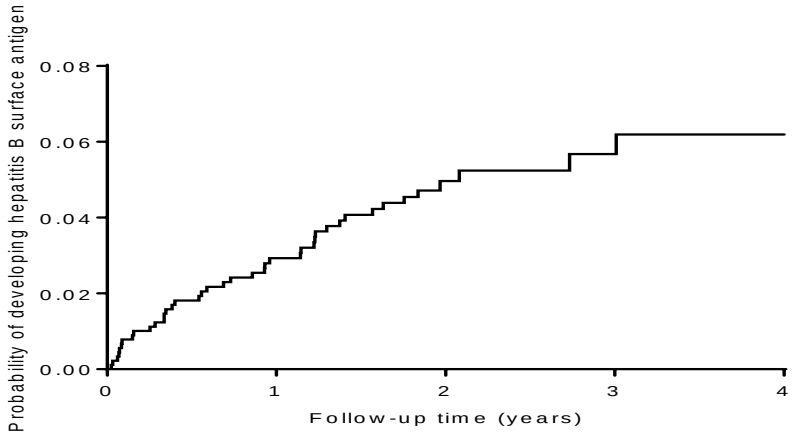


Figure 2*: Kaplan-Meier estimates of cumulative probability of incident hepatitis B infection*

Results

- 4292 HIV infected patients with a mean age of 35 (SD: 8.8 years) were included
- The baseline prevalence of HBV was 8.5% (363/4292) [95% confidence interval (CI): 7.7 to 9.3] and 9.4% (95%CI: 8.6% to 10.3 %) at end of follow-up
- The HBV incidence rate was 2.1/100 person-years (p-y)
- Being male was associated with a two-fold higher risk (HR 2.11; 95% CI: 1.14 - 3.92) of incident HBV infection while severe immunosuppression was associated with a two-fold higher risk of persistent infection (adjusted risk ratio (RR) 2.54; 95% CI 1.06-6.14; p=0.004.
- Active TB at enrolment was associated with a two-fold higher risk of incident HBV infection (aHR 2.38; 95% CI: 0.77 to 7.35).

Conclusion

- The provision of HIV care and treatment in high HBV burden settings provide a missed opportunity for HBV screening, immunization and care provision