

Evaluating adherence to HBV public health interventions to prevent vertical transmission of HBV and outcomes of children born to HBsAg-positive people

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Background:

The Northern Territory of Australia has the highest rate of chronic hepatitis B (CHB) infection, which disproportionately affects Aboriginal and Torres Strait Islander people. A unique hepatitis B virus (HBV) subgenotype, C4, circulates within the Aboriginal and Torres Strait Islander communities of the NT, and is associated with more rapid progression to liver cirrhosis and liver cancer.¹ Vertical hepatitis B virus transmission is a major route of infection globally. The use of hepatitis B immunoglobulin (HBIG) and vaccination in neonates are key strategies to reduce this risk.

Objectives:

This study aims to evaluate the effectiveness of hepatitis B immunoglobulin (HBIG) administration and vaccination in neonates born to Aboriginal and Torres Strait Islander people living with chronic hepatitis B (CHB) in the Northern Territory in the context of C4 genotype.

Methods:

A retrospective cohort study of neonates born to people living with CHB in the Northern Territory, 2010-2023.

Results/Outcomes:

HBIG was provided to 93.3% of 179 neonates. A birth HBV vaccination dose was administered to 96.1% of neonates within 7 days. A four-dose vaccination schedule was given to 94.4% of neonates. Serological results were available for 113 infants; three infants (2.2%) acquired CHB and ten infants (8.8%) demonstrated hepatitis B core antibody positivity.

Conclusion/Lessons Learnt

High levels of adherence to the current recommended vaccination schedule were observed. The current hepatitis B vaccine provides excellent protection against CHB infection but may provide inadequate protection against acquisition of hepatitis B core antibody in the context of C4 genotype.

Disclosure of Interest Statement:

The authors have no conflicts of interest to declare.

AI declaration

AI was not utilised in the preparation, drafting or editing of this submission, including data analysis or language editing.

1. Hosking K, Binks, P., De Santis, T., Wilson, P., Gurruwiwi, G., Bukulatjpi, S., Vintour-Cesar, E., et al. Evaluating a novel model of hepatitis B care, Hep B PAST, in the Northern Territory of Australi: results from a prospective, population-based study. *Lancet Regional Health - Western Pacific*. 2024;48(101116).