

INVESTIGATING TRENDS IN HEPATITIS B EPIDEMIOLOGY WITHIN INDIGENOUS POPULATIONS IN THE NORTHERN TERRITORY

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Introduction:

Aboriginal and Torres Strait Islander people are disproportionately affected by hepatitis B virus (HBV), with an estimated 3.7% affected compared to 0.3% in non-Indigenous Australian-born individuals. Furthermore, timely vaccination rates for Indigenous children are lower. Previous studies have explored variations in HBV prevalence and vaccination rates, however few focus on the epidemiology in Indigenous Australians. This study aimed to determine the prevalence of HBV in the Northern Territory (NT) by Indigenous status following the introduction of universal infant and catch-up vaccination, and to quantify the inclusion of Indigenous people in these programs.

Methods:

A retrospective longitudinal analysis of all available HBV serology results in the NT from 1991 to 2011 was conducted. HBV prevalence was calculated according to test year, Indigenous status, age, and sex. Vaccination status was derived using the pattern of anti-HBs and anti-HBc serology results.

Results:

103,147 individuals (47.2% Indigenous) were tested, with a total of 219,138 tests conducted. HBV prevalence was 5.1%, and increased over time despite the introduction of HBV vaccination programs. HBV prevalence was higher in Indigenous people (8.3%) than non-Indigenous people (2.1%). The odds ratio for HBV infection was 4.19 for Indigenous Australians compared to non-Indigenous Australians (95%CI 4.00-4.38). Of 10,370 individuals eligible for universal infant vaccination and 43,777 individuals eligible for catch-up vaccination, only 28.6% and 27.5% respectively had serology reflecting HBV vaccination. Vaccine-derived immunity was lower for Indigenous individuals (24.6% vs 35.5%), while immunity through past infection was higher in Indigenous people (25.5% vs 7.2%).

Conclusion:

This study has created a comprehensive longitudinal picture of HBV infection within the NT, which will assist in planning and delivering effective health services for HBV prevention and management. This analysis highlights the disparity in HBV prevalence between Indigenous and non-Indigenous Australians in the NT, with evidence of lower levels of vaccine-derived immunity which must be explored further.

Disclosure of Interest Statement:

No authors declare a conflict of interest.