ABSTRACT

Association Between HBIg Administration and HBsAg Status among Infants Born to HBsAg-Reactive Mothers in Berau

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Background : Mother-to-child transmission of hepatitis B virus (HBV) remains a public health concern because perinatal infection carries a high risk of chronic infection. Hepatitis B immunoglobulin (HBIg) is an important component of neonatal immunoprophylaxis. However, local evidence regarding infant HBsAg outcomes according to HBIg administration remains limited. In Berau , East Kalimantan, 97 infants were born to HBsAg-reactive mothers across 21 primary health centers in 2025.

Objective : To examine the association between HBIg administration and HBsAg status among infants born to HBsAg-reactive mothers in Berau.

Research Methods/ Implementation Methods : This analytical observational study employed a cross-sectional design with retrospective data collection. Of 97 infants born to HBsAg-reactive mothers in 2025, 37 with available HBsAg screening results were included. Data on HBIg administration and infant HBsAg status were obtained from medical records and the SIHEPI hepatitis reporting system. Fisher’s exact test assessed the association between HBIg administration and infant HBsAg status.

Results : Among 37 infants, 32 received HBIg and five did not. Of those receiving HBIg, 29 (90.6%) were HBsAg non-reactive, while three (9.4%) were reactive. Among infants who did not receive HBIg, one (20.0%) was non-reactive and four (80.0%) were reactive. HBIg administration was significantly associated with infant HBsAg status (p=0.002).

Conclusion/Lesson Learned : HBIg administration was significantly associated with infant HBsAg status. HBsAg reactivity was lower among infants receiving HBIg, reinforcing its importance in preventing mother-to-child HBV transmission. Although interpretation should consider the limited number of infants with available HBsAg screening results

Keyword : hepatitis B immunoglobulin; HBIg; HBsAg; mother-to-child transmission; hepatitis B