

P1407

Paper Poster Session

Hepatitis B vaccination and transmission

Prevention of mother-to-child transmission of hepatitis B virus in the Republic of Korea, 2002–2013

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Background: The Republic of Korea has shown a high prevalence of hepatitis B virus (HBV) infection, mostly comprised of perinatal transmission. To mitigate the risk of transmission, the National Perinatal Hepatitis B Prevention Programme (NPHBPP) was created to identify and manage infants born to mothers who are hepatitis B surface antigen (HBsAg)- or hepatitis B e antigen (HBeAg)-positive in July 2002 by liaising with the private sector. This study aimed to establish the outcomes of the NPHBPP and to identify remaining gaps to further accelerate progress in eliminating HBV.

Material/methods: Compiled data collected through a web-based information system for registry and management of the NPHBPP run by the Korea Centres for Disease Control and Prevention was analysed. All children should have been registered to receive full management for the prevention of perinatal hepatitis B transmission. The recommended schedule was a hepatitis B immunoglobulin (HBIG) at birth, hepatitis B (HepB) vaccination at 0, 1, and 6 month from birth and postvaccination serologic testing at 9–15 months from birth in free of charge. The HBeAg status of mothers, demographic data, and level of adherence to recommended immunoprophylaxis were examined to find factors associated with failure to prevent perinatal infection.

Results: Registered infants born to HBsAg- or HBeAg-positive mothers from July 2002 to December were 167,248. The percentage of infants who completed the 3-dose vaccination by 6 months and by 9 months of age was 68.9% (range, 62.0%–74.6%) and 89.1% (range, 79.3%–96.6%) respectively with consistent increase over time (**Figure**). The percentage who received postvaccination testing at 9 months or later increased from 52.7% to 73.1%. On average, 96.4% of NPHBPP-managed infants received HepB vaccine and HBIG on day 0 from 2005 to 2013. Overall percentage of HBs Ag-positive rate of tested infants was 2.5%. The acquisition of seroprotection from HepB vaccine was more likely in infants tested before 9 months (86.2%) than in those tested 15 months or later (79.7%). The failure of perinatal HBV transmission prevention was associated with maternal age, maternal nationality, the HBeAg status of the mother, and the timing of the birth dose HepB vaccine and HBIG among tested infants ($p < .05$). The HBeAg-positive rate was higher in younger mothers ($p < .001$).

Conclusions: The NPHBPP was successful and played a key role in preventing mother-to-child transmission of hepatitis B virus in the Republic of Korea. Yet, the low postvaccination testing rate of children under the NPHBPP is a major gap and some infants still acquire hepatitis B even with good adherence to the recommended schedule. To further reduce transmission, risk-stratified approach and innovative measures are required.

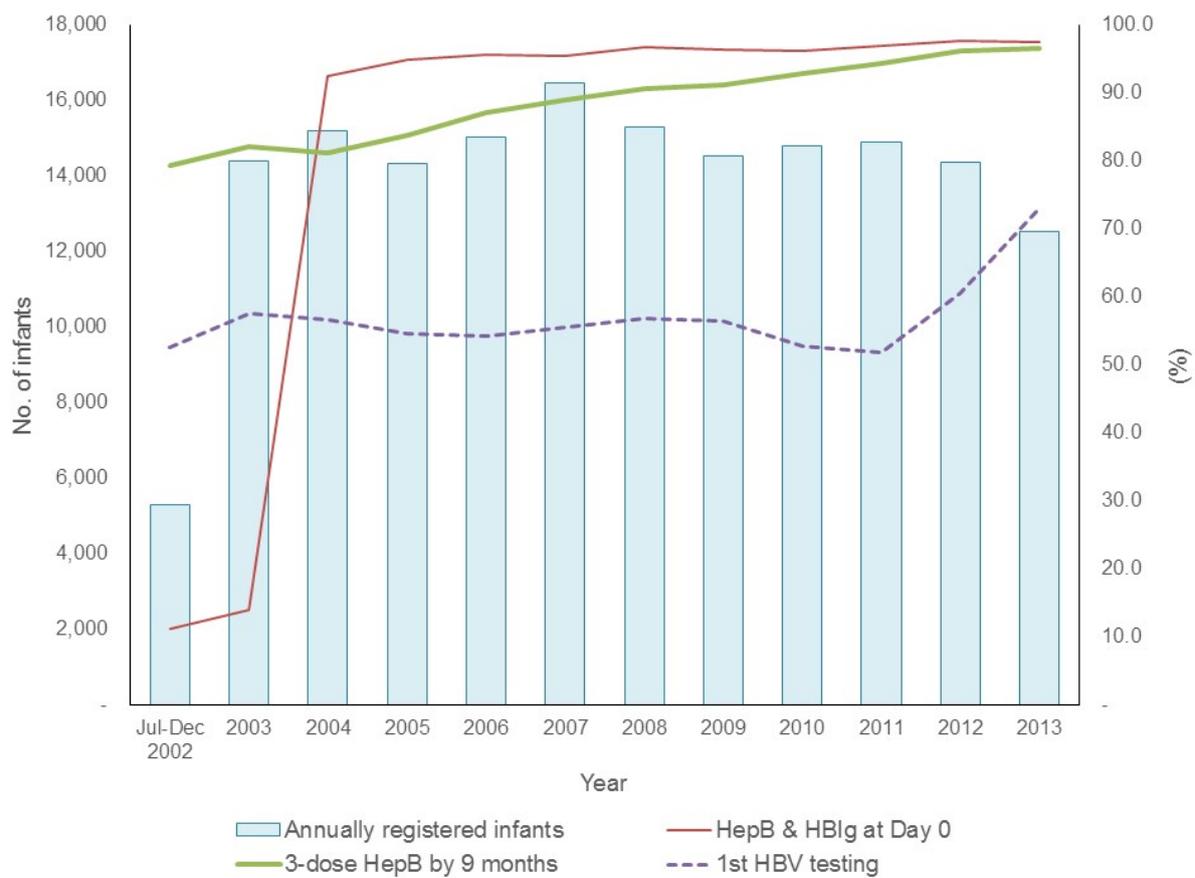


Figure. Performance of the National Perinatal Hepatitis B Prevention Programme in the Republic of Korea, July 2002–2013.