Efficacy of combined hepatitis B immunoglobulin and hepatitis B vaccine in blocking father-infant transmission of hepatitis B viral infection

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ABSTRACT. The aim of this study was to examine the efficacy of combined immunization of hepatitis B immunoglobulin (HBIG) and hepatitis B vaccine (HBVac) in blocking father-infant transmission of hepatitis B virus (HBV). Newborns positive at birth for blood HBV surface antigen (HBsAg) and/or HBV DNA were selected and immunized with HBIG combination HBVac. At 7 months, HBV markers and HBV DNA of each neonate were measured using electrochemiluminescence with the Cobas-e-411 Automatic Electrochemiluminescence Immunoassay Analyzer and fluorescence quantitative polymerase chain reaction. Among all 7-month-old subjects, the negative conversion rates of HBV DNA and HBsAg were 48/61 (78.7%) and 19/41 (46.3%), respectively. Therefore, this study demonstrated that prompt combination
injection of HBIG and HBVac can protect some of the HBV DNA- and/or HBsAg-positive newborns from HBV.

**Key words:** Combined immunization; Blocking effect; HBV; Father-infant transmission