HEPATITIS B & C
Supporting information

This guideline has been prepared with reference to the following:

Public Health England. Hepatitis B Immunoglobulin for a named baby. 2019. London. PHE

Department of Health. Immunisation against infectious disease: the green book. 2013. London. DoH

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/628602/Greenbook_chapter__18.pdf

Mack CL, Gonzalez-Peralta RP, Gupta N et al. NASPGHAN practice guidelines: Diagnosis and management of hepatitis C infection in infants, children, and adolescents. J Pediatr Gastroenterol Nutr. 2012;54:838-55

http://www.sbp.com.br/fileadmin/user_upload/pdfs/NASPGHAN_Practice_Guidelines_Diagnosis_Hepatitis.pdf

Department of Health. Hepatitis B antenatal screening and newborn immunisation programme; Best practice guidance 2011. London. DoH

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_126195

Pembrey L, Newell M-L, Tovo P-A. The management of HCV infected pregnant women and their children. European paediatric HCV network. J Hepatol 2005;43:515–25

http://www.journal-of-hepatology.eu/article/S0168-8278(05)00417-4/pdf

Immunisation should be given within 24 hours for infants of HBsAg positive mothers? Infants of mothers testing positive for HB_eAg should be given HBIG in addition?

The American Academy of Pediatrics recommends that that all newborn infants with a birth weight of greater than or equal to 2000g receive hepatitis B vaccine by 24 hours of age (Committee on Infectious Diseases, 2016).

A systematic review of 29 RCTs (Lee, 2006) found that immunisation within 24 hours of birth reduced the occurrence of hepatitis B compared with placebo or no intervention (RR 0.28, 95% CI 0.20 – 0.40).

In a small uncontrolled study of 41 infants of HBsAg positive mothers (Reesink, 1979), 21 were immunised within 48 hours of birth and 20 were not treated. None of the treated group became HBsAg positive, compared with 5 of the untreated group ($p<0.02$). Two of 3 infants who were not immunised until the fourth or fifth day after birth also became HBsAg positive.

A RCT in 117 infants (Beasley, 1981) took care to ensure that immunisation occurred as soon as possible after birth (usually within 1 hour). Follow-up continued for at least 15 months, during which time 91% of the 35 infants given placebo became HBsAg positive. This compared with 45% in the 42 infants who received a single dose of HBIG at birth, and 23% of the 40 infants given a course of 3 treatments at birth, 3 months and 6 months. The authors concluded that “Presumably…the earlier administration occurs the better.”

Passive immunisation alone was available in the first six months of life until 1985, when hepatitis B vaccine was first licensed for infants below this age (Polakoff, 1988). Active immunisation was subsequently started at birth.

The presence of HB_eAG in the mother is indicative of more severe infection and consequently, the infant may be given 200 IU of HBIG as additional protection (Wallis, 1999).

Beasley RP, Hwang LY, Lin CC, et al. Hepatitis B immune globulin (HBIG) efficacy in the interruption of perinatal transmission of hepatitis B virus carrier state: initial report of a randomised double-blind placebo-controlled trial. Lancet 1981;ii:388-93

Committee on Infectious Diseases, Committee on Fetus and Newborn. Elimination of Perinatal Hepatitis B: Providing the First Vaccine Dose Within 24 Hours of Birth. Pediatrics. 2017;140
http://pediatrics.aappublications.org/content/140/3/e20171870.long

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Lee C, Gong Y, Brok J, et al. Effect of hepatitis B immunisation in newborn infants of mothers positive for hepatitis B surface antigen: systematic review and meta-analysis. BMJ 2006;332:328-36
http://www.bmj.com/content/332/7537/328

Polakoff S, Vandervelde EM. Immunisation of neonates at high risk of hepatitis B in England and Wales: national surveillance. BMJ 1988;297:249-53
http://www.bmj.com/content/297/6643/249.full.pdf+html

Reesink HW, Reerink-Brongers EE, Lafeber-Schut BJ, et al. Prevention of chronic HbsAG carrier state in infants of HbsAG-positive mothers by hepatitis B immunoglobulin. Lancet 1979;ii:436-8

Wallis DE, Boxall EH. Immunisation of infants at risk of perinatal transmission of hepatitis B: retrospective audit of vaccine uptake. BMJ 1999;318:1112-3
http://www.bmj.com/content/318/7191/1112

Evidence Levels: I

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