



## Service Priorities and Programmes Electronic Presentations

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### **Hepatitis B carriers in Hong Kong- prevalence and pregnancy outcomes**

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#### **Introduction**

To contain the widespread of the hepatitis B virus (HBV) infection, the Hong Kong Government introduced the universal neonatal HBV vaccination programme in 1988. If the programme is 100% effective, we expect to find no HBV carriage in patients aged 22 or younger in 2010.

#### **Objectives**

To determine whether the prevalence of hepatitis B surface antigen (HBsAg) carriers varies with maternal age, and to assess the impact of HBV carrier status on pregnancy outcomes.

#### **Methodology**

9,526 patients who had delivered in our Hospital between 1st October 2010 to 31st December 2011 were included in this retrospective study. Demographic data and HBV status were entered by designated midwifery and nursing colleagues. Statistical analysis was performed with SPSS 16.0.

#### **Result**

The HBsAg carrier rate was lower in the younger age group, with 11.3% in women aged 43 or above; 8.0% in women with age  $\geq 22$  to  $< 43$ ; and 4.4% in women below 22 ( $P=0.016$ ). Parity was higher in HBsAg carriers (0.70 vs. 0.58,  $P<0.001$ ). The prevalence of positive HBsAg status was significantly lower in Hong Kong residents compared to NEP (6.8% Vs 13.3%,  $p<0.001$ ). There was no significant difference in prevalence of major antenatal or perinatal complications between HBsAg carriers and non-carriers. Among the hepatitis B carriers, elective caesarean section rate was higher (13.8% Vs 12.9%,  $p=0.018$ ); rate of postpartum hemorrhage was higher (4.0% Vs 2.7%,  $p=0.033$ ); while rate of epidural analgesia was lower (4.4% Vs 6.2%,  $p=0.045$ ); rate of emergency lower segment caesarean section was lower (11.6% Vs 15.5%,  $p=0.018$ ). Birth weights of babies delivered by hepatitis B carriers were significantly larger (3184.3g Vs 3144.3g,  $p=0.042$ ). Declining maternal HBsAg carrier

rate in women with age <22 was observed, likely due to the benefits of universal neonatal vaccination programme which has been implemented since 1998. However, 4.4% of women below 22 were carriers. Possible reasons included failure of vaccination or incomplete vaccination, NEP, steady influx of immigrants from mainland China, intrauterine transmission, horizontal transmission of hepatitis B within a family through close contact or in adulthood through sexual intercourse. Further measures are necessary to reduce the carriage rate. Carrier status was associated with a higher elective Caesarean section rate and a mildly larger birth weight. Further studies are required to elaborate these associations.