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**De novo Hepatitis B Virus Infection after Liver Transplantation from Anti-hepatitis B core Antibody Positive Donor: A 20-year experience at a single center**

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**Introduction:** As an endemic area of hepatitis B virus (HBV), Thailand has a significant proportion of liver donors who were previously infected with HBV. Liver transplantation (LT) from anti-Hepatitis B core antibody (anti-HBc) positive donor to hepatitis B surface antigen (HBsAg) negative recipient has some risk for *de novo* HBV infection. The aim of this study is to evaluate the incidence and factors associated with *de novo* HBV infection after LT from anti-HBc positive donors in non-hepatitis B recipients.

**Methods:** We retrospectively reviewed 396 patients who underwent LT between 2002 to 2021 at Siriraj Hospital, Bangkok, Thailand. Among these, there were 75 HBsAg negative recipients receiving anti-HBc positive liver grafts. *De novo* HBV infection was defined as HBsAg positive detected after LT. Incidence of *de novo* HBV infection was calculated and associated factors, such as pre- and post-transplant hepatitis B immunoglobulin (HBIG) and antiviral, were evaluated.

**Results:** *De novo* HBV infection occurred in 12 recipients (16%). The median time to *de novo* HBV infection was 1,133 days. Post-transplant antiviral drug (lamivudine) was the significant protective factor against *de novo* HBV infection ( $p < 0.001$ ). There was no *de novo* HBV infection occurred in recipients who continuously received post-transplant lamivudine. While 36.8% of recipients who did not receive and 27.8% of recipients who discontinued lamivudine during the post-transplant period had *de novo* HBV infection. Recipients who received pre-transplant and post-transplant HBIG had a trend to have a lower rate of *de novo* HBV infection (9.8% vs. 29.2%,  $p = 0.05$  and 8.7% vs. 27.6%,  $p = 0.05$ , respectively). Pre-transplant anti-HBs and anti-HBc antibody status, pre-transplant antiviral, and post-transplant HBV vaccine were not significant factors related to *de novo* HBV infection.

**Conclusion:** Anti-HBc positive liver grafts are safe to be transplanted to HBsAg negative recipients if they receive suitable prophylaxis especially post-transplant antiviral medication continuously.