hepatitis and NUC treated HBeAg-negative hepatitis were 0.49% vs. 1.60% (hazard ratio [HR], 3.36; 95% confidence interval [CI], 1.20–4.82; $p < 0.001$) and 0.77 vs. 0.80 (HR, 1.16, 95% CI 0.76–1.78, $p < 0.61$), respectively. Multivariable analyses showed that compared with treated group, inactive hepatitis was associated with a significantly lower risk of HCC (HR, 0.43; 95% CI, 0.29–0.64; $p < 0.001$), but a similar risk of death/transplantation (HR, 0.95; 95% CI, 0.61–1.49; $p = 0.82$). In the propensity score-matched cohort (469 Pairs), inactive hepatitis was associated with a significantly lower risk of HCC (HR, 0.35; 95% CI, 0.18–0.65; $p = 0.001$) but a similar risk of death/transplantation (HR, 1.20; 95% CI, 0.68–2.11; $p = 0.54$). And the proportion of NUC treatment in inactive hepatitis was actually low (Estimated annual rate = 0.87%). **Conclusions** Inactive hepatitis develops significantly fewer HCCs compared to HBeAg-negative CHB hepatitis treated with NUCs with similar biochemical and virologic profile. In the NUC era, inactive hepatitis could be still evaluated as stable enough in the area where genotype C is dominant.

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VIROLOGICAL AND CLINICAL OUTCOMES AFTER CESSATION OF NUCLEOS(T)IDE ANALOGUE THERAPY FOR CHRONIC HEPATITIS B – A PROSPECTIVE COHORT STUDY IN CENTRAL TAIWAN

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Background Hepatitis B virus (HBV) relapse is a practical issue after nucleos(t)ide analogue (NA) therapy discontinuation in chronic hepatitis B (CHB). However a prospective multi-centre study remains lacking. The aim of this study was to prospectively investigate virological and clinical outcomes after NA therapy.

Methods CHB patients, who discontinued tenofovir disoproxil fumarate (TDF) or entecavir (ETV) therapy based on the NA stopping guidelines, were prospectively recruited from January 2015 to January 2018. Patients with liver cirrhosis, active malignancies, hepatitis C virus, hepatitis D virus or human immunodeficiency virus coinfection, liver transplantation history, immune disorders, a history of NA therapy other than TDF or ETV, or a follow-up period of fewer than 4 weeks were excluded. Serum HBV DNA and quantitative hepatitis B surface antigen (qHBsAg) levels were measured every 3 months. Both cumulative incidences of and hazard ratios (HRs) for the predictors of HBV relapse were analysed.

Results Totally, 178 patients (40 HBeAg-positive and 138 HBeAg-negative prior to NA therapy) were enrolled for this analysis (98 TDF and 80 ETV users), and the median follow-up period was 10.6 (interquartile range [IQR]: 5.6–7.2) months. The cumulative incidences of virological (VR) and clinical relapse (CR) in 2 years were 59.5% (95% confidence interval [CI]: 50.6%–68.3%) and 49.0% (95% CI: 34.0%–65.0%), respectively. Moreover, the cumulative incidences of severe hepatitis flare (ALT >500 IU/L) and liver

decompensation were 11.8% (95% CI: 3.4%–19.6%) and 1.4% (95% CI: 0%–3.3%), respectively. No patient died of liver disease. In multivariable analysis, qHBsAg >100 IU/mL at the end of therapy was an independent risk factor of VR (HR 2.47, 95% CI: 1.30–4.70) and of CR (HR 3.16, 95% CI: 1.25–7.89), respectively. TDF users initially demonstrated a faster pattern of HBV relapse when compared to ETV users, but the relapse rates were not significantly different in 2 years.

Conclusions In this study for non-cirrhotic patients, HBV relapse was common after cessation of NA therapy, and serum qHBsAg can be used as a predicting marker. A longer study period is essential for investigating long-term outcomes.

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A PROSPECTIVE CROSS-SECTIONAL STUDY ON THE PREVALENCE AND FACTORS ASSOCIATED WITH SEROPROTECTION AFTER PRIMARY SERIES OF HEPATITIS B VACCINATION

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Background Hepatitis B infection is a vaccine-preventable condition that is commonly asymptomatic in children and unrecognised until complications such as cirrhosis and hepatocellular carcinoma develop. Identifying patients at risk for Hepatitis B infection despite universal vaccination will help improve the immunisation program. The objective is to determine the prevalence and factors associated with seroprotection among children 3 months to 18 years old with complete primary Hepatitis B vaccination series.

Methods This is a perspective cross-sectional study among children 3 months to 18 years old seen at Philippine Children's Medical Centre (PCMC) charity and private outpatient clinic from March-June 2017 with immunisation record of complete Hepatitis B immunisation. Children who are immunocompromised, those who received vaccine within four weeks from the time of the conduct of the study and those who received booster doses were excluded. Serologic determination of antibody to Hepatitis B surface antigen (Anti-HBs), total antibody to Hepatitis B core antigen (Total Anti-HBc) and Hepatitis B surface antigen (HBsAg) were done. Demographic, social and clinical data were correlated with reactivity to Anti-HBs (≥ 10 mIU/ml), Total Anti-HBc and HBsAg serologic tests.

Results Among 110 subjects from different age groups, 52% had seroprotective Anti-HBs levels (≥ 10 mIU/ml), with the highest noted among infants (3 months–2 years) at 82%, followed by 41% from the childhood group (3–9 years) and 26% from the adolescent group (10–18 years). Seventy-four percent seroprotection rate was noted among subjects with <5 years interval from vaccination, 26% in cases after 5–10 years, and 38% at more than 10 years after vaccination with a significant difference on multilogistic regression (p value 0.000/0.020). None of the other factors including gender, geographic area, age at first dose, schedule, type and place of vaccine were significantly associated with seroprotection.

Conclusions Fifty-two percent of patients among different age groups were seroprotected, with the highest among children 3 months–2 years old. Seroprotection was significantly associated with the interval year after vaccination demonstrated at less than 50%, 5 years and beyond post-vaccination.