term trajectories of serum HBV DNA levels in a treatment-naïve cohort of chronic hepatitis B patients.

Methods: A total of 3140 participants from the REVEAL-HBV cohort were included in this analysis. They were anti-HCV-seronegative and free of liver cirrhosis at study entry. Long-term trajectories of serum HBV DNA levels were determined using group-based trajectory methods and Cox proportional hazards models.

Results: Serum HBsAg levels at study entry was significantly associated with long-term HBV DNA trajectories (P < 0.001 by ANOVA and chi-square test). Among participants with baseline serum HBV DNA levels >10^7 copies/mL, the higher the baseline serum HBsAg levels were the less likely follow-up serum HBV DNA levels decreased to lower levels. The adjusted odds ratio (95% confidence interval) of having serum HBsAg levels at study entry >1000 IU/mL for participants with HBV DNA trajectories of persisting at >10^7 copies/mL, decreasing to <10^6 copies/mL, persisting at 10^6–10^7 copies/mL, decreasing to/persisting at 10^5–10^6 copies/mL, and decreasing to/persisting at 10^5–10^4 or >10^4 copies/mL was 2.43 (2.01–2.95), 2.70 (2.01–3.63), 3.50 (2.67–4.58), 7.96 (5.97–10.62), and 22.69 (14.78–34.82), respectively, in comparison with participants with undetectable serum HBV DNA at study entry or during follow-up.

Conclusions: Baseline serum HBsAg levels may predict long-term viral load trajectories in chronic hepatitis B patients.

P675 RISK PREDICTORS FOR LIVER CANCER AND CIRRHOSIS AMONG CHRONIC HEPATITIS B PATIENTS WITH UNDETECTABLE HEPATITIS B VIRAL LOADS


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Background and Aims: This study aims to examine the incidence and determinants of hepatocellular carcinoma (HCC) and cirrhosis in a community-based cohort of chronic hepatitis B patients with undetectable viral loads.

Methods: A total of 701 participants of the REVEAL-HBV cohort were included in this analysis. They were anti-HCV-seronegative, free of liver cirrhosis and HBsAg-seronegative, and had undetectable viral loads at study entry. Hazard ratios of HCC and cirrhosis were estimated using Cox proportional hazards models.

Results: Among 701 participants, 29 cases of cirrhosis and 9 cases of HCC occurred. The only risk predictor of cirrhosis was male gender, with a multivariate-adjusted hazard ratio (95% confidence interval [CI]) of 2.87 (1.16–7.11). Elder age (>50 years), elevated ALT, cigarette smoking, elevated serum HBsAg levels, and cirrhosis status were independent predictors of HCC risk. The effect of cigarette smoking may reflect the underlying effect of gender, as all HCC cases and a vast majority of cigarette smokers were male. The multivariate-adjusted hazard ratio (95% CI) of developing HCC in patients for cirrhosis status and elevated serum HBsAg levels (1000+ vs. <1000 IU/mL) was 32.03 (7.42–138.34) and 4.17 (0.99–17.90), respectively. Time-dependent ROC curves using the prediction model with the above factors could accurately predict the 13-year HCC risk with an AUROC of 0.80.

Conclusions: Among chronic hepatitis B patients with undetectable viral loads, cirrhosis status was the most important HCC risk predictor, and several other risk predictors also play some roles.

P676 SINGNIFICANT REDUCTION IN END-STAGE LIVER DISEASE BURDEN THROUGH NATIONAL CHRONIC VIRAL HEPATITIS THERAPY PROGRAM IN TAIWAN

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Background and Aims: A national program of chronic viral hepatitis therapy using antivirals and immunomodulators to control chronic hepatitis B and C was launched in October 2003 in Taiwan. This study aimed to evaluate its impact on end-stage liver disease burden.

Methods: Profiles of national household registry, cancer registry and death certification were used to derive incidence and mortality of end-stage liver diseases from 2000 to 2011. The age-gender-adjusted incidence and mortality rates of hepatocellular carcinoma and chronic liver diseases of adults aged 30–69 years were compared before and after the therapy program using Poisson regression models.

Results: A total of 157,570 and 61,823 patients (20% of the eligible for reimbursed treatment) received therapy for chronic hepatitis B and C, respectively, by 2011. There were 42,526 chronic liver diseases deaths, 47,392 hepatocellular carcinoma deaths, and 68,338 incident hepatocellular carcinoma cases occurred in 140,814,448 person-years from 2000 to 2011. The mortality and incidence rates of the end-stage liver diseases decreased continuously from 2000–2003 (before therapy program) through 2004–2007 to 2008–2011 in all age and gender groups. The age-gender-adjusted rate ratio (95% confidence interval, p-value) in 2008–2011 was 0.78 (0.76–0.80, p < 0.001) for chronic liver diseases mortality, 0.76 (0.75–0.78, p < 0.005) for hepatocellular carcinoma mortality, and 0.88 (0.86–0.89, p < 0.005) for hepatocellular carcinoma incidence using 2000–2003 as the referent period (rate ratio = 1.0).

Conclusions: There has been a significant reduction in chronic liver diseases and hepatocellular carcinoma incidence and mortality since the implementation of national chronic viral hepatitis therapy program in Taiwan.

P677 HEPATIC STEATOSIS DOES NOT PREDICT REGRESSION OF LIVER CIRRHOSIS IN CHRONIC HEPATITIS B (CHB) PATIENTS TREATED WITH TENOFOVIR DISOPROXIL FUMARATE (TDF)

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Background and Aims: Suppression of CHB with TDF results in regression of cirrhosis in many patients. Patients with a BMI ≥30 kg/m² have been shown to have a reduced likelihood of cirrhosis regression with CHB suppression (Marcellin, Lancet 2013). Whether