

FP-080

Prospective Randomized Trial of Switching to Entecavir in Chronic Hepatitis B Patients with Suboptimal Virological Response to Lamivudine: Interim Analysis at 48 Weeks

Sang Hoon Ahn¹, Jun Yong Park¹, Heon-Ju Lee², Won Young Tak³, Soon Ho Um⁴, Do Young Kim¹, Ki Tae Yoon⁵, Soo Young Park³, Yeon Seok Seo⁴, Kwang-Hyub Han¹, Mong Cho⁵, Jeong Heo⁵

¹Department of Internal Medicine, Yonsei University College of Medicine, Seoul, Republic of Korea, 250 Seongsanno, Sodaemun-gu, Seoul 120-752, Korea, ²Department of Internal Medicine, Yeungnam University College of Medicine, Daegu, Republic of Korea, 317-1 Daemyung-Dong, Daegu, 705-717, Republic of Korea, ³Department of Internal Medicine, Kyungpook National University College of Medicine, Daegu, Republic of Korea, 200 Dongduk-Ro, Junggu, Daegu 700-721, Republic of Korea, ⁴Department of Internal Medicine, Korea University College of Medicine, Seoul, Republic of Korea, 126-1, 5-Ga, Anam-Dong, Seongbuk-Gu, Seoul, Republic of Korea, ⁵Department of Internal Medicine, Pusan National University School of Medicine, Pusan, Republic of Korea, Busan 602-739, Republic of Korea

Aims: Prompt switching from lamivudine (LVD) to entecavir (ETV) in patients with insufficient suppression of hepatitis B virus (HBV) replication (HBV DNA \geq 60 IU/mL by polymerase chain reaction [PCR]) may lead to full viral suppression to undetectable levels. The aim of this study was to compare the antiviral efficacy, safety and tolerability of switching from LVD to ETV, versus maintained LVD therapy.

Methods: A total of 72 patients (HBeAg-positive; HBV DNA \geq 60 IU/mL) who received LVD monotherapy for at least 6 months and remained HBV DNA detectable were randomized to switch to ETV 1 mg daily or maintain LVD 100 mg daily. 45 patients (ETV n = 22; LVD n = 23) completed the 48-week treatment period. HBV DNA levels, resistance, HBeAg status, liver biochemistry and safety were monitored.

Results: Mean duration of prior LVD treatment was 14.5 (LVD) and 16.7 months (ETV) respectively (p = 0.82). No difference was seen in baseline HBV DNA levels between two groups (mean HBV DNA 6.20 [ETV] vs. 6.10 [LVD] \log_{10} IU/mL, p = 0.32). At Week 48, more patients in the ETV-switch group than in the LVD-maintained group had undetectable serum HBV DNA levels by real-time PCR assay (77.3 versus 8.7%, P < 0.001). Three ETV and one LVD patients achieved HBeAg loss and two ETV patients seroconverted. No patients in the ETV-switch group developed resistance, whilst 60.9% (14/23) patients in the LVD-maintained group had emergence of genotypic resistance during 48-weeks of treatment.

Conclusions: In this interim analysis, prompt switching from LVD to ETV resulted in increased virological efficacy in patients with suboptimal virological response to previous LVD therapy.

FP-081

The Epidemiological and Economic Impact of Chronic Hepatitis B in Australia to 2,017 and the Cost-Effectiveness of Enhanced Treatment

James R. G. Butler¹, Rosemary J. Korda², Katrina J. R. Watson³, D. Ashley R. Watson⁴

¹ACERH, Australian National University, Canberra ACT 0200, Australia, ²ACERH and NCEPH, Australian National University, Canberra ACT 0200, Australia, ³Department of Epidemiology and Preventive Medicine, Monash University, Victoria 3800 Australia, ⁴Infectious Diseases Unit, The Canberra Hospital, and Clinical School of Medicine, The Australian National University, Canberra ACT 0200, Australia

Background: In Australia, 0.5–2.0% of the population are chronically infected with the hepatitis B virus (HBV). Half of these people are immigrants born in high-endemicity countries. Australia's immigration patterns, the ageing of individuals with chronic HBV infection and the low proportion receiving HBV drug therapy together mean the long-term sequelae of HBV infection will become increasingly evident. This study projects the mortality, morbidity and direct costs of HBV infection in Australia to 2017, and investigates the cost-effectiveness of increasing the proportion of people with chronic hepatitis B (CHB) receiving drug therapy.

Methods: Three scenarios are investigated using Markov models: SI—natural history, where patients receive medical care excluding drug therapy; SII—

current treatment and management practices; and SIII—a nationally coordinated approach which increases the proportion of people with CHB receiving drug therapy.

Results: Under current treatment practices (SII), the number of people living with chronic HBV infection is projected to increase from 187,000 at the beginning of 2008 to 276,000 at the end of 2017 (a 48% increase). The number of people living with HBV-related liver cancer is predicted to rise from 500 at the end of 2008 to 1,600 by the end of 2017, while the annual number of HBV-related deaths will increase from 450 to 1,550 over the same period. The annual direct costs of management and treatment will rise from \$171.8 million in 2008 to \$307.9 million in 2017 (2008 prices)—an 80% increase. Currently 13% of people with CHB receive HBV drug therapy. Increasing this proportion to 41% (SIII) is cost-effective. Funding a National Strategy for Hepatitis B that achieved this would likely be a sound investment.

Conclusion: The looming burden of HBV-related morbidity and mortality in Australia and the cost-effectiveness of CHB drug therapy underscore the importance of developing a National Strategy for Hepatitis B.

FP-082

Effectiveness of Telbivudine as Add-on Therapy in a Population of Chronic Hepatitis Patients with Suboptimal Response to Tenofovir

Stephan Kaiser¹, Bettina Lutze¹, Cihat Sen², Thomas Bock³
¹Liver Center Stuttgart, Stuttgart, Germany, ²Practice for Internal Medicine, Stuttgart, Germany, ³Robert-Koch-Institute, Berlin, Germany

Background: We provide observational data on the efficacy of telbivudine in a population of patients with chronic hepatitis B who demonstrated suboptimal response to tenofovir.

Methods: Ten patients (9 caucasian, 1 asian) with continued elevated hepatitis B virus (HBV) DNA levels and alanine aminotransferase (ALT) levels while receiving tenofovir 245 mg/day received telbivudine 600 mg/day as add-on therapy. They were monitored every 3 months during treatment.

Results: The 10 patients had a mean age of 42 years (range, 23–60 years), HBV DNA levels of 9.3×10^5 to 1.8×10^6 IU/mL, 8 genotype D, 2 genotype A, and ALT levels of 61 to 148 IU/mL. All were hepatitis B surface antigen positive, and 8 were hepatitis B e antigen negative. HBV DNA levels declined at 3 and 6 months (range, 6×10^2 to 21×10^3 IU/mL), as did ALT levels (range, 31 to 64 IU/mL) under tenofovir monotherapy, however, HBV DNA levels remained detectable. Telbivudine 600 mg/day was added to tenofovir in all 10 patients; at 6 months for the 4 patients with a higher viral load and at subsequent visits between months 6 and 9 for the remaining 6 patients. Within 6 months of combination treatment, all patients demonstrated undetectable HBV DNA and normalized ALT levels (mean, 29 IU/mL).

Conclusions: In this population of 10 patients, the addition of telbivudine to tenofovir monotherapy resulted in a rapid and sustained suppression of HBV DNA and normalization of ALT levels. Thus, telbivudine may be used as a salvage therapy in incomplete responders to tenofovir.

FP-083

Profiles of HBV DNA in a Large Population of Chinese Chronic Hepatitis B Patients: Implications for Antiviral Therapy

James Fung¹, Wai-Kay Seto¹, Ching-Lung Lai¹, John Yuen¹, Danny Wong¹, Man-Fung Yuen¹

¹The University of Hong Kong, Queen Mary Hospital, Hong Kong

Background: Large population studies on HBV DNA levels with respect to demographic and laboratory data are lacking. We aimed to determine the virological profile in Chinese CHB subjects, and the implications with current treatment guidelines.

Methods: 1,400 randomly selected treatment-naïve CHB patients had HBV DNA levels determined using Cobas Taqman assay. Patient demographics, HBeAg status and liver biochemistry were recorded.

Results: The median age was 45 years, with 62% males and 22% HBeAg-positive. In subjects aged \leq 25, 26–35, 36–45, 46–55, and $>$ 55 years, there was decreasing trend of HBV DNA levels of 9.9, 9.3, 8.2, 7.4, and 7.3 log copies/mL respectively (p < 0.001) in HBeAg-positive subjects, while the pattern was reversed with HBV DNA levels of 3.7, 4.4, 4.7, 4.9, and 5.2 log copies/mL respectively in HBeAg-negative subjects (p < 0.001). In patients