Correspondence to letter to the editor on "Non-linear association between liver fibrosis scores and viral load in patients with chronic hepatitis B"

Gi-Ae Kim, MD, PhD;1* Seung Won Choi;2* Young-Suk Lim, MD, PhD3

1Department of Internal Medicine, Kyung Hee University School of Medicine, Seoul, Republic of Korea
2University of Ulsan College of Medicine, Seoul, Republic of Korea
3Department of Gastroenterology, Liver Center, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Republic of Korea

*GA Kim and SW Choi contributed equally to this work and deserve co-first authorship.

Corresponding author:
Young-Suk Lim, MD, PhD
Professor, Department of Gastroenterology
Asan Medical Centre, University of Ul산 College of Medicine
88 Olympic-ro 43-gil, Songpa-gu, Seoul 05505, Republic of Korea
E-mail: limys@amc.seoul.kr; Tel: +82-02-3010-5933; Fax: +82-02-485-5782

Word counts: 286 words

Conflicts of interest: Y-SL is an advisory board member of Gilead Sciences and receives investigator-initiated research funding from Gilead Sciences. All the other authors have no conflict of interest to declare.
We thank the letter from Wang et al. for our article. The letter explored liver fibrosis by serum HBV DNA levels in treatment-naïve chronic hepatitis B (CHB) patients without significant alanine aminotransferase (ALT) elevation. It is a multi-center large cohort study using liver biopsy results and its findings support our previous study involving non-invasive liver fibrosis scores.

The study can find its significance in the use of biopsy results. They showed that patients with moderate HBV DNA of 6–7 log_{10} IU/ml had the highest proportion of significant fibrosis, advanced fibrosis, and cirrhosis compared to the other viral load groups. The tendency was more prominent in HBeAg-negative patients. It is in line with our study that showed a non-linear parabolic association between viral load and APRI and FIB-4 scores. Moderate viral loads of 6–7 log_{10} IU/mL corresponded to the highest APRI and FIB-4 scores. It is very encouraging that the study using liver biopsy produced comparable findings to this study.

The risk of moderate HBV DNA levels in CHB patients without ALT elevation has been underappreciated but recently many studies have demonstrated their association with unfavorable outcomes. Recent studies involving liver biopsy showed moderate HBV viral load of 5–7 log_{10} IU/mL was independently associated with significant liver inflammation and fibrosis. Moderate viral loads were also associated with an increased risk of developing hepatocellular carcinoma (HCC). With the underlying mechanisms not being elucidated yet, there is great anticipation for related research.

Taken together, valuable insights are being offered regarding the moderate HBV viral load and its significance. The established knowledge regarding the association of HBV viral load with liver fibrosis and HCC risk is expected to enhance the strategy for antiviral treatment for non-cirrhotic CHB patients.
REFERENCES


