



Albuminuria Is Associated with Steatosis Burden in Patients with Type 2 Diabetes Mellitus and Nonalcoholic Fatty Liver Disease (*Diabetes Metab J* 2021;45:698-707)

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We are grateful for being provided the opportunity to respond to the letter received from Prof. Mi-kyung Kim concerning our recent article in *Diabetes and Metabolism Journal* entitled “Albuminuria is associated with steatosis burden in patients with type 2 diabetes mellitus and nonalcoholic fatty liver disease.” Further, we would like to extend our gratitude to Prof. Mi-kyung Kim for her insightful comments on our study. In this study, patients with type 2 diabetes mellitus and nonalcoholic fatty liver disease (NAFLD) were enrolled using prospective method, and the data was collected in a cross-sectional design. Given that the Korean health insurance does not cover elastography, its high cost would be an economic burden for some patients. Owing to this, data from only a few patients that had undergone elastography was collected in a retrospective manner. Furthermore, the grant covered the examination fee for the patients included in the prospective design [1]. We would also like to thank the Korean Diabetes Association for supporting this study. We believe that the outcomes of our study outline the clinical implication of albuminuria and signify the importance of identifying high risk NAFLD patients via elastography. In particular, the recent expert consensus guidelines in both America and Europe emphasize the need for evaluating the degree of hepatic steatosis in NAFLD patients with metabolic risk factors [2,3]. With respect to the impact of metformin on NAFLD, a cut-off value of 45 mL/min/1.73 m², which is the borderline for metformin treatment, was applied [4]. In addition, there are comparable outcomes of chronic kidney disease

(CKD) stage II and CKD stage III A [5,6]. As per Prof. Mi-kyung Kim’s suggestion, we categorized the study population based on stages of liver stiffness. A few patients with advanced liver fibrosis (liver stiffness measurement ≥ 9.3 kPa, $n=12$) exhibited insignificant differences in albuminuria compared to those without advanced liver fibrosis. Our study population included relatively younger subjects with shorter course of diabetes. Therefore, it is possible that patients with earlier stages of NAFLD compared with that of a previous Chinese study [7] may have been enrolled, and thus, distinct results were obtained.

We agree with Dr. Mi-kyung Kim that prospective, further longitudinal and well-designed trials are required to characterize albuminuria as a convincing marker for the progression of NAFLD in diabetes. As indicated by Prof. Mi-kyung Kim, we believe that albuminuria could play a major role in identifying the link between NAFLD and diabetes.

CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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