KSN SEOUL, KOREA 2023
April 27(Thu) - 30(Sun), 2023
Coex, Seoul, Korea

Abstract Type : Poster
Abstract Submission No. : 1215

Association between fatty liver index and the risk of end stage renal disease stratified by baseline kidney function in patients with type 2 diabetes: A nationwide population-based study

NAMJU HEO[1], Goh Eun Chung[3], Kyungdo Han[2], Kyu Na Lee[4], Jung Ho Bae[3], Sun Young Yang[3], Su-Yeon Choi[5], Jeong Yoon Yim[3]
[1]Department of Internal Medicine-Nephrology, Seoul National University Hospital, Korea, Republic of
[2]Department of Biostatistics, Soongsil University, Korea, Republic of
[3]Department of Internal Medicine-G-I/Hepatology, Seoul National University Hospital, Korea, Republic of
[4]Department of Biostatistics, School of Medicine, The Catholic University of Korea, Korea, Republic of
[5]Department of Internal Medicine-Cardiology, Seoul National University Hospital, Korea, Republic of

Objectives: The effect of NAFLD on the risk of end stage renal disease (ESRD) remains unclear. We investigated the association between fatty liver index and the risk of ESRD in patients with type 2 diabetes.

Methods: Data were obtained from the Korean National Health Insurance Service. Patients with diabetes who participated in health screenings from 2009 to 2012 were included. Fatty liver index (FLI) was used as a surrogate marker to detect the presence of hepatic steatosis. Chronic kidney disease (CKD) was defined as an estimated glomerular filtration rate (eGFR) less than 60 mL/min/1.73 m² calculated using the Modification of Diet in Renal Disease equation.

Results: During a median follow-up of 7.2 years, 40,863 incident ESRD cases developed in 1,900,598 patients with type 2 diabetes. After adjusting for conventional risk factors, patients with high FLI scores showed an increased risk of ESRD [FLI 30-59, hazard ratio (HR) = 1.124; 95% confidence interval (CI): 1.083–1.166, and FLI ≥60, HR = 1.278; 95% CI: 1.217-1.343] compared with those with FLI <30. The association between a high FLI (≥60) and the risk of ESRD differed according to the baseline kidney function. Among patients with baseline CKD, high FLI scores increased the risk of ESRD (HR = 1.268; 95% CI: 1.198–1.342), while FLI scores didn't showed significant association with risk of ESRD among patients with normal kidney function (HR = 0.995; 95% CI: 0.930–1.065).

Conclusions: High FLI scores were associated with an increased risk of ESRD in type 2 diabetes patients with CKD at baseline. Close monitoring and appropriate management of hepatic steatosis may be helpful to prevent progression of kidney function deterioration in patients with type 2 diabetes and CKD.