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

Abstract Type : Poster
Abstract Submission No. : 1532

Effects of SGLT2 inhibitors on renal outcomes in patients with diabetes mellitus and normal or low body mass index

Yun Soo Lee, Kyungho Lee, Hye Ryoun Jang, Jung-Eun Lee, Wooseong Huh, Yoon-Goo Kim, Junseok Jeon
Department of Internal Medicine-Nephrology, Samsung Medical Center, Korea, Republic of

Objectives: SGLT2 inhibitors (SGLT2i) have been shown to improve cardiovascular and renal outcomes in patients with diabetes mellitus or chronic kidney disease. In previous studies regarding the use of SGLT2i, most of patients had body mass index (BMI) of 29-32 kg/m^2. Therefore, it remains to be determined whether SGLT2 inhibitors will be beneficial in patients with normal or low BMI. We aimed to evaluate the effects of SGLT2i on renal and patient outcome in diabetic patients with normal or low BMI

Methods: This a single-center, retrospective cohort study included adult patients who visited outpatient clinic for type 2 diabetes from 2016 to 2020. Patients divided into control and SGLT2i group according to use of SGLT2i. Normal or low BMI was defined as BMI < 23 kg/m^2. Primary outcome was decrease in estimated glomerular filtration rate (eGFR) of more than 50% from baseline (eGFR < 50%).

Results: A total of 5,842 patients with diabetes had low or normal BMI and 304 (5.2%) were taking SGLT2i. The SGLT2i group were younger (Control vs SGLT2i; 64.0 vs. 61.0 years, p= 0.000) and had higher eGFR and HbA1c than the control group (Control vs SGLT2i; 83.9 vs 90.2 mL/kg/1.73 m^2, p = 0.00 and 6.70% vs. 7.80%, p= 0.000, respectively). There was no difference in proteinuria and the use of insulin between groups. The risk of eGFR < 50% was lower in the SGLT2i groups than the control group [Hazard ratio (HR) 0.114, 95% confidence interval (CI), p=0.030], while the risk of end-stage kidney disease was not different. The use of The SGLT2i was associated with lower risk of all-cause death (HR 0.200, 95% CI, p=0.001).

Conclusions: The use of SGLT2 inhibitors may reduce the risk of eGFR < 50% and all-cause death even in diabetic patients with low or normal BMI.