THE KOREAN SOCIETY OF NEPHROLOGY
APCN & KSN 2024
June 13(Thu) - 16(Sun), 2024 Coex, Seoul, Korea
APSN
Promoting Sustainable Kidney Health: The Asia-Pacific and Beyond

Abstract Submission No.: A-0024

Effect of SGLT2 Inhibitors on Anemia and Inflammation In CKD

Sherzod Abdullaev, Olimkhon Sharapov
Department of Internal Medicine-Nephrology, Republican specialized scientific and practical medical center of nephrology and kidney transplantation, Uzbekistan

Objectives : SGLT2 inhibitors (SGLT2i) were reported to increase hemoglobin (Hb) by suppressing hepcidin and increasing erythropoietin, similar to hypoxia-inducible factor prolyl hydroxylase (HIF-PH) inhibitors. We analyzed the increasing of Hb by SGLT2i might be more prominent among patients with inflammation in CKD.
Methods : In this retrospective cohort study, diabetic patients from 2020 to 2022 at single center were enrolled. The Hb slope within 8 months after initiation of SGLT2i (the first 6 months of the observation period for non-users) was analyzed using a mixed-effects model. Non-linear regression models were fitted with restricted cubic splines to investigate Hb levels at the last visit across different eGFR levels. Analyses were performed separately for those with higher and lower than the median baseline C-reactive protein (CRP) levels. The data were adjusted for potential confounders.
Results : Among 175 patients, 43 were on SGLT2i (Dapagliflozin 10 mg daily). During the first 8 months, CRP and eGFR trajectories were not significantly different between users and non-users of SGLT2i. Differences in Hb slope between users and non-users of SGLT2i were 0.18 (0.06–0.22) and 0.04 (-0.05–0.12) g/dL/month for those with higher and lower baseline CRP, respectively. Hb levels at the last visit were significantly higher among SGLT2i users across the range of eGFR levels, and it was more prominent among those with higher CRP ($p<0.1$).
Conclusions : SGLT2i use was associated with higher Hb levels, especially among those with inflammation across the range of eGFR levels. The results suggest that SGLT2i could improve anemia among patients with anemia of chronic kidney disease and inflammation which are refractory to treatment with erythropoiesis-stimulating agents. Further studies are needed to enhance our understanding of mechanism of action and to optimize patients' management.