Background and Aims: Sodium-glucose transporter-2 (SGLT-2) inhibitors have recently emerged as standard of care for delaying the progression of chronic kidney disease. Data regarding the safety and efficacy of SGLT-2 inhibitors in kidney transplant recipients remain limited.

Method: We retrospectively analysed the data of all adult kidney transplant recipients who received SGLT-2 inhibitors at our center. We examined the safety and efficacy at 3-, 6- and 12- months post-treatment.

Results: Thirty-seven kidney transplant recipients (males 70.3%) were treated with SGLT-2 inhibitors at a median time of 8.3 years (IQR 5.2-7.4) post-transplant. Nineteen patients (51.4%) received empagliflozin and 18 (48.6%) dapagliflozin. The median follow-up time post-SGLT-2 inhibitors initiation was 9 months (IQR 5.5-20.8). Type 2 diabetes mellitus was present in 32 kidney transplant recipients (86.5%). The mean estimated glomerular filtration rate (eGFR) pre-SGLT-2 inhibitors therapy was 54.6 ± 17.2 ml/min. During the first 3 months of SGLT-2 inhibitors initiation, the mean eGFR declined by 3.51 ml/min (p:0.024), while at 6 and 12 months no significant changes from the starting value were observed. Urine protein levels decreased from 173 mg (IQR 140-500) to 140 mg (IQR 86-251, p:0.006) in the first 3 months and remained stable at 6 and 12 months. The mean HbA1c declined from 7.06 to 6.80% (p:0.042) at 3 months and the beneficial effect was maintained through the study period. Mean serum magnesium levels exhibited an increasing trend by 0.05 (p:0.080), 0.08 (p:0.074) and 0.09 mg/dl (p: 0.138) at 3, 6 and 12 months, respectively. Urinary tract infections were observed in 7 kidney transplant recipients (18.9%). Stage 1 acute kidney injury occurred in 2 patients, which led to the drug discontinuation in one of them.

Conclusion: Based on our preliminary data, SGLT-2 inhibitors seem to be a safe therapeutic option for reducing urine protein levels, as well as improving glycemic control and electrolyte disturbances in kidney transplant recipients. Long-term monitoring is required to establish the beneficial effect on renal graft function.