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A PROSPECTIVE COHORT STUDY OF SODIUM/GLUCOSE COTRANSPORTER 2 INHIBITOR-TREATED DIABETIC KIDNEY TRANSPLANT PATIENTS

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Objectives: Diabetic kidney transplant(DKT) patients suffer from increased burden of cardiovascular(CV) disease. The graft outcome of these patients is not only determined by immunologic injury but also by diabetic kidney disease(DKD) of graft. The SODIUM/GLUCOSE COTRANSPORTER 2 INHIBITOR(SGLT2i) reduces CV events and delays the progression of DKD, and would favor the outcome of these patients. There are limited experiences of the use of SGLT2i on DKT patients.

Methods: One hundred and forty-nine DKT patients treated with dapagliflozin have been prospectively followed for more than 6 months(median 15.4 ±7.0 months) in our center. Four patients had type 1 diabetes, 58 had type 2 diabetes, and 87 had posttransplant diabetes. Twenty-five patients were on insulin. Baseline serum creatinine was 1.3±0.4(0.6~2.4)mg/dl.

Results: Baseline HbA1c was 7.0±1.8%, which decreased significantly at 3 months(6.8±1.3%, p=0.01) and maintained stable thereafter. Body weight decreased significantly from 66.5±27.1 to 65.1±27.3kg(p=0.00) at 3 months and slightly more reduced until 12 months. Baseline urine albumin-creatinine ratio was 188.9±511.1 mg/g, which decreased significantly at 3 months(132.3±301.2 mg/g, p=0.03), reduced more until 6 months and maintained unchanged until 24 months. The slope of eGFR decline before and after the use of SGLT2i did not differ significantly. Eight patients stopped dapagliflozin due to acute cystitis in 3, weight loss in 2 and patient's preference in 3. There was no episode of acute kidney injury. Acute pyelonephritis was infrequent and did not appear to be increased with this drug.

Conclusions: SGLT2i reduced albuminuria and was well tolerated in DKT patients. The long-term benefit of patient and graft outcome would be worth to be evaluated by further follow up.