

中文題目:第2型鈉-葡萄糖轉運蛋白抑制劑(SGLT2i)用於治療腎移植受者的糖尿病與移植後糖尿病-18個月的觀察性研究

英文題目:Sodium glucose co-transporter type 2 inhibitor (SGLT2i) in renal transplant recipients with DM and post-transplant diabetes mellitus (PTDM) - an 18 months observational study

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Background

Following transplantation, glucose levels were higher in patients with DM and post-transplant diabetes mellitus (PTDM), both associated with a higher long-term morbidity and mortality in renal transplant recipients. A sodium glucose co-transporter type 2 inhibitor (SGLT2i) is recommended in type 2 diabetes mellitus but its use is still undetermined in renal transplant recipients with DM and PTDM.

Methods

We collected 6 Taiwanese renal transplant recipients who received SGLT-2 inhibitor therapy and followed up from Jan. 2016 to Jun. 2017. Data collected included baseline characteristics; glomerular filtration rate (GFR); creatinine; hemoglobin A1c. Inclusion criteria: PTDM (antidiabetic therapy ≥ 6 months, based on prior 2-h BG ≥ 200 mg/dL, fasting BG ≥ 125 mg/dL (2 times) or HbA1c $\geq 6.5\%$); stable renal allograft function > 6 months; eGFR ≥ 30 mL/min/1.73m². Exclusion criteria: eGFR < 30 mL/min/1.73m²; HbA1c $> 10.0\%$. After study inclusion, patients will record body weight, blood pressure, lab works (AC sugar; glomerular filtration rate (GFR); creatinine; hemoglobin A1c) during each outpatient department (period 1 to 3 months) follow up.

Results

Baseline characteristics of the patients (3 males and 3 females) are shown the mean age was 48.67 years. We followed up patient's basic data (body weight, blood pressure); AC sugar; glomerular filtration rate (GFR); creatinine; hemoglobin A1c at least one year. The period 1(-90-0 days) of eGFR was 78.44 ± 19.49 mL/min/1.73m² and the period 4(180-365 days) of eGFR was 90.54 ± 22.79 mL/min/1.73m², $P=0.108$. The period 1(-90-0 days) of the body weight was 70.53 ± 9.58 kg and the period 4(180-365 days) of the body weight was 68.66 ± 7.83 kg, $P=0.682$. The period 1(-90-0 days) of the systolic blood pressure(SBP) was 133.79 ± 13.16 mmHg and the period 4(180-365 days) of the systolic blood pressure(SBP) was 122.24 ± 6.72 mmHg, $P=0.001$. AC sugar decreased 54.56 ± 67.34 mg/dL, $P=0.064$. SGLT2 inhibitor was not significant

changes in eGFR in patients with DM and PTDM, likely resulting from a mixture of an initial reduction of eGFR and long-term renal function preservation.

Conclusions

SGLT2i may have nephroprotection not only through improving glycemic control but also through blood pressure-lowering and direct renal effects. From the small population observational study, we supposed that SGLT2i seems to have trend to improve the eGFR for both PTDM and DM in renal transplant recipients.