EFFECT OF SACUBITRIL/VALSARTAN ON GLYCAEMIC CONTROL AND RENAL FUNCTION IN PATIENTS WITH DIABETES AND HEART FAILURE: A MULTI-INSTITUTIONAL COHORT STUDY IN TAIWAN

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Background and importance A well known trial, PARADIGM-HF, has demonstrated that sacubitril/valsartan could affect glycaemic control (HbA1c <0.3%) and renal function (eGFR = 1.7 mL/min/1.73 m²) in patients with diabetes and heart failure with reduced ejection fraction (HFrEF). However, the effects have not been evaluated using real world data.

Aim and objectives To assess the effect of sacubitril/valsartan on glycemic control and renal function in patients with diabetes and heart failure, by evaluating the changes in HbA1c and eGFR, respectively.

Material and methods We analysed the multi-institutional electronic health records database, Chang Gung Research Database, covering 1.3 million individuals from seven hospitals in Taiwan (6% of the national population) for this study. We selected a cohort of patients with diabetes and HFrEF (ie, left ventricular ejection fraction ≤40%) newly initiating sacubitril/valsartan during 2016–2018. Study outcomes were changes in HbA1c and eGFR values from baseline to 1 year after the initiation of sacubitril/valsartan treatment. We used a two-tailed paired t test to compare the differences in HbA1c and eGFR before and after sacubitril/valsartan treatment.

Results We identified 511 patients with diabetes and HFrEF receiving sacubitril/valsartan. Mean age was 64.1 (SD 13.2) years and 24.9% were women. At baseline, mean HbA1c and eGFR were 7.5 (SD 1.6)% and 62.6 (SD 31.7) mL/min/1.73 m², respectively. After 1 year of sacubitril/valsartan treatment, the mean differences in HbA1c and eGFR were −0.16% (95% CI −0.29 to −0.03; p=0.014) and −4.45 mL/min/1.73 m² (95% CI −6.27 to −2.63; p<0.001), respectively.

Conclusion and relevance Consistent with the PARADIGM-HF trial, our findings indicated the use of sacubitril/valsartan affected glycemic control and renal function in patients with diabetes and heart failure.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest