中文題目：探討同時罹患末期腎病與左心室功能衰退之心臟衰竭病人使用血管張力素受體-腦啡肽酶抑制劑與心血管事件的關聯性

英文題目：Association between angiotensin receptor-neprilysin inhibitors and cardiovascular outcomes among end-stage renal disease patients with heart failure and reduced ejection fraction

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Background:

Angiotensin receptor-neprilysin inhibitor (ARNI) has promising clinical benefits among patients with heart failure (HF) and reduced ejection fraction (HFrEF). However, the effectiveness in HFrEF patients with the concurrence of end-stage renal diseases (ESRD) is still ambiguous. Therefore, this study aimed to examine the ARNI utilization related to cardiovascular (CV) outcomes among patients with concurrent ESRD and HFrEF.

Methods:

This single-centered retrospective cohort study identified patients with concurrent ESRD and HFrEF, hemodialysis status and renin-angiotensin system inhibitor treatments. The enrolled patients were divided into ARNI and non-ARNI groups, and a propensity score matching was performed to balance the variances. The primary outcome was a composite of hospitalization for HF and mortality; secondary outcome included one-year echocardiogram data of cardiac remodelling. Event outcomes were analyzed with cox proportional hazards models and presented as hazard ratio (HR) and 95% confidence interval (95% CI); the difference in difference analysis was carried out for echocardiographic data.

Results:

A total of 46 matched patients (23 in ARNI) was analyzed. After one-year follow-up, the HR of total hospitalization for HF and mortality of the ARNI versus non-ARNI groups was 0.711 (95%CI 0.1-19.52, P=0.729). The HR of individual outcomes was 1.468 (95%CI 0.11-19.52, P=0.771) for hospitalization for HF, and 0.029 (95%CI 0-1269.77, P=0.516) for mortality. The differences after one-year treatment of left ventricular ejection fraction, left atrial chamber diameters and left ventricular internal diameters between the two groups were insignificant.

Conclusion:

This study found that the composite incidences of hospitalization for HF and mortality

in the ARNI group are non-statistically lower than those in the non-ARNI group. The significantly reversed cardiac remodelling in the ARNI group compared to the non-ARNI group was not observed. Future research with a more large-scale and extended follow-up period may be warranted to examine the effectiveness of ARNI among patients with HFrEF and ESRD.