中文題目：附加低劑量螺內酯可改善晚期腎臟病之高血壓患者且接受血管張力素轉換酶抑製劑或血管血管張力素受體阻滯劑的心血管事件

英文題目：Add-on Low Dose Spironolactone Improve Cardiovascular Events among Advanced CKD Patients with Hypertension Received an Angiotensin-converting Enzyme Inhibitor or an Angiotensin Receptor Blocker Agents

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Background. Spironolactone has been recommended for treating high blood pressure and heart failure to prevent major cardiac adverse events (MACE) and kidney failure. Therefore, we aimed to examine the effectiveness of spironolactone as an add-on therapy among advanced chronic kidney disease (CKD) patients who received angiotensin-converting enzyme inhibitor (ACEI) and angiotensin receptor blocker (ARB) agents.

Materials and methods. CKD stage 3b, 4, and 5 patients with hypertension were selected from National Health Insurance Research Database in Taiwan between 2012 and 2016. The inverse probability treatment weighting (IPTW) was used to adjust the imbalance in baseline characteristics of eligible patients with and without spironolactone as an add-on therapy within three months after the index of advanced CKD patients who received ACEI/ARB. Medication possession ratio (MPR) was used to measure the compliance of spironolactone use. Multivariate Cox regression models were used to compare the effectiveness of spironolactone between the two groups.

Results. Of 2.623 advanced CKD patients who received ACEI/ARB and add-on spironolactone, 55.5% (n=1,456) had received spironolactone (MPR≧80%) as add-on therapy with a mean follow-up of 3.9 years. Two groups were well-balanced after adopting the IPTW technique. The risk of MACE (adjusted hazard ratio [aHR] of 0.71, 95% confidence interval [CI] = 0.57-0.89), non-fatal myocardial infarction (aHR of 0.54, 95 % CI = 0.39-0.75), and hospitalized for heart failure (aHR of 0.84, 95% CI = 0.72-0.98). Moreover, patients with MPR ≧ 80 % of spironolactone had no risks of ARF requiring dialysis (aHR of 0.87, 95 % CI = 0.75-1.02), CRF requiring dialysis (aHR of 0.84, 95 % CI = 0.71-1.00), and hyperkalemia (aHR of 0.86, 95 % CI = 0.69-1.07).

Conclusion. The real-world data of our study indicated that higher compliance with add-on spironolactone use could be associated with a lower risk of cardiovascular diseases in patients with CKD stage 3b, 4, and 5 who received ACEI/ARB, and had no risks of ARF requiring dialysis, CRF requiring dialysis, and hyperkalemia.