

The role of mineralocorticoid receptor antagonist in the treatment of heart failure

Chun-Chieh Wang, M.D.

Director, Cardiac arrhythmia center

Associate Professor of Medicine, Department of medicine, Chang Gung Memorial
Hospital & University, Taoyuan, Taiwan

Heart failure (HF) is a complex clinical syndrome resulting from any structural or functional cardiac disorder that impairs the ability of the ventricle to fill with or eject blood. HF is associated with a high burden of mortality and morbidity, reduced quality of life and increasing healthcare costs in Taiwan.

The mineralocorticoid receptor antagonists (MRAs) spironolactone and eplerenone have become part of standard medical therapy for heart failure with reduced ejection fraction (HFrEF) in the last decade. Randomized clinical trials have shown the clinical efficacy of spironolactone and eplerenone, which lead to lower mortality and HF hospitalization in patients with HFrEF. MRAs improve survival and reduce morbidity in patients with HFrEF with mild-to-severe symptoms (RALES study and EMPHASIS-HF study), and in patients with left ventricular systolic dysfunction and HF after acute myocardial infarction (EPHESUS study). These clinical benefits are observed in addition to the standard treatment of HF with angiotensin converting enzyme inhibitors or angiotensin receptor blockers and beta-blockers.

Despite these important findings from randomized clinical trials and endorsements of international HF guidelines as one of the first line therapies in HF, MRAs are still underutilized in the real world. Recent TSOC HFrEF registry demonstrates that less than half of hospitalized HF patients received MRAs at the time of discharge and one-year follow-up. We will also discuss the pharmacologic differences between the drugs, which may be relevant for therapeutic decision making in individual patients.