

Title: Therapeutic Tightrope: Navigating Guideline Directed Medical Therapy for Heart Failure in Renal Dysfunction

Presenter:

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Learning Objectives:

1. Describe the effect of heart failure guideline directed medication therapies on renal function
2. Define criteria for heart failure medication initiation and titration in chronic kidney disease
3. Explain considerations for heart failure medication management in impaired renal function

Abstract:

Heart failure is a chronic cardiovascular condition with several different guideline-recommended medication therapies (GDMT), including renin-angiotensin-aldosterone system inhibitors (RAASi), beta blockers (BB), mineralocorticoid receptor antagonists (MRA), and sodium-glucose cotransporter 2 inhibitors (SGLT2i). Initiation and titration of these agents may be limited in patients with renal dysfunction due to heightened risk of adverse effects. In chronic kidney disease patients, individual RAASi, SGLT2i, and MRA agents have manufacturing labeling thresholds for GDMT initiation, however balance of risks and benefits can be considered in initiation on a case-by-case basis. These agents also possess protective qualities that have evidence for reducing the rate of glomerular filtration rate decline in addition to cardiovascular benefit in heart failure. In patients with worsening renal function or decompensated heart failure, GDMT should be continued in mild acute renal impairment unless a related contraindication exists. As renal function approaches end-stage classification and risk of hyperkalemia increases, adjunctive therapies can be considered in addition to routine monitoring.

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Audience Response Questions:

1. Which of the following GDMT classes does not possess a mechanism effecting electrolytes in the kidneys?
 - A.ACEi's
 - B.Beta Blockers
 - C.MRA's
 - D.SGLT2i's

2. Which of the following agents has a guideline recommended restriction criteria for initiation to limit risk of adverse effects?
 - A. Sacubitril-valsartan
 - B. Carvedilol
 - C. Dapagliflozin
 - D. Eplerenone

3. At which serum potassium threshold would intervention or adjunctive therapies become necessary?
 - A. $K > 4.5$
 - B. $K > 5.0$
 - C. $K > 5.5$
 - D. $K > 6.0$