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Editorial

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Mind the Gap: Bridging Guideline Recommendations and Real-World Practice in Heart Failure Management

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▸ See the article "Worsening Heart Failure and Medication Use in HFrEF: A Finnish Retrospective Registry Study and Patient Survey" in volume 7 on page 6.

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Patients with worsening heart failure with reduced ejection fraction (HFrEF) face approximately 40% annual risk of heart failure (HF)-related rehospitalization.[1] This repeated hospitalization creates a vicious cycle, increasing the burden of myocardial and renal damage and ultimately leading to cardiovascular mortality.[2] To break this cycle and reduce HF-related hospitalization, current guidelines strongly recommend implementing four essential medications: renin-angiotensin system (RAS) inhibitors, beta-blockers, mineralocorticoid receptor antagonists (MRA), and sodium-glucose cotransporter-2 (SGLT2) inhibitors.[3] However, significant barriers—physician-related, patient-related, and treatment-related—continue to impede optimal guideline-directed medical therapy (GDMT) implementation.[4]

The evolution of GDMT implementation in Korea provides valuable insights into this challenge. The Korean Acute Heart Failure (KorAHF) registry (2011–2014) reported that while RAS inhibitor usage reached 78%, the use of beta-blockers and MRA remained below 60%.[5] More recent data from Korean Heart Failure III (KorHF III) (2018–2022) showed improvement with RAS inhibitors at 81%, beta-blockers at 76%, MRA at 65%, and SGLT2 inhibitors at 20%.[6] Further emphasizing the importance of medication adherence, a recent real-world analysis using Korean National Health Insurance claim data demonstrated that improved patient adherence to angiotensin receptor-neprilysin inhibitors was associated with better clinical outcomes compared to traditional RAS inhibitors.[7] Despite these encouraging trends in both implementation and adherence, a substantial gap persists between guideline recommendations and real-world practice.

In this context, the recent Finnish real-world registry study by Vesikansa et al.[8] offers crucial evidence regarding GDMT implementation. Among 570 HFrEF patients studied between 2013 and 2019, 23% experienced worsening HF events within one year, associated with increased mortality and reduced quality of life as measured by EQ-5D-5L. The study reported high initial medication use rates for RAS inhibitors (85%) and beta-blockers (90%), though MRA usage was notably lower at 44% during the first follow-up year. Importantly, medication adherence, defined as the proportion of purchased versus prescribed medications, significantly impacted outcomes: adherence of ≥60% was associated with a 0.59-fold risk of worsening HF events compared to adherence <60%.

Comparison of Finnish and Korean registries reveals interesting differences. While the use of RAS inhibitors is similar to recent KorHF III data, the Finnish cohort showed higher beta-blocker utilization but markedly lower MRA use (44% versus 65%). The underutilization of MRA, a medication capable of reducing mortality risk by 30% in HFrEF patients, likely reflects concerns about chronic kidney disease and hyperkalemia.[3] However, several factors suggest potential for improvement: MRA is an essential drug in GDMT sequencing, concurrent SGLT2 inhibitor use may mitigate hyperkalemia risk, and trials with emerging non-steroidal MRAs such as finerenone report lower discontinuation rates due to hyperkalemia.[9,10]

The path forward requires a multi-faceted approach to improving both GDMT implementation and medication adherence. Evidence suggests that interventions during the critical transitional period after HF-related hospitalization can enhance outcomes. These interventions include structured discharge protocols, comprehensive patient education programs, and technological solutions such as digital health monitoring systems.[11] Furthermore, multidisciplinary approaches involving clinical pharmacists and systematic changes in healthcare policy and insurance coverage have shown promise.[11]

In an era where we have unprecedented therapeutic options for HF management, our focus must shift from drug development to optimization of implementation. The evidence from both Finnish and Korean registries underscores that closing the gap between guidelines and practice requires attention to both physician implementation and patient adherence. Success in this endeavor could transform our ability to break the cycle of HF-related hospitalization and improve patient outcomes.

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