Newer guideline-directed medical therapies are underutilized in 2021-2 in patients with heart failure and chronic kidney disease

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BACKGROUND

Chronic kidney disease (CKD) is a common comorbidity in patients with heart failure (HF). In 2021 and 2022, HF guidelines endorsed newer therapies such as angiotensin receptor-neprilysin inhibitors (ARNI) and sodium-glucose cotransporter-2 inhibitors (SGLT2i) as first-line medications to improve clinical outcomes in HF patients with or without CKD (Table 1:1,2). Our analysis evaluated the hypothesis that prescription of guideline directed medical therapy (GDMT) is similar in HF patients with or without CKD.

METHODS

Chronic kidney disease (CKD) is a common comorbidity in patients with heart failure (HF). In 2021 and 2022, HF guidelines endorsed newer therapies such as angiotensin receptor-neprilysin inhibitors (ARNI) and sodium-glucose cotransporter-2 inhibitors (SGLT2i) as first-line medications to improve clinical outcomes in HF patients with or without CKD (Table 1:1,2). Our analysis evaluated the hypothesis that prescription of guideline directed medical therapy (GDMT) is similar in HF patients with or without CKD.

RESULTS

Among 17990 patients with HF encounters, 51% had reduced (HFrEF) and 49% preserved ejection fraction (HFpEF). Mild CKD was more common among patients with HFrEF than HFpEF (Stage G1 25% vs 20%, p<0.0001; G2 40% vs 38%, p<0.05) while more severe CKD was more common in patients with HFpEF (G3 32% vs 37%, p<0.0001; G4 4% vs 5%, p=0.0005). Older GDMT (beta-blockers, ACEi/ARB) were widely prescribed irrespective of HF phenotype and CKD stage (Figure 1,2). Use of mineralocorticoid receptor antagonists was intermediate (despite Finerenone resulted not prescribed in our cohort), whereas use of newer GDMT (ARNI and SGLT2i) was less frequent in both HFpEF and HFrEF (Figure 1).

DISCUSSION

Older GDMT (beta-blockers, ACEi/ARB) were widely prescribed irrespective of HF phenotype and CKD stage (Figure 1,2). Use of mineralocorticoid receptor antagonists was intermediate (despite Finerenone resulted not prescribed in our cohort), whereas use of newer GDMT (ARNI and SGLT2i) was less frequent in both HFpEF and HFrEF (Figure 1).

LIMITATIONS

The analysis was conducted on retrospective and pooled observational data which lacked patient level information.

CONCLUSION

• ARNI and SGLT2i use even in 2021-2 was infrequent among patients with HF irrespective of CKD stage.
• Efforts to accelerate uptake of newer guideline-directed medical therapies are needed to improve HF outcomes, irrespective of CKD stage and HF phenotype.

REFERENCES


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