Impact of worsening heart failure events and renal impairment on vericiguat drug use patterns in real-world

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Background & Purpose

- Use patterns of vericiguat in patients with worsening heart failure (wHF) have been recently described. However, data on its use in vulnerable subgroups, particularly those with chronic kidney disease (CKD) or a recent wHF event, are lacking. The purpose of this study was to investigate vericiguat use patterns in specific subgroups in daily life practice in Germany.

Methods

- Longitudinal, retrospective cohort study of the InGef Health Research Database (claims data for ~14% of the 73 million individuals covered by the German statutory health insurance) including all patients with new prescriptions of vericiguat from September 2021 to September 2023
- Discontinuation rates and titration patterns were analyzed stratified by wHF event (defined as hospitalization within 12 months prior to initiation of vericiguat), time since wHF event, and renal impairment.
- Multivariate regression models were used to assess predictors for the achievement of the 10mg target dose and vericiguat discontinuation.

Results

- Vericiguat was initiated in 491 patients (mean age 70±13 years; 22% women). In 311 (63%) patients, a wHF event occurred within the 6 months before initiation, with 228 (73%) of these events occurring 1-29 days prior to initiation. Comorbidity burden was higher than in the VICTORIA trial (Table).
- During a median follow-up period of 226 days (quartiles 131-390 days), 39% of the patients achieved the target dose of 10 mg. The percentage of patients receiving 10 mg was lower in patients with a recent wHF event (1-29 days: 32%; 30-39 days: 22%; >60 days: 52%) and in those with renal impairment (37% vs. 43% without renal impairment). Logistic regression showed that patients with a recent wHF event were less likely to reach 10mg
- Discontinuation within the first year was observed in 19% of the patients, with similar persistence rates in patients with (18%) and without (20%) a wHF event. However, patients with a recent wHF event showed slightly higher discontinuation rates (1-29 days: 19%; 30-39 days: 15%; >60 days: 14%). Notably, discontinuation was less common in patients with renal impairment (16% vs. 23% without renal impairment). History of wHF event and renal impairment were associated with a nominally lower risk of vericiguat discontinuation

Conclusion

- Vericiguat was predominantly initiated in patients with a recent wHF event and a substantial cardiorenal comorbidity burden.
- Renal impairment and a history of recent wHF event did not impact discontinuation rates, however the target dose was reached less often in patients with a recent wHF event. Further research on barriers for up-titration in these subpopulations is warranted.

	Real-world (n = 491)	VICTORIA trial (n = 2,526)
Female sex	106 (22%)	605 (24%)
Age (years)	70 (13)	68 (12)
NYHA class III/IV*	452 (92%)	1045 (41%)
Anemia	110 (22%)	541 (21%)
Atrial fibrillation	299 (61%)	1,098 (44%)
COPD	148 (30%)	431 (17%)
Renal impairment	256 (65%)	1,553 (25%)
Diabetes mellitus	295 (60%)	1,226 (49%)
Hypertension	455 (93%)	2,002 (79%)
Myocardial infarction	198 (40%)	1,099 (44%)
Sleep apnea	95 (19%)	200 (8%)

*Data are n (%) or mean (SD). *Information on NYHA was missing in n=26 patients*

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