CHARACTERISTICS, PATTERNS OF CO-MEDICATIONS AND DOSE TITRATION IN HEART FAILURE PATIENTS USING VERICIGUAT IN REAL-WORLD CLINICAL SETTING IN JAPAN

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Introduction

Background: In the phase 3 VICTORIA trial, sGC stimulator vericiguat reduced the risk of CV death and HFH compared with placebo in HFrEF patients who experienced a worsening event. Evidence on characteristics of patients treated with vericiguat in real-world clinical settings are scarce to date.

Purpose: To assess the characteristics, HF medication use, and dose titration of patients who are treated with vericiguat in real-world clinical settings.

Methods

- A retrospective cohort study using a nationwide Japanese hospital administrative database, MDV.
- Adult HF patients prescribed vericiguat between Jul 2021 and Sep 2022 were included and followed for 90 days.
- Patient characteristics, patterns of HF medication use and vericiguat dose titration were assessed.
- Multivariable Cox proportional hazard models were computed to explore the factors associated with reaching the vericiguat maximal daily dose of 10 mg/day at any given time over the 90 days of follow-up.

Results

Table 1. Baseline characteristics

	All patients (n = 829)	Patients with 2.5 mg as a starting dose (n = 738)
Age, years		
Mean (SD)	75.5 (11.8)	75.5 (11.7)
Median (IQR)	77 (69–84)	77 (69–84)
Male, n (%)	572 (69.0)	510 (69.1)
Body mass index, kg/m^2, median (IQR)	22.1 (19.7–24.9)	22.1 (19.8–24.9)
Missing, n (%)	237 (28.6)	204 (27.6)
Comorbidities, n (%)		
Hypertension	760 (91.7)	681 (92.3)
Myocardial infarction	288 (34.7)	262 (35.5)
Coronary artery disease	591 (71.3)	529 (71.7)
Diabetes mellitus	498 (60.1)	446 (60.4)
Chronic kidney disease	268 (32.3)	240 (32.5)
Atrial fibrillation	272 (32.8)	240 (32.5)
Stroke	138 (16.6)	120 (16.3)
Anemia	369 (44.5)	334 (45.3)
Cardiovascular procedure, n (%)		
Biventricular pacemaker	91 (11.0)	77 (10.4)
Implantable cardioverter defibrillator	102 (12.3)	86 (11.7)
Concomitant HF medications, n (%)		
ACEI or ARB	295 (35.6)	269 (36.4)
Beta-blocker	616 (74.3)	562 (76.2)
MRA	447 (53.9)	411 (55.7)
ARNI	364 (43.9)	335 (45.4)
SGLT2i	451 (54.4)	418 (56.6)
Combined use of 3 GDMT, n (%)	252 (30.4)	232 (31.4)
Combined use of 4 GDMT, n (%)	295 (35.6)	271 (36.7)

Figure. Dose titration of vericiguat after initiation

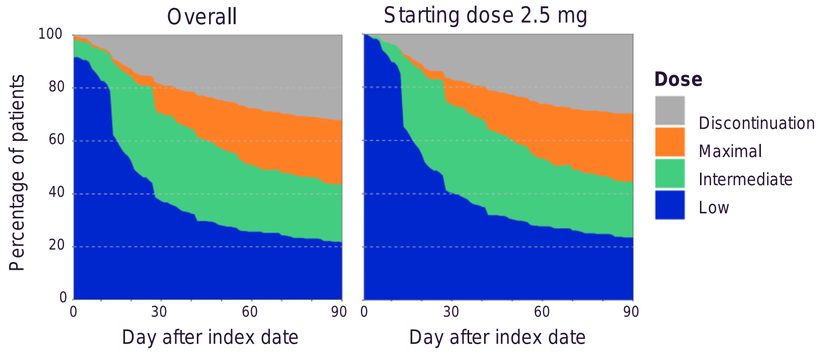

Table 2. Results of multivariable Cox proportional hazard model

	Multivariable HR* (95% CI)
Initiation of vericiguat in the outpatient setting (vs. inpatient setting)	**1.79 (1.27–2.52)**
Use of ARNI before vericiguat initiation	**1.56 (1.08–2.25)**

*Adjusted by age, sex, vericiguat initiation setting, hypertension, use of beta-blockers, use of ARNI, and use of SGLT-2i; these covariates were identified to have significant ($p<0.05$) associations based on univariate HR.

- Factors usually considered to impede uptitration such as older age, presence of hyperkalaemia, CKD, and anaemia were not associated with uptitration to the vericiguat maximal daily dose.

Conclusions

Patients treated with vericiguat were largely similar to the VICTORIA population. The initiation of vericiguat seemed to occur earlier in the treatment cascade than recommended in guidelines.

Abbreviations: ACEI, angiotensin-converting enzyme inhibitor; ARB, angiotensin-receptor blocker; ARNI, angiotensin-receptor blocker neprilysin inhibitor; CI, confidence interval; CKD, chronic kidney disease; CV, cardiovascular; GDMT, guideline-directed medical therapy; HF, heart failure; HFH, heart failure hospitalization; HFrEF, heart failure with reduced ejection fraction; HR, hazard ratio; IQR, interquartile range; MDV, Medical Data Vision; MRA, mineralocorticoid receptor antagonist; SD, standard deviation; sGC, soluble guanylate cyclase; SGLT2i, sodium-glucose cotransporter 2 inhibitor.

Declaration of interest:

Employment in industry: Bayer Yakuhin, Ltd.