Impact of left ventricular ejection fraction in Japanese heart failure patients

Heart failure (HF) is a complex clinical syndrome, where not only heart failure with preserved ejection fraction (HFpEF) but also heart failure with reduced EF (HFrEF) are substantially involved [1,2]. Indeed, HFpEF and HFrEF respectively account for approximately half of HF patients [3,4]. Although it has been reported that the prognosis is comparable between patients with HFpEF and those with HFrEF [3,4], we also have previously demonstrated that the patients with HFpEF had a significantly better prognosis than those with HFrEF; however, after the adjustment with stage of HF, the survival became comparable between the 2 groups, suggesting a smaller population of HFpEF in the advanced stage of HF [5]. This previous study also demonstrated that the 5-year survival rate from all-cause death was apparently better than in the previous study [6], probably because the patients are monthly followed up to control sodium intake and blood pressure in Japan. Consistently, it has been also reported that intensive medical treatment for HF patients with close follow-up can reduce re-admission for HF and cardiac deaths [7].

In the current issue of Journal of Cardiology, Kaneko et al. identified the clinical characteristics, long-term outcomes, and prognostic factors of HFpEF and HFrEF in a Japanese real-world clinical practice [8]. The major findings were (1) that the prevalence of HFpEF was relatively high, (2) that patients with HFpEF showed a better prognosis than those with HFrEF; however, the clinical outcomes of HFpEF and HFrEF patients were comparable in inpatients, and (3) that the independent predictors of all-cause death were older age, chronic kidney disease (CKD), anemia, prior myocardial infarction, absence of statin treatment, and lower left ventricular EF in HFrEF, and lower body mass index, CKD, anemia, higher B-type natriuretic peptide and left ventricular hypertrophy in HFpEF [8]. As also previously reported, patients with HFpEF are consistently older, with a higher prevalence of females and hypertension, compared to those with HFrEF [4,6,9]. Furthermore, it has been also reported that the prognostic factors of HF are older age, severity of HF, anemia, presence of CKD, lower EF, and the presence of pulmonary hypertension due to left heart disease [8,10–12]. Based on these observational findings, more effective treatment for HF should be developed in the near future.

The mechanism of interaction between HFpEF and HFrEF should also be clarified in future studies. As previously reported, several risk factors, such as metabolic disorders and hypertension, are related to HF [13], which can cause left ventricular diastolic and/or systolic dysfunction, and then symptomatic HFpEF or HFrEF may occur (Fig. 1). However, in the clinical situation, we often experience the improvement or worsening of EF during the observational period, indicating that left ventricular EF is variable and suggesting that HFpEF and HFrEF are not persistent. From this point of view, some factors other than left ventricular EF might be important for the prognosis. This issue should also be clarified in the near future.

References


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