Worse long term prognosis in new onset HFpEF treated in HF clinics compared to HFrEF and HFmrEF patients; reflecting need for effective treatment in HFpEF. Results from the Stockholm PREFERS Study

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Background/Introduction: Few contemporary studies are available for long term outcome in patients with new onset heart failure (HF) of the three 3 phenotypes; HF with preserved ejection fraction (HFpEF), mildly reduced (HFmrEF) and reduced EF (HFrEF). The Stockholm PREFERS study (Preserved and Reduced Ejection Fraction Epidemiological Regional Study) included new onset HF patients between 2014-18.

Purpose: To report and compare long term outcomes for patients with new onset HFpEF, vs HFmrEF and HFrEF.

Methods: Totally 547 patients, HFpEF n = 137 (25%), HFmrEF n = 61 (11%) and HFrEF n = 349 (64%) were included and followed to end of August 2021. Time to total and cardiovascular (CV) mortality and CV mortality and first HF hospitalizations were compared by log rank test and Cox regression models. All patients were followed at hospital-based HF clinics for guideline directed information and treatment. HFpEF patients were recommended optimal treatment for comorbidities including hypertension, diabetes, ischemic heart disease and atrial fibrillation, and RAAS-inhibition or diuretics. Primary endpoint: CV mortality and HF hospitalizations.

Results: Mean age was 76 (HFpEF), 71 (HFmrEF) and 67 (HFrEF) years (p<0.001). Female sex 49% (HFpEF), 30% (HFmrEF) and 30% (HFrEF) (p<0.001). Median follow up was 3.8 years (IQR 3.0;4.7). Median EF was 55%, 45% and 30% in HFpEF, HFmrEF, and HFrEF, respectively (p<0.001). All-cause mortality was 13% (n = 70), and CV mortality 7.3% (n = 40). The overall CV hospitalization rate was 13.9% (n = 76). The combined endpoint of CV mortality and HF hospitalizations was 21.2% (n = 116) and higher in HFpEF compared to HFrEF (Univariate Hazard ratio (HR) 2.3 (95% CI 2.0-2.5, p<0.001) and vs HFmrEF (HR 2.5; 2.1-2.6, p<0.001). In analysis adjusted for age, sex and diabetes, HFpEF had worse outcome vs HFrEF and HFmrEF (HR 1.5; 0.2-2.0, p<0.05).

Conclusions: New onset HFpEF patients have worse long term outcome vs new onset HFrEF and HFmrEF patients. There is a need for effective evidence based treatment in HFpEF.
Figure 1

The Kaplan-Meier survival curve shows the probability of being free of cardiovascular (CV) death or hospitalization over time for three subgroups: HFrEF (n = 349), HFmrEF (n = 61), and HFP EF (n = 137). The p-value for the difference between the subgroups is < 0.0001.