

Trends in cause-specific readmissions in heart failure with preserved versus reduced and mid-range ejection fraction

X.T. Cui¹, E. Thunstrom², U. Dahlstrom³, J.M. Zhou¹, J.B. Ge¹, M. Fu²

¹Zhongshan Hospital, Fudan University, Shanghai Institute of Cardiovascular Diseases, Shanghai, China; ²Institute of Medicine - Sahlgrenska Academy - University of Gothenburg, Gothenburg, Sweden; ³Linköping University, Linköping, Sweden

Funding Acknowledgement: Type of funding source: Foundation. Main funding source(s): The SwedeHF was funded by the Swedish National Board of Health and Welfare, the Swedish Association of Local Authorities and Regions.

Background: It remains unclear whether the readmission of heart failure (HF) patients has decreased over time and how it differs among HF with preserved ejection fraction (EF) (HFpEF) versus reduced EF (HFrEF) and mid-range EF (HFmrEF).

Methods: We evaluated HF patients index hospitalized from January 2004 to December 2011 in the Swedish Heart Failure Registry with 1-year follow-up. Outcome measures were the first occurring all-cause, cardiovascular (CV) and HF readmissions.

Results: Totally 20,877 HF patients (11,064 HFrEF, 4,215 HFmrEF, 5,562 HFpEF) were included in the study. All-cause readmission was highest in patients with HFpEF, whereas CV and HF readmissions were highest in HFrEF. From 2004 to 2011, HF readmission rates within 6 months (from

22.3% to 17.3%, $P=0.003$) and 1 year (from 27.7% to 23.4%, $P=0.019$) in HFpEF declined, and the risk for 1-year HF readmission in HFpEF was reduced by 7% after adjusting for age and sex ($P=0.022$). Likewise, risk factors for HF readmission in HFpEF changed. However, no significant changes in cause-specific readmissions were observed in HFrEF. Time to the first readmission did not change significantly from 2004 to 2011, regardless of EF subgroup (all P -values >0.05).

Conclusions: Although the burden of all-cause readmission remained highest in HFpEF versus HFrEF and HFmrEF, a declining temporal trend in 6-month and 1-year HF readmission rates was found in patients with HFpEF, suggesting that non-HF-related readmission represents a big challenge for clinical practice.