Differences in clinical and prognosis patient's characteristics between acute heart failure with mid-range ejection fraction compared to heart failure with other ejection fraction groups

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On behalf of PROAMTIC
Funding Acknowledgement: Type of funding source: None

Background: There are scarce data on clinical profile and prognosis of pts with Heart failure with mid-range ejection fraction (HFmrEF). The aim of this study was to analyse the patient's characteristics and their prognosis in terms of morbidity and mortality compared to those patients with acute heart failure with reduced (HFrEF) and preserved (HFpEF) ejection fraction

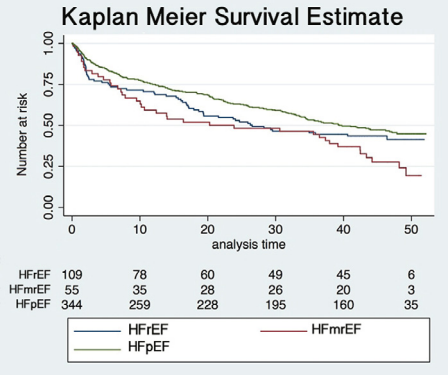
Methods: We performed a retrospective analysis from a prospective observational study developed in a University Hospital, which covers 220.000 individuals. We analysed 600 discharges with the main diagnosis of Heart Failure with 52 months of median follow up. We obtain clinical and demographic data at the moment of admission and during de follow up. To analyse mortality and readmission we used a Kaplan-Meier model.

Results: A total of 551 patients (91%) had a transthoracic echocardiogram (TEE) during the admission. Eleven percent (11.8%) of the patients (pts) had HFmrEF (35.6% of them were women), 66.7% HFpEF (81.8% women) and 20.6% HFrEF (29.0% women).

Median age of HFmrEF was 80.5±1.3 years, similar to HFpEF (81±0.5 years). However, pts with HFrEF were younger (75.2±1.1 years). A higher percent of pts with HFrEF were on beta-blocker (BB) treatment at admission compared to HFmrEF (51.79% vs 47.54%) and HFpEF (39.91%). At discharge, all of them were on high doses of BB (64.55% HFrEF, 54.10% HFmrEF and 33.62% HFpEF).

After an adjusted analysis by age, pts with HFmrEF had higher mortality compared to HEpEF (HR: 0.55; 95% CI: 0.38–0.80; p=0.002) with no statically significant difference compared to HFrEF (HR: 0.88; 95% IC: 0.57–1.35; p=0.5). Pts with HFmrEF were on a higher risk of readmission compared to HFpEF (HR 0.59; 95% CI 0.41–0.84, p=0.004). There was also no statistical difference compared to HFrEF (HR 0.72, 95% CI 0.47–1.11; p=0.14).

Conclusions: According to our results, pts with HFmrEF and HFpEF are older compared to HFrEF. HFpEF were mostly women, compared to other groups. A lower percent of HFmrEF were also on BB treatment. HFmrEF and HFrEF had a similar prognosis in terms of readmission and mortality. HFmrEF pts were on higher risk of mortality and readmission compared to HFpEF. We need more studies to find more information and confirm these results.



Graph 1