

Gender Differences in Weight Loss and Readmissions with Acute Heart Failure Admissions.

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Background

Acute heart failure (AHF) patients admitted to the hospital are generally volume overloaded, and improve with diuresis. However, there are varying phenotypes, most clearly distinguished by ejection fraction (EF). However, an often overlooked distinction may be made based on gender. It is known that female patients with AHF tend to be older, less ischemic, with preserved (EF). Treatment responses between men and women, including readmission rates are not well established, with variable findings. To further understand gender differences in AHF treatment and outcomes in a local, contemporary setting, we studied the AHF registry at The Christ Hospital, Cincinnati, OH.

Methods

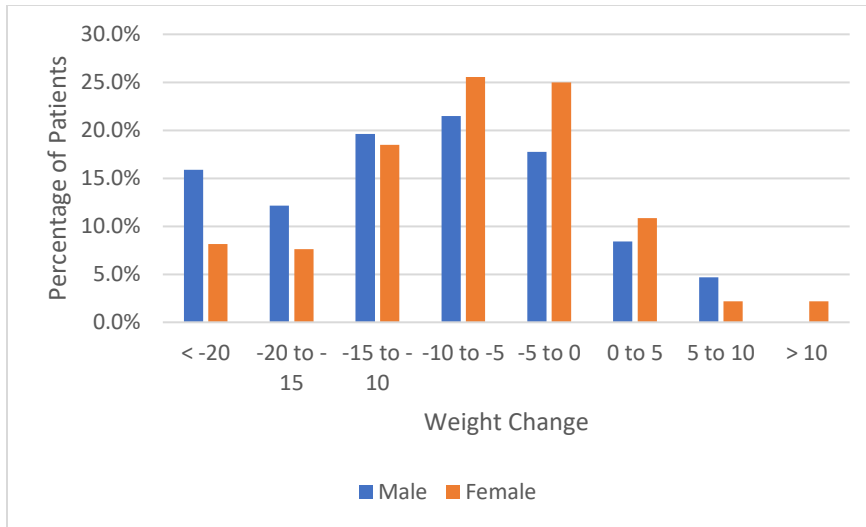
We performed a retrospective study of 685 patients admitted *for* or *with* heart failure, undergoing diuresis from December 2017 to May 2018 and March 2020 to August 2020. The exclusion criteria consisted of patients who 1) died during the hospitalization, 2) were treated with dialysis, 3) underwent surgery of any kind during the hospitalization, or 4) left hospital against medical advice. We collected admission and discharge laboratory data, weight change, net input/output, and 30-day all-cause readmissions, stratified by gender.

Results

Demographic characteristics of men vs. women are consistent with existing data (age, EF, blood pressure, BMI). Men, despite worse baseline renal function, tended to lose more weight in absolute and relative values than women. Distribution of weight changes from admission to discharge are shown in the graph, showing a shift to the right (less weight loss) for women. Female patients appear to be readmitted more frequently within 30 days of discharge than males.

Conclusions

The population of AHF patients at our center resembles existing data. However, a higher 30-day all-cause readmission rate for women appear to be accompanied by less vigorous diuresis and weight loss.



	Male	Female
Avg Age (years)	69.9	73.4
Avg Height (inches)	69.9	63.6
Avg Weight (lbs)	224.1	193.9
% EF ≥ 50%	29.9%	58.4%
Avg systolic BP (mmHg)	128.2	131.8
Avg Admit BUN (mg/dl)	31.3	29.0
Avg Admit Creatinine (mg/dl)	1.9	1.3
Avg Δ BUN (mg/dl)	4.46	5.03
Avg Δ Creatinine (mg/dl)	-0.01	-0.03
Avg Weight Loss (lbs)	11.44	8.60
% of body weight lost	5.1	4.4
Avg Net Volume lost (ml)	7427.51	6474.53
Avg BMI	31.66	33.25
Readmission Rate	22.9%	27.0%