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Sex Differences in Outcomes Among Patients with High-Output Heart Failure: A Retrospective Cohort Study

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Sex Differences in Outcomes Among Patients with High-Output Heart Failure: A Retrospective Cohort Study

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Background

- ❖ There is limited data specifically looking for sex differences in patients with high output heart failure (HOHF).
- ❖ We sought to examine the national inpatient sample database to describe in-hospital outcomes among female patients.

Methods

- ❖ Data were extracted from the National Inpatient Sample (NIS) Database for the years 2019 and 2020.
- ❖ The NIS was searched for hospitalizations of adult patients with HOHF.
- ❖ Female patients with HOHF were identified.
- ❖ Female patients with HOHF who were pregnant were excluded from this study.
- ❖ The primary outcome was inpatient mortality. SPSS software was used for statistical analysis.

Results

- ❖ This study included 946 patients with HOHF, of which 517 (54.6%) patients were female. Out of those 23 women were pregnant and were excluded from this study.
- ❖ Admissions with female HOHF patients had higher prevalence of anemia (30.3% Vs 23.5% $p < 0.001$), thyroid disease (15.6% Vs 12.3% $p < 0.001$), and obesity (18.5% Vs 12.5% $p < 0.001$). In-hospital mortality was higher among the female cohort (6.2% Vs 5.3% $p < 0.001$).
- ❖ Multivariate regression showed that patients with female sex and HOHF had higher inpatient mortality (OR 1.613, CI 1.298-2.004 $p < 0.001$).
- ❖ Total hospital charges were more for female HOHF patients but not statistically significant (\$115,984 vs \$110,841, $P < 0.079$).
- ❖ The mean length of stay (LOS) was more for female patients with HOHF (6.8 days vs 5.4 days, $p < 0.001$).
- ❖ On secondary analysis it has shown that female patients with HOHF higher odds of having arrhythmias (OR 1.841, CI 1.598-2.120, $p < 0.001$), AKI (OR 2.028, CI 1.805-2.279, $p < 0.001$), acute liver failure (OR 1.521, CI 1.493- 1.598, $P < 0.001$) and shock (OR 2.640, CI 1.938-3.596, $p < 0.001$).

Conclusions

- ❖ In this nationally representative population-based retrospective cohort study, **females had higher mortality and worse outcomes among patients with HOHF.**
- ❖ These findings have important implications, as we strive for equitable care, irrespective of biological sex.
- ❖ Efforts are needed to **minimize the excess mortality observed among women.**