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## INTRODUCTION

- Nonalcoholic steatohepatitis (NASH) is the progressive form of Nonalcoholic Fatty Liver Disease (NAFLD).
- With the increasing trend in the prevalence of NASH in last decade, it has become important to study each and every aspect of the disease prevalence.
- Presence of gender disparities have been reported in NASH but there have not been enough studies about that, so we decided to evaluate gender disparities among patients with NASH

## METHODS

- Adult male and female patients admitted with NASH, were analyzed from September 2015 to December 2020 using the National Inpatient Sample database.
- The primary outcome was to determine the burden of NASH in both subgroups. Secondary outcomes included all-cause in-hospital mortality, length of stay (LOS), and total hospital costs.
- SAS 9.4 software was used for statistical analysis.

## RESULTS

- Out of 435760 patients admitted with NASH, 2,69,980(62%) were female and 1,65,780(38%) were male. Median age in males is 61.3 ± 13 vs 62.2 ± 13.2 in females. Predominantly Caucasian Males and Females were reported compared to other ethnic groups.
- Comorbidities like hypertension, coronary artery disease, diabetes, peripheral vascular disease, A fib were higher in the male group compared to female. Only Obesity was reported slightly higher (37.2% vs 35.9%) in females.
- Higher in hospital mortality was observed (3.8% vs 3.6%, P < 0.001) in male patients with NASH. Male subgroup demonstrated higher burden of A.fib (17.1% vs 12.6%) and VTE (1.8% vs 1.4%) compared to female subgroup.
- Inpatient hospital stay was found to be almost similar in both subgroups.
- We noted the cost of hospitalization is higher [18156\$ ± 31336 vs. 15701\$ ± 25255p < 0.001] in males with NASH.
- Furthermore, our study showed increased need for acute/subacute rehab facility upon discharge (18.5% vs 15.1%) in female subgroup.

## TABLES

Table 1. Baseline characteristics of Gender Disparity in NASH patients hospitalized between September 2015 and December 2020

Variables	Male N=165,780(38%)	Female N=269,980(62%)	P- Value
Age, in years (Mean ± SD*)	61.3 ± 13	62.2 ± 13.2	0.001
Age groups, %			<0.001
18 - 40 years	7.5%	7.2%	
41 - 60 years	35.2%	31.6%	
61 - 80 years	52.6%	55.2%	
>80 years	4.8%	6%	
Race, %			<0.001
Caucasians	77.9%	72.7%	
African Americans	3.6%	4.6%	
Others	18.4%	22.7%	
Comorbidities, %			<0.001
Hypertension	63.5%	61.9%	<0.001
Diabetes mellitus	61.5%	61.2%	0.04
Congestive heart failure	22.9%	21.7%	<0.001
CAD*	29.9%	18.9%	<0.001
Peripheral vascular disease	5.5%	3.9%	<0.001
COPD*	18.2%	24.7%	<0.001
Renal failure	28.9%	26.3%	<0.001
Coagulopathy	34.3%	31.3%	<0.001
Obesity	35.9%	37.2%	<0.001
Drug abuse	2.4%	2.4%	0.39
Alcohol abuse	5.6%	2.5%	<0.001
Smoking	36.5%	29%	<0.001
Insurance type, %			<0.001
Medicare	53.7%	58.6%	
Medicaid	10%	13.1%	
Private	30.3%	23.7%	
Other	6%	4.6%	
Location/Teaching status of the hospital, %			<0.001
Rural	7%	8%	
Urban nonteaching	17.6%	18.7%	
Urban teaching	75.4%	73.3%	

Table 2. Outcomes of Gender Disparity in NASH patients

Outcomes	Male N=165,780(38%)	Female N=269,980(62%)	P-value
In-hospital mortality, %	3.8%	3.6%	<0.001
Mortality adjusted odds ratio	0.96(0.93 - 0.99)		0.01
Length of stay, in days (mean ± SD)	5.8 ± 7.2	5.7 ± 6.5	0.008
Total hospitalization cost, in US \$ (mean ± SD)	18156 ± 31336	15701 ± 25255	<0.001
Atrial fibrillation	17.1%	12.6%	<0.001
VTE	1.8%	1.4%	<0.001
Disposition, %			<0.001
Discharge to home	58.9%	54.5%	
Transfer other: includes Skilled Nursing Facility, Intermediate Care Facility, or another type of facility	15.1%	18.5%	
Home health care	17.9%	19.9%	
Against medical advice	0.9%	0.6%	

## CONCLUSION

Our study suggests that incidence of NASH is much higher in Caucasian female despite less comorbidities. Higher in-hospital mortality and cost burden noted in males with NASH. Given the fact that NASH is currently second leading cause of liver transplantation overall and leading cause in female, aggressive risk reduction strategies and proactive screening approaches needs to be established.

The primary author and the coauthors have no disclosures.

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