

Females Are at Lower Risk of Mortality as Compared to Males When Admitted to Esophageal Variceal Bleeding: A

National Inpatient Sample Analysis

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Introduction

- The natural history of liver disease differs by gender.
- Women are significantly less likely to have chronic liver disease, with men accounting for 55–70% of the total cases.
- Women are thought to have a more favorable clinical course however the effect of gender on outcomes in patients with esophageal variceal bleeding is unknown.
- In this study, we analyze the effects of gender differences on outcomes in variceal bleeding

Methods

- The National Inpatient Sample (NIS) database was used to identify patients with a discharge diagnosis of esophageal varices with hemorrhage from 2016 to 2019.
- The relationship between gender and in-hospital mortality, endoscopy requirement, acute kidney injury (AKI), blood transfusion requirement, sepsis, ICU admission, placement of transjugular intrahepatic portosystemic shunt (TIPS), total hospitalization charge, and length of stay was analyzed using multivariate logistic regression.
- We adjusted for patient demographics, hospital characteristics, hepatic decompensations, and common etiologies of liver disease.

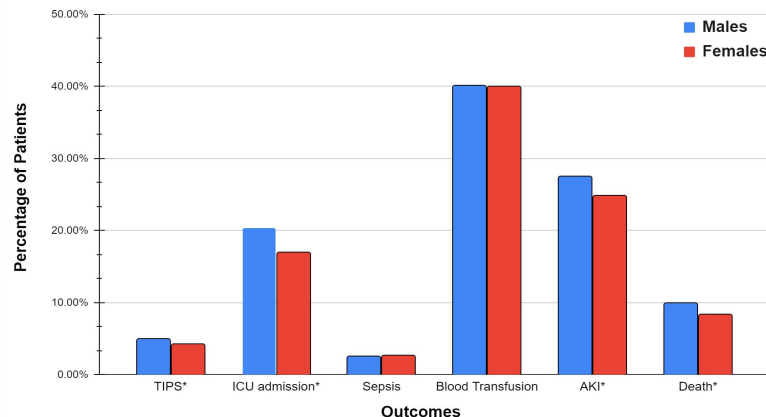


Figure 1: Comparison of categorical outcomes, stratified by gender

	Unadjusted coefficient	p-value	Adjusted coefficient	p-value
LOS	0.1 days	0.252	0.003 days	0.975
Total Charge	\$2346.65	0.211	2135.59	0.247
Total Costs	\$525.63	0.259	607.16	0.183
Time to EGD	0.05 days	0.199	0.02 days	0.632

Table 1: Unadjusted and Adjusted coefficients for continuous outcomes

Results

- We identified a total of 166,760 patients with variceal bleeding of which 32.7% were female.
- The risk of mortality rate in females was lower than males (aOR:0.88, p=0.005).
- There were no statistical differences between males and females in terms of length of stay (-0.001 days, p=0.982), hospitalization cost, and charge (-\$2,332.25, p=0.214, and -\$520.99, p=0.249, respectively).
- Females also had decreased risk of AKI (aOR:0.78, p< 0.001), ICU admission (aOR=0.84 p< 0.001) and TIPS (aOR=0.83 p=0.002).
- There was no statistically significant difference in the rates of endoscopy (aOR=1.01 p=0.30) and blood transfusion requirement (aOR=1.03 p=0.299) between the two groups.

Conclusion

- Women hospitalized with esophageal variceal bleeding are at a lower risk of death compared to males.
- Our study also highlights decreased disease severity in females as evidenced by lower rates of AKI, ICU admission and TIPS.
- Further research is needed to elucidate the factors affecting the outcomes, such as the role of estrogen, in patients admitted with acute variceal bleeding.