Postprocedural Complications in Patients With Cirrhosis

An Analysis of the National Inpatient Sample 2012-2018

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Background

- Patients with cirrhosis undergoing procedures can be vulnerable to complications, as side effects are common in the post-procedural period.
- There are minimal studies on the influence of sex, race, and insurance status on mortality, hospital length of stay (LOS), and total hospital charges for patients with cirrhosis undergoing endoscopic retrograde cholangiopancreatography (ERCP).
- The objective of this study was to identify risk factors in a national population cohort **(in the USA) admitted to hospitals in the years 2012-2018.**

Methods

- All patients aged 18 years and above with cirrhosis undergoing ERCP were identified from the US Nationwide Inpatient Sample (NIS), a large publicly available all-payer inpatient care database in the USA.
- **Multivariate regression analysis was used to estimate** the odds ratios of in-hospital mortality, the average length of **hospital stay, and hospital charges, after adjusting for age, gender, race, primary insurance payer status, hospital type and size (number of beds), hospital region, hospital teaching status, and other demographic characteristics.**

For patients with cirrhosis undergoing ERCP there was increased mortality and length of stay, compared to those without cirrhosis.

Results

- Our study identified approximately 235, 970 patients who had been discharged, 8,014 with cirrhosis undergoing ERCP and 227,956 undergoing ERCP without cirrhosis from 2012-2018.
- For these patients, the average age was 61.4.
- The analysis **revealed that increases in mortality [OR 3.32 (2.96-3.73), P < 0.0001] and length of stay [OR 1.03 (1.02-1.04), P < 0.0001] were statistically significant** but there was no statistically significant difference in total hospital charges [OR 1.00 (1.00-1.01), P < 0.001] for patients with cirrhosis undergoing ERCP compared to patients without cirrhosis undergoing ERCP.
- Additionally, **the presence of ascites [OR 1.78 (1.40-2.27), P < 0.0001], acute liver failure [OR 2.11 (1.45-3.07), P < 0.0001], respiratory failure [OR 2.04 (1.11-3.75), P < 0.022], and hepatorenal syndrome (HRS) [OR 4.06 (2.90-5.70), P < 0.0001] were positive predictors** for mortality for patients with cirrhosis undergoing ERCP.

Conclusion

- In patients with cirrhosis undergoing ERCP, higher mortality and LOS were noted compared to patients without cirrhosis who underwent ERCP.
- It is important to identify these patients and treat them aggressively and earlier on as they are likely to have higher post-procedural complications and mortality.

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