

VARIABILITY OF PRESENTATION OF CHOLELITHIASIS IN RELATION TO ETIOLOGY AND STAGES OF CIRRHOSIS OF LIVER IN A TERTIARY CARE HOSPITAL IN DHAKA CITY

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Background: In patients with cirrhosis of liver, cholelithiasis has been recognized to have a higher incidence associated with high morbidities. Asymptomatic gall stone disease in cirrhotic patients are currently managed conservatively with close monitoring and surgery done only when symptoms arise, complications develop. But in those cases, due to systemic complications and local anatomic consequences related to cirrhosis rises anesthetic risks and perioperative complications more in advanced stages of cirrhosis. Therefore, the treatment of the aforementioned biliary conditions in cirrhotic patients has become a challenging issue. To manage these groups of people more effectively, we have to better understand the relation between cholelithiasis and cirrhosis of the liver. **Methods:** This cross-sectional study was carried out from October 2022 to October 2024. A total of 261 patients were enrolled from the Department of Gastrointestinal, Hepatobiliary and Pancreatic Disorders (GHPD), BIRDEM, Dhaka Bangladesh, who met the established selection criteria. Among them, 131 were patients with cirrhosis of liver and the remaining 130 served as controls. Relevant history, physical examination, laboratory investigations were taken, and data were recorded in separate case record forms. Collected data were checked for errors and then analyzed using the software SPSS 25. Baseline demographics, clinical, laboratory parameters, and Child- Pugh classification were analyzed. Statistical comparisons were made using independent t-test, chi-square test, fisher exact test, and Mann-Whitney U-tests, with a significance threshold of $p < 0.05$. **Results:** In this study, the baseline characteristics of participants were compared between 131 cirrhotic patients and 130 controls matched for age and sex. Cholelithiasis was significantly high in cirrhotic patient (34.4%) than in control (7.7%) ($p < 0.001$). Also found more often in male cirrhotic patients (68.9%) than in female (31.1%) ($p = 0.001$). A significant association was found between family history of cholelithiasis and the presence of gallstones in cirrhotic patients ($p = 0.003$). The stages of liver disease, as assessed by the Child- Pugh classification, Cholelithiasis was found more often in decompensated liver disease (80%) than in compensated (20%) but this is not statistically significant. Cirrhosis with cholelithiasis significantly associated with HBV related etiology ($p = 0.001$) where non B non C etiology is significantly associated with cirrhosis without cholelithiasis group ($p = 0.038$). Laboratory parameters, including CBC, liver enzymes, and serum bilirubin did not show significant differences. Among patients with cholelithiasis, 31.1% were symptomatic, while 68.9% were asymptomatic. No significant association was observed between the presentation of cholelithiasis (symptomatic vs. asymptomatic) and common etiology of liver cirrhosis ($p = 0.614$) and also there were no significant associations with liver disease severity ($p = 0.156$). **Conclusion:** Cholelithiasis is not uncommon among patients with cirrhosis of liver, among them a considerable portion have asymptomatic cholelithiasis. Presence of cholelithiasis in cirrhosis is significantly associated with male gender, having family history of gallstones and HBV related etiology. But there were no significant association between the presentation of cholelithiasis (symptomatic vs. asymptomatic) with common etiology of liver cirrhosis and stages of liver disease. These results emphasize the need for targeted screening and management strategies for this large group of patients.

Keywords: Liver cirrhosis, Cholelithiasis, Gallstone disease

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