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3. OUTCOME OF CHOLECYSTECTOMY IN US VETERANS WITH CIRRHOSIS

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Background: The Veterans Affairs medical system in the US, encompassing about 60,000 patients with cirrhosis. Cholelithiasis is common in patients with cirrhosis, and cholecystectomy, especially laparoscopic, is commonly perceived as a high-risk operation in these patients. This study examines the outcome of open and laparoscopic cholecystectomy (OC/LC) in veterans with cirrhosis.

Methods: We analyzed the Veterans Affairs Surgical Quality Improvement Program to identify all patients with cirrhosis and ascites who underwent cholecystectomy from 2008 to 2015. Data collection included demographics, operative details, Model for End-stage Liver Disease (MELD) score, and postoperative outcomes. Univariate and multivariate regression were used to identify predictors of morbidity and mortality, and a p-value of ≤ 0.05 was considered significant.

Results: A total of 349 patients were identified (97% males, mean age 62.7, mean BMI 28.4, 55.6% functionally independent, 90% with ASA class \geq III, and median MELD score was 11). Overall, mean operative time was 2.1 hours, length of stay (LOS) was 7.1 days, complications occurred in 18.6% (65) of patients, and 30-day mortality was 3.7% (13). LC was performed in 202 (58%) cases, OC in 147 (42%) cases, and 19.2% were performed emergently. Compared to OC, patients who underwent LC were more functionally independent (90.1% vs. 76.2%), more likely to have esophageal varices (38.1% vs. 19.7%, $p < 0.001$), had higher BMI (28.8 vs. 27.1, $p = 0.006$), lower MELD score (10.26 vs. 12.7, $p < 0.001$), less emergent procedures (11.4% vs. 29.9%, $p < 0.001$), shorter operative time (1.65 hours vs. 2.32 hours, $p < 0.001$), LOS (3 days vs. 6 days, $p < 0.001$), and lower mortality (1.5% vs. 6.8%, $p = 0.01$) and morbidity (9.9% vs. 30.6%, $p < 0.001$). Overall, MELD ≥ 15 (OR 5.74; 95%CI 1.44-22.89; $p < 0.001$), and poor functional status (OR 5.57; 95%CI 1.35-22.9; $p < 0.001$) were independent predictors of mortality.

Conclusion: Although cholecystectomy is a high-risk operation in veterans with cirrhosis, LC has a better outcome than OC in these patients. MELD score and poor functional status are the independent predictors of mortality regardless of the operative approach.