

Factors predicting difficult laparoscopic cholecystectomy

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Abstract

Introduction:

Laparoscopic cholecystectomy is the standard treatment for gallbladder diseases. However, certain factors can predict a challenging procedure. Identifying these factors preoperatively and intraoperatively can help in managing expectations and improving patient outcomes.

Objective:

The aim of this study is to identify and analyze the factors that predict a difficult laparoscopic cholecystectomy, focusing on both preoperative and intraoperative parameters.

Methodology:

A study was conducted on 90 patients who underwent laparoscopic cholecystectomy between October 2022 till September 2023. Preoperative factors such as patient demographics, history of previous abdominal surgeries, ultrasound findings, and laboratory results were evaluated. Intraoperative factors included adhesions, inflammation, and anatomical variations. Statistical analysis was performed to determine the significance of these factors in predicting the difficulty of laparoscopic cholecystectomy

Results:

Out of 90 patients, 5 (5.5%) had difficult laparoscopic cholecystectomy. Significant preoperative predictors included male gender ($p=0.01$), BMI > 30 ($p=0.02$), previous upper abdominal surgery ($p=0.03$), and gallbladder wall thickness > 4 mm on ultrasound ($p=0.04$). Intraoperative factors such as severe adhesions ($p=0.001$) and unclear anatomy ($p=0.002$) were also significant predictors of difficulty.

Discussion:

The study highlights that both preoperative and intraoperative factors play a crucial role in predicting difficult laparoscopic cholecystectomy. Preoperative predictors can aid in patient counseling and surgical planning. Intraoperative findings necessitate surgical expertise and sometimes conversion to open cholecystectomy to ensure patient safety.

Conclusion:

Identifying predictors of difficult laparoscopic cholecystectomy preoperatively and intraoperatively is essential for optimal surgical planning and patient management. Surgeons should consider these factors to minimize complications and improve surgical outcomes. Further studies with larger sample sizes and prospective designs are recommended to validate these findings.

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