



## A Comparative Analysis of Postoperative Complications Following Open and Laparoscopic Cholecystectomy- Systematic review

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### ABSTRACT

**Objective:** This study aims to systematically compare the postoperative complications associated with open and laparoscopic cholecystectomy procedures, employing the Modified Clavien-Dindo Classification System for a comprehensive assessment. The primary focus is to provide insights into the relative safety and complication profiles of these two surgical approaches.

**Methods:** A thorough literature review was conducted, encompassing studies that investigated postoperative complications in patients undergoing either open or laparoscopic cholecystectomy. The selected studies utilized the Modified Clavien-Dindo Classification System to categorize and grade complications, ensuring uniformity in reporting. A range of databases, including PubMed, Scopus, and Cochrane Library, were queried to identify relevant articles.

**Results:** The analysis of the selected studies revealed nuanced differences in postoperative complications between open and laparoscopic cholecystectomy, as classified by the Modified Clavien-Dindo system. While both approaches exhibited overall safety, laparoscopic cholecystectomy demonstrated a lower incidence of high-grade complications. The majority of complications associated with laparoscopic procedures were classified as lower-grade, indicating minor clinical significance, whereas open cholecystectomy exhibited a higher proportion of moderate to severe complications.

**Conclusion:** Our findings suggest that laparoscopic cholecystectomy is associated with a favorable postoperative complication profile compared to open cholecystectomy when assessed using the Modified Clavien-Dindo Classification System. Surgeons and healthcare practitioners should consider these results when making decisions about the most suitable surgical approach for cholecystectomy, taking into account the potential impact on patient outcomes.

**Keywords:** Complications, laparoscopic, cholecystectomy, Clavien-Dindo Classification System

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