



Original Article

Complications of Calculous Cholecystitis in Acute-on-Chronic Cases Post-Surgery: A Case Series of 65 Patients

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ABSTRACT

Background: Acute exacerbations of chronic calculous cholecystitis often generate dense fibrosis and adhesions that increase operative complexity and predispose to complications.

Objective: To document the intra- and postoperative complications in patients undergoing cholecystectomy for acute-on-chronic calculous cholecystitis at a tertiary-care centre.

Methods: Retrospective analysis of 65 consecutive cases (January 2022 – June 2025) treated surgically at RajaRajeswari Medical College and Hospital. Complications were classified as intraoperative and postoperative. Descriptive statistics were applied.

Results: Mean age 46.2 years; 73.8 % female. Laparoscopic cholecystectomy was attempted in 59 patients, with 11 (16.9 %) converted to open surgery. Intraoperative events included gallbladder perforation (21.5 %), bleeding (7.7 %), and bile-duct injury (3.1 %). Postoperative complications included surgical-site infection (13.8 %), bile leak (6.2 %), and retained CBD stones (4.6 %). One subhepatic abscess required percutaneous drainage. No mortality occurred; mean hospital stay was 5.8 days.

Conclusion: Acute-on-chronic calculous cholecystitis carries a substantial risk of complications. Early identification of difficult anatomy, precise dissection adhering to “critical view of safety,” and readiness to convert to open or subtotal procedures are pivotal in reducing morbidity.

Keywords: acute-on-chronic cholecystitis; calculous cholecystitis; cholecystectomy; bile-duct injury; postoperative complications.

INTRODUCTION

Gallstone disease remains a major global health issue, and calculous cholecystitis represents its most frequent clinical expression. In acute-on-chronic cases, chronic fibrotic changes obscure Calot’s triangle and distort biliary anatomy, increasing the difficulty of laparoscopic dissection. Although laparoscopy is standard, these patients exhibit elevated conversion rates and postoperative morbidity.

This study evaluates complications arising from surgery for acute-on-chronic calculous cholecystitis in a consecutive series of 65 patients managed at a tertiary centre.

MATERIALS AND METHODS

Study Design and Setting: Retrospective case-series, Department of General Surgery, RajaRajeswari Medical College and Hospital, Bengaluru. Institutional approval was obtained.

Inclusion Criteria: Adults diagnosed with acute-on-chronic calculous cholecystitis (clinical, radiologic, and histopathologic confirmation).

Exclusion Criteria: Acalculous cholecystitis, gallbladder carcinoma, or inadequate 30-day follow-up.

Data and Analysis: Demographics, operative details, complications, and outcomes were collected. Complications were defined per international standards. Descriptive statistics were calculated using SPSS v26.

RESULTS

Demographics: 65 patients; mean age 46.2 years (25–70); 48 female, 17 male.

Operative approach: 59 laparoscopic (90.7 %); 11 converted to open (16.9 %) for dense adhesions or unclear anatomy; 6 primary open (9.2 %).

Intraoperative complications:

- Gallbladder perforation with bile spillage 14 (21.5 %)
- Bleeding at Calot's triangle 5 (7.7 %)
- Bile-duct injury 2 (3.1 %)

Postoperative complications:

- Surgical-site infection 9 (13.8 %)
- Bile leak 4 (6.2 %)
- Residual CBD stones 3 (4.6 %)
- Subhepatic abscess 1 (1.5 %)

Mean hospital stay 5.8 ± 2.6 days; no mortality.

DISCUSSION

Operative difficulty and complication risk in acute-on-chronic calculous cholecystitis arise primarily from fibrosis and distorted anatomy. Our conversion rate (16.9 %) matches published data and reflects prudent surgical judgment rather than procedural failure.

Bile-duct injury (3.1 %) was managed intraoperatively with appropriate reconstruction. Frequent gallbladder perforation underscores the friability of chronically inflamed tissue; prompt lavage and retrieval of spilled stones prevent later abscesses.

Postoperative bile leaks were controlled conservatively or endoscopically. These findings align with international recommendations emphasizing early drainage, ERCP, and selective re-exploration.

CONCLUSION

Acute-on-chronic calculous cholecystitis presents elevated surgical risk due to fibrotic distortion. Diligent operative strategy, situational awareness, and timely conversion can minimize morbidity. Early postoperative surveillance for bile leak or infection is essential for optimal recovery.

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Conflicts of Interest

None declared.

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