

# INPLASY PROTOCOL

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None declared.

## Comparison of The Safety and Efficacy of Early Laparoscopic with Delayed Laparoscopic Cholecystectomy for Acute Cholecystitis: A Epoch-making Review and Meta-analysis

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**Review question / Objective:** Laparoscopic Cholecystectomy (LC) had recognized as the standard operation for cholecystectomy . With the development of laparoscopic technology day by day, acute cholecystitis, once considered as unsuitable for immediate surgical treatment, today is accepting by surgeons gradually . Base on congestion and edema of gallbladder, severe peripheral inflammatory reaction, and unclear anatomical formation of Calot trangle, intraoperative or postoperative complications may be occurred when performed ELC for acute cholecystitis. However, with the gradual understanding of the causes of the above complications and the gradual improvement of surgical methods, the intraoperative and postoperative complications have significantly reduced .Therefore, for acute cholecystitis, there still have some controversial about ELC and DLC.

**Condition being studied:** Even though several researches had published about the advantage of ELC comparing with DLC, however, the number of research cases was not large and had some conflicting results (.So there still have some controversies about the feasibility and safety between ELC and DLC. Therefore, we designed and analyzed the available literature to evaluate the efficiency, safety, and potential advantages of ELC compared with DLC.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 22 September 2022 and was last updated on 22 September 2022 (registration number INPLASY202290107).

### INTRODUCTION

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## METHODS

**Participant or population:** All kinds of people.

**Intervention:** Laparoscopic Cholecystectomy.

**Comparator:** Early Laparoscopic vs. Delayed Laparoscopic Cholecystectomy.

**Study designs to be included:** RCT or retrospective.

**Eligibility criteria:** All the included studies were made of randomized controlled trials (RCTs) and retrospective comparative studies (cohort or case-control studies) that compared ELC with DLC in all age groups which had at least one of the quantitative results. Animal experimental studies, case reports, letters to the editor and review articles were excluded from literature screening.

**Information sources:** The primary sources were the electronic databases of PubMed and the Cochrane Library. The following MeSH terms and their combinations were searched in [Title/Abstract]: Early Laparoscopic Cholecystectomy in Title Abstract Keyword OR Delay Laparoscopic Cholecystectomy in Title Abstract Keyword AND acute cholecystitis in Title Abstract Keyword AND complication in Title Abstract Keyword AND timing in Title Abstract Keyword - in Trials. In order to expand the scope of literature retrieval, some researches such as retrieved studies, review articles, conference, the complete or latest report were also used.

**Main outcome(s):** Postoperative complications, operation time, postoperative hospital stay time and total hospital stay time.

**Quality assessment / Risk of bias analysis:** The method of Centre for Evidence-Based Medicine in Oxford, UK was used for rating the evidence of the studies. Cochrane collaborations tool was used for assessing the risk of bias of this analysis. Low, unclear or high risk of bias were used as the “risk of bias” assessment.

**Strategy of data synthesis:** We use R x64 4.0.2 Version to finish data synthesis.

**Subgroup analysis:** Meta regression and subgroup analysis finish by package of Metareg from R x64 4.0.2 Version.

**Sensitivity analysis:** We explore sensitivity analysis by excluding studies which had obvious heterogeneity.

**Country(ies) involved:** China.

**Keywords:** ELC DLC Acute Cholecystitis Meta-analysis.

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