

INPLASY PROTOCOL

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Comparing Percutaneous transhepatic cholecystostomy combined with cholecystectomy and Cholecystectomy for acute cholecystitis: a systematic review and meta-analysis

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Review question / Objective: Acute cholecystitis is one of the most common acute abdomen in general surgery. The number of patients increases year by year. Cholecystectomy has become the gold standard for surgical treatment of AC patients. Recently, there is evidence that ptgbd drainage of infected bile for moderate AC patients can reduce the risk and difficulty of surgery after the improvement of gallbladder inflammation and the recovery of body function. However, there are some disputes on the evaluation of its effectiveness. In addition, most of these literatures are single center studies, and the number of cases is limited. Therefore, so far, there is still a lack of conclusive evidence in the medical literature about the clinical benefits of ptgbd sequential LC in the treatment of AC. P: Patients with acute cholecystitis; I: Percutaneous transhepatic cholecystectomy combined with cholecystectomy; C: Simple cholecystectomy; O: Operation time, hospital stay, postoperative complications, conversion to laparotomy rate; S: RCT.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 23 March 2022 and was last updated on 23 March 2022 (registration number INPLASY202230129).

INTRODUCTION

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patients. Recently, there is evidence that ptgbd drainage of infected bile for moderate AC patients can reduce the risk and difficulty of surgery after the improvement of gallbladder inflammation and the recovery of body function. However, there are some disputes on the evaluation of its effectiveness. In addition,

most of these literatures are single center studies, and the number of cases is limited. Therefore, so far, there is still a lack of conclusive evidence in the medical literature about the clinical benefits of ptgbd sequential LC in the treatment of AC. P: Patients with acute cholecystitis; I: Percutaneous transhepatic cholecystectomy combined with cholecystectomy; C: Simple cholecystectomy; O: Operation time, hospital stay, postoperative complications, conversion to laparotomy rate; S: RCT.

Condition being studied: Acute cholecystitis is one of the most common acute abdomen in general surgery. The number of patients increases year by year. Cholecystectomy has become the gold standard for surgical treatment of AC patients. Recently, there is evidence that ptgbd drainage of infected bile for moderate AC patients can reduce the risk and difficulty of surgery after the improvement of gallbladder inflammation and the recovery of body function. However, there are some disputes on the evaluation of its effectiveness. In addition, most of these literatures are single center studies, and the number of cases is limited. Therefore, so far, there is still a lack of conclusive evidence in the medical literature about the clinical benefits of ptgbd sequential LC in the treatment of AC.

METHODS

Participant or population: Patients with acute cholecystitis.

Intervention: Percutaneous transhepatic cholecystectomy combined with cholecystectomy.

Comparator: Simple cholecystectomy.

Study designs to be included: RCT.

Eligibility criteria: Inclusion criteria:1. Patients with acute cholecystitis;2 the experimental group received ptgbd + LC operation scheme, and the control group received ELC operation scheme;3. The type

of study was randomized controlled trial;4 the observation indexes include at least one of the conversion to laparotomy rate, intraoperative bleeding volume, operation time, incidence of postoperative complications, postoperative hospital stay, total hospital stay, hospitalization expenses and other indexes;Exclusion criteria:1. The number of patients in a single group was small;2. Review, review and other non comparative research literature;3. Unable to extract from the literature;4. Statistical methods are flawed.

Information sources: PubMed, Embase, The Cochrane Library, CBM, CNKI, VIP, WangFang.

Main outcome(s): Laparotomy rate, intraoperative bleeding volume, operation time, incidence of postoperative complications, postoperative hospital stay, total hospital stay, hospitalization expenses.

Data management: Endnote.

Quality assessment / Risk of bias analysis: Cochrane tool.

Strategy of data synthesis: Revman software provided by Cochrane Collaboration Network was used for statistical analysis. The statistical index of counting data was set as odds ratio (or) and its 95% confidence interval (CI). The measurement data are expressed by mean difference (MD) and its 95% CI. If the units of measurement data are inconsistent or the values differ by several times, the standardized mean difference (SMD) and its 95% CI are used.

Subgroup analysis: Subgroups were divided according to patients' age, disease degree and laboratory examination.

Sensitivity analysis: The heterogeneity between studies was analyzed by I² test. If the heterogeneity is low or does not exist (I² < 50%, P > 0.10), the fixed effect model was used to combine the effect quantity in the next step; When the heterogeneity is high (I² > 50%, P < 0.10), the random effect

model is adopted, and the relevant factors causing heterogeneity need to be further analyzed. The sensitivity of each group of data was analyzed by eliminating the literature one by one.

Country(ies) involved: China.

Keywords: acute cholecystitis PTCD LC.

Contributions of each author:

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