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A systematic review on the outcomes for acute cholecystitis patients undergoing percutaneous cholecystostomy.

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Abstract

Background: Percutaneous cholecystostomy (PC) is a treatment for acute cholecystitis (AC) which involves percutaneous insertion of a catheter into the gallbladder with local anaesthesia and under radiological guidance in order to drain the infected contents. It is being used more frequently, however, its use is inconsistent between hospitals and even clinicians, due to a lack of understanding about the outcomes. This study aimed to undertake a systematic review of the literature pertaining to what the outcomes are for AC patients undergoing PC.

Methods: Embase, Medline and Google Scholar were searched for articles from the last 10 years about the outcomes for AC patients undergoing PC (last searched 22nd March 2024). Articles with a comparison group (laparoscopic cholecystectomy or antibiotic treatment), discussing other methods of gallbladder drainage (such as endoscopic methods) or focusing on the route of PC (transhepatic or transperitoneal) were excluded from the study. The CASP cohort study checklist was used to assess risk of bias in the studies. Thematic analysis was adopted to analyse the data.

Results: Eight eligible studies were identified with a total of 1,033 participants. Study duration ranged from 3.5 years to 10 years. Thematic analysis identified 3 major themes: safety outcomes, efficacy outcomes and quality of life (QOL) outcomes. It was found that PC is a relatively effective and safe alternative treatment for AC. Its main use is in patients who are unfit for surgery as a salvage treatment or as a bridging treatment to stabilise patients prior to surgery. Mild complications such as catheter dislodgement are common, however, they can be treated in most cases, for example with catheter reinsertion. Incidences of major complications are less common. Morbidity and mortality in PC patients are rarely attributable to PC itself and more often reflect the severe associated comorbidities and high-risk nature of these patients. The requirement for follow up and burden of having an external drainage bag can have negative implications for patient QOL.

Conclusions: PC can be a relatively safe and effective treatment for AC, although careful selection of appropriate patients is required as there are implications for patient QOL. The main limitations of this study were that it was carried out by a single researcher, and thematic analysis was done instead of meta-analysis, therefore there is a risk of bias.

Keywords: Percutaneous Cholecystostomy | Acute Cholecystitis | Outcomes | Systematic Review

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