EDITORIAL

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Treatment strategies of drain after complicated laparoscopic cholecystectomy for acute cholecystitis

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Acute cholecystitis (AC) is the most common biliary tract disease, and laparoscopic cholecystectomy (LC) is recognized as the treatment of choice. The present study in this issue compared the surgical outcomes, particularly the occurrence of postoperative surgical site infections (SSIs) in patients with and without drain placement following complicated LC for AC. It showed that late drain removal demonstrated significantly worse surgical outcomes than no drain placement and early drain removal for overall complications, postoperative hospital stay, and SSIs. Drain placement is not routinely recommended, even after complicated LC for AC. When placing a drain, early drain removal is recommended for postoperative outcomes such as SSIs.

Keywords: Cholecystitis, Laparoscopic cholecystectomy, Drainage

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Gallbladder disease is one of the most common and costly of all digestive diseases. The prevalence of cholecystitis including gallstone increases with age, and laparoscopic cholecystectomy (LC) is recognized as the gold standard surgical treatment [1].

Drain insertion after LC may be necessary for drainage of intraabdominal fluid collection or for early detection of bleeding and bile leakage. However, drain placement can cause increasing surgical site infections (SSIs) or increased pain.

According to the previous systematic reviews, routine abdominal drainage after elective uncomplicated LC is not recommended [2,3]. Moreover, randomized clinical trials and a recent systematic meta-analysis of reviews have reported that there is no significant benefit in placing a drain for preventing or reducing postoperative morbidities after LC for acute cholecystitis (AC); drain placement may even increase postoperative pain [4,5]. Therefore, drainage after LC is performed to treat an acutely inflamed gallbladder should be avoided, except in unusual cases with intraoperative complications [6].

Although many studies have demonstrated the disadvantages of drain insertion during LC for AC, the placement of an abdominal drain in complicated LC may be a good choice for reducing or preventing postoperative SSI in clinical practice.

In a current issue article entitled "*Optimal drain management following complicated laparoscopic cholecystectomy for acute cholecystitis: A propensity matched comparative study*," Lee et al. [7] aimed to compare the surgical outcomes, particularly the occurrence of postoperative SSI, in patients with and without drain placement following complicated LC for AC [7]. The incidences of surgical outcomes in late drain removal (19 patients, 15.5%), no drain group (61 patients, 50.0%), and early removal group (42 patients, 34.4%) were as follows: overall complications, 13.1%, 21.4%, and 47.4% (p = 0.006); SSI, 4.9%, 11.9%, and 31.6% (p = 0.006);

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hospital stay, 3.8, 4.4, and 12.4 days ($p < 0.001$) [7]. It demonstrated that drain placement is not routinely recommended, even after complicated LC for AC. When placing a drain, early drain removal is recommended [7].

This study was a retrospective study comprised of a relatively small sample size and single-center study, which may have introduced surgeon's selection bias. Furthermore, there was no standard criteria for drain insertion and antibiotics administration. Despite these limitations, the study tried to reduce selection bias through propensity score matching.

However, a large-scale prospective or randomized controlled trial study is warranted for standard drain management of complicated cholecystectomy.

NOTES

Conflict of interest

The author has no conflicts of interest to declare.

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