

COMPARISON OF LAPAROSCOPIC AND OPEN SURGERY FOR ACUTE CHOLECYSTITIS

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Abstract. Acute cholecystitis is a rapidly developing inflammatory disease of the gallbladder, and surgical treatment is the main method. This article discusses the clinical and practical comparison of laparoscopic and open cholecystectomy methods used in the treatment of acute cholecystitis. Laparoscopic surgery is characterized by minimal invasiveness, low postoperative pain, short hospital stay, and rapid rehabilitation. Open surgery is preferred in complex, complicated, or late-detected cases. The article analyzes the advantages and disadvantages of both methods, the duration of the operation, the risk of complications, and the impact on the patient's quality of life. The importance of an individual approach in modern surgical practice, depending on the patient's general condition and the severity of the disease, is substantiated.

Keywords: acute cholecystitis, laparoscopic cholecystectomy, open surgery, minimally invasive surgery, complications, rehabilitation.

Acute cholecystitis is one of the most common diseases in modern surgical practice that requires emergency medical care. This pathology is mainly caused by the presence of stones in the gallbladder, which leads to obstruction of the bile ducts and the development of an inflammatory process. If the disease is not detected in time and not properly treated, it can lead to serious complications - gangrene of the gallbladder, perforation, and peritonitis, which are life-threatening. Therefore, choosing the optimal type of surgical intervention in the treatment of acute cholecystitis is of great importance.

The rapid development of medical technologies in recent decades has led to the widespread introduction of laparoscopic surgical methods. Laparoscopic cholecystectomy is characterized by minimal invasiveness, low postoperative pain, aesthetic advantages, and rapid recovery of patients. However, in some clinical cases, in particular, in late-stage, purulent, or complicated acute cholecystitis, open cholecystectomy is still important.

The main issue facing surgeons today is to choose the most appropriate surgical method, taking into account the patient's general condition, the severity of the disease and the existing risk factors. In this regard, it is of urgent scientific and practical importance to compare laparoscopic and open operations, analyze their effectiveness, safety and results. This article will focus on the comparison of these two surgical approaches.

Acute cholecystitis is an inflammatory process in the gallbladder, which in most cases develops as a result of mechanical obstruction associated with gallstones. Obstruction of the gallbladder neck or cystic duct leads to stagnation of bile, ischemia of the mucosa and the accession of bacterial infection. As a result, the inflammation rapidly increases, and the local process turns into a severe clinical condition accompanied by general intoxication. Patients often present with right upper quadrant pain, nausea, vomiting, fever and leukocytosis.[1]

The degree of development of the disease can range from mild catarrhal inflammation to phlegmonous, gangrenous and perforative forms. It is this clinical diversity that plays an important role in choosing the method of surgical treatment.

used as a temporary measure. The main treatment for the disease is cholecystectomy, that is, removal of the gallbladder. Timely surgical intervention significantly reduces the risk of complications and improves the patient's quality of life. Today, cholecystectomy is performed in two main ways: laparoscopic and open.[3]

Both methods have their own technical, clinical and rehabilitation aspects, and their in-depth analysis is important for practical surgery.

Laparoscopic cholecystectomy is considered the “gold standard” in modern surgery. In this method, a laparoscope and special instruments are inserted into the abdominal cavity through several small incisions. Under video control, the gallbladder is isolated, the cystic duct and artery are clipped, and the gallbladder is removed.

The main advantage of laparoscopic surgery is its minimal invasiveness. The lack of a large incision in the abdominal wall reduces postoperative pain, reduces the risk of infection, and allows the patient to move more quickly. In addition, this method is preferred by patients from an aesthetic point of view.

Laparoscopic cholecystectomy has a short hospital stay, and in most cases, patients are discharged home within 2–4 days. Return to work is also much faster than with open surgery.[4]

However, laparoscopic cholecystectomy is not suitable for all cases. In severe forms of acute cholecystitis, i.e., suppurative, gangrenous, or perforated cases, tissue swelling and poor visualization of anatomical structures complicate the operation. This can lead to scarring of the bile ducts, bleeding, or conversion to open surgery.

In addition, patients with cardiovascular and respiratory diseases may be at risk for pneumoperitoneum. Therefore, the general somatic condition of the patient is necessarily taken into account when choosing a laparoscopic method.

Open cholecystectomy has long been the main method of treatment for acute cholecystitis. This operation is performed through a wide incision in the right hypochondrium and allows the surgeon to directly visualize and assess the gallbladder and surrounding tissues.[5]

Open surgery is preferred in complex and late-detected cases, as well as when the laparoscopic method is technically risky. Full visualization of anatomical structures allows the surgeon to perform wider manipulations and helps to prevent serious complications.

However, open cholecystectomy is characterized by high invasiveness. A large incision leads to severe postoperative pain, an increased risk of infection and hernia.

The rehabilitation period is long, and patients often have to stay in the hospital for 7–10 days.

Also, the recovery of work capacity is delayed compared to laparoscopic surgery. Therefore, the open method is currently used in more urgent cases.

According to scientific studies, laparoscopic cholecystectomy has high efficiency and safety indicators in mild and moderate acute cholecystitis. The frequency of complications is low, blood loss is minimal, and the postoperative period is mild.

Open surgery, however, remains a reliable method in complicated cases, especially in cases of perivesical infiltrate, abscess, or gangrene of the gallbladder. In many cases, switching to an open method during laparoscopic surgery is necessary to ensure patient safety.

In modern surgical practice, the principle of “one method - for all patients” has lost its relevance. An individual approach is selected for each patient based on the course of acute cholecystitis, age, comorbidities and diagnostic results. The correct choice of laparoscopic and open operations is crucial for preserving the patient’s life and health.[2]

In conclusion, laparoscopic and open cholecystectomy are complementary methods in the surgical treatment of acute cholecystitis. While the laparoscopic approach is characterized by convenience and rapid recovery, open surgery remains a reliable alternative in complex clinical situations. The experience of the surgeon and the patient’s condition are the main factors determining the final outcome.

References

1. Freeman M. L. Complications of endoscopic biliary sphincterotomy: A review. //Gastrointestinal Endoscopy 1997, 45(3), 215— 225.
2. Buxbaum J., Abbas Fehmi S., Sultan S. et al. ASGE guideline on the role of endoscopy in the management of choledocholithiasis. //Gastrointestinal Endoscopy 2019, 89(6), 1075-1105.

3. Lai E.C., Tang C.N. Laparoscopic surgery for common bile duct stones: Advances and controversies. //World Journal of Gastroenterology 2016, 22(6), 2754-2760.

4. Trikudanathan G., Navaneethan U., Vege S.S. Endoscopic management of acute pancreatitis and its complications. //Gastroenterology Report 2014, 2(1), 1-10.

5. Koc B., Karaman K., Gunay K. et al. Comparison of laparoscopic and open surgical approaches for complicated choledocholithiasis. //Surgical Endoscopy 2018, 32(2), 848-856.

6. Pavlidis T.E., Triantafyllou A., Marakis G.N. Complications of laparoscopic cholecystectomy: A review. //World Journal of Gastroenterology 2008, 14(7)