

OPTIMAL TIMING AND METHODS OF CHOLECYSTECTOMY FOR BILIARY PANCREATITIS

Qosimov Nodirxo'ja Abduqosim ugli

Tashkent Medical Academy Department of Surgical Diseases

Abstract: Biliary pancreatitis (BP) is a common pathology associated with cholelithiasis. Cholecystectomy is the main method of preventing relapses, but the question of its optimal timing and methods remains open. The article considers modern approaches to choosing the time of surgical intervention, compares laparoscopic and open techniques, and discusses the role of endoscopic interventions in the treatment of biliary pancreatitis.

Keywords: biliary pancreatitis, cholecystectomy, laparoscopy, endoscopic retrograde cholangiopancreatography, cholelithiasis.

Introduction

Biliary pancreatitis develops due to obstruction of the bile ducts by stones, which leads to the reflux of bile into the pancreatic ducts and activation of pancreatic enzymes. Cholelithiasis is the main cause of acute pancreatitis, accounting for up to 60% of cases of the disease [1].

Current clinical guidelines note that cholecystectomy should be performed on all patients who have had biliary pancreatitis, except for those for whom surgery is contraindicated [2]. However, the timing and technique of the intervention depend on the severity of pancreatitis and the general condition of the patient.

Optimal timing of cholecystectomy

There are several strategies for choosing the timing of surgery in patients with biliary pancreatitis:

1. Early cholecystectomy (within 48-72 hours after admission).

- Optimal for patients with mild pancreatitis.
- Helps prevent recurrent attacks and reduce the overall duration of hospitalization.
- Studies show that early cholecystectomy does not increase the risk of complications compared with delayed surgery [3].
- 2. Delayed cholecystectomy (4-6 weeks after the acute episode).
- Recommended for severe pancreatitis with necrotic changes.
- Allows for surgery in a more stable patient, reducing the risk of surgical complications [4].

- Endoscopic papillosphincterotomy (EPST) is often performed before surgery to improve bile outflow [5].

3. Emergency cholecystectomy.

- Indicated for complicated cases (e.g. purulent cholecystitis, mechanical jaundice, gallbladder perforation).
- May require extended access if laparoscopic intervention is not possible [6].

Cholecystectomy methods

1. Laparoscopic cholecystectomy

This method is considered the “gold standard” for the treatment of cholelithiasis and pancreatitis. Its advantages:

- Minimal trauma.
- Rapid patient recovery.
- Reduced risk of postoperative infections.
- Short hospital stay (1–3 days) [7].

2. Open cholecystectomy

It is used in complicated forms of cholelithiasis, the presence of severe inflammation, adhesions, or failure of laparoscopic access.

- Long rehabilitation period.
- High risk of infectious complications.
- It is used in cases of severe destructive changes in the gallbladder [8].

The role of endoscopic methods

For some patients, endoscopic retrograde cholangiopancreatography (ERCP) with EPST is indicated before cholecystectomy. This procedure allows:

- To remove stones from the bile ducts.
- To reduce the risk of repeated attacks of pancreatitis.
- To improve the prognosis in case of concomitant choledocholithiasis [9]. Comparative analysis of treatment tactics

Approach	Advantages	Flaws
Early cholecystectomy	Minimizing relapses, reducing the length of hospitalization	Possibility of complications in severe pancreatitis
Delayed cholecystectomy	Conducting surgery in a stable condition	Risk of recurrent attacks before surgery
Laparoscopic cholecystectomy	Minimal trauma, fast rehabilitation	Technical difficulties may occur during inflammation
Open cholecystectomy	Possibility of implementation in case of severe inflammation	Highly invasive, long recovery

Development Prospects

Minimally invasive technologies are being actively introduced in modern surgery:

- Robotic surgery, increasing the accuracy of laparoscopic operations.
- Improvement of endoscopic methods for effective removal of stones without the need for surgical intervention.
- Personalized approach to treatment, taking into account inflammation biomarkers [10].

Conclusion

The choice of the optimal time and method of cholecystectomy for biliary pancreatitis depends on the severity of the disease and the patient's condition. Laparoscopic cholecystectomy is the preferred method, but in some cases open surgery or endoscopic interventions are required. Modern technologies can improve treatment results and reduce the frequency of relapses.

REFERENCES

1. Banks P.A., Bollen T.L., Dervenis C., et al. Classification of acute pancreatitis—2012: revision of the Atlanta classification and definitions by international consensus // Gut. 2013. Vol. 62. P. 102–111.
2. van Brunschot S., Bakker O.J., Besselink M.G., et al. Treatment of necrotizing pancreatitis // Clin Gastroenterol Hepatol. 2012. Vol. 10. P. 1190–1201.
3. da Costa D.W., Bouwense S.A., Schepers N.J., et al. Same-admission versus interval cholecystectomy for mild gallstone pancreatitis: a systematic review and meta-analysis // Ann Surg. 2016. Vol. 263. P. 255–262.
4. Baron T.H., DiMaio C.J., Wang A.Y., Morgan K.A. Endoscopic transgastric necrosectomy for walled-off pancreatic necrosis: a systematic review // Gastrointest Endosc. 2019. Vol. 89. P. 141–149.

5. Nealon W.H., Bawduniak J., Walser E.M. Appropriate timing of cholecystectomy in patients who present with moderate to severe gallstone-associated acute pancreatitis // Ann Surg. 2004. Vol. 239. P. 741–749.

6. Tenner S., Baillie J., DeWitt J., Vege S.S. American College of Gastroenterology guideline: management of acute pancreatitis // Am J Gastroenterol. 2013. Vol. 108. P. 1400–1415.

7. da Costa D.W., van Santvoort H.C., Boermeester M.A., et al. Staged multidisciplinary step-up management for necrotizing pancreatitis // Br J Surg. 2014. Vol. 101. P. e65–e79.

8. van Geenen E.J.M., van der Peet D.L., Bhagirath P., Bruno M.J. Etiology and diagnosis of acute biliary pancreatitis // Nat Rev Gastroenterol Hepatol. 2010. Vol. 7. P. 495–502.

9. Teoh A.Y.B., Dhir V., Kida M., et al. Consensus guidelines on the optimal management in interventional EUS procedures: results from the Asian EUS group RAND/UCLA expert panel // Gut. 2018. Vol. 67. P. 1209–1228.

10. Buxbaum J.L., Abbas Fehmi S.M., Sultan S., et al. ASGE guideline on the role of endoscopy in the evaluation and management of acute pancreatitis in the context of gallstone disease // Gastrointest Endosc. 2021. Vol. 94. P. 757–767.