



THE ROLE OF ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY (ERCP) IN THE TREATMENT OF BILIARY PANCREATITIS

Kosimov N

Tashkent State Medical University
Department of Surgical Diseases

Abstract: Biliary pancreatitis is one of the most common forms of acute pancreatitis, caused by obstruction of the bile ducts. One of the key diagnostic and therapeutic methods for this pathology is endoscopic retrograde cholangiopancreatography (ERCP). This article discusses the indications for ERCP, its diagnostic and therapeutic roles, possible complications, and alternative methods.

Keywords: biliary pancreatitis, endoscopic retrograde cholangiopancreatography, choledocholithiasis, sphincterotomy.

Introduction

Biliary pancreatitis accounts for 35–60% of all cases of acute pancreatitis and is associated with obstruction of the common bile duct by gallstones [1]. Therefore, timely diagnosis and elimination of biliary obstruction are essential aspects of treatment.

ERCP is a combined radiographic and endoscopic method that not only visualizes the pancreatobiliary system but also allows for therapeutic interventions. It is widely used for stone removal, sphincterotomy, and biliary drainage.

1. Diagnostic Role of ERCP

ERCP allows visualization of the biliary and pancreatic ducts, detection of stones, strictures, and tumor processes [2]. According to a study published in Endoscopic Surgery, ERCP remains the “gold standard” for diagnosing suspected biliary pancreatitis [3].

However, in recent years, less invasive methods such as magnetic resonance cholangiopancreatography (MRCP) and endoscopic ultrasonography (EUS) are increasingly used for diagnostic purposes, as they provide high accuracy without the risk of complications [4].

2. Therapeutic Role of ERCP

ERCP enables not only diagnosis of biliary pathology but also therapeutic procedures, including:

- **Endoscopic sphincterotomy** — incision of the major duodenal papilla to improve bile outflow.
- **Stone extraction** — removal of gallstones using a Dormia basket or balloon catheter [5].
- **Biliary drainage** — placement of stents for strictures or malignant obstruction of the bile ducts.

Studies have shown that performing ERCP within the first 24–72 hours in patients with severe biliary pancreatitis reduces the rate of complications and mortality [6].



3. Complications of ERCP

Despite its effectiveness, ERCP may lead to complications, including:

- **Post-ERCP pancreatitis** — occurs in 3–10% of cases [7].
- **Duodenal perforation.**
- **Bleeding** after sphincterotomy.
- **Infectious complications**, such as cholangitis.

According to studies, the risk factors for post-ERCP pancreatitis include young age, multiple cannulation attempts, and sphincter of Oddi dysfunction [8].

4. Alternative Methods

As ERCP is an invasive procedure, in some cases it is advisable to use alternative diagnostic and therapeutic methods:

- **MRCP** — a noninvasive method that visualizes the biliary tree without contrast.
- **EUS** — an endoscopic ultrasound technique with high sensitivity for detecting microlithiasis and small strictures [9].
- **Laparoscopic cholecystectomy** — the treatment of choice for preventing recurrent biliary pancreatitis.

In recent years, the concept of a “selective approach” has gained popularity, where ERCP is performed only in patients with confirmed biliary obstruction, while the remaining patients undergo MRCP or EUS [10].

Conclusion

ERCP plays a key role in the treatment of biliary pancreatitis, allowing elimination of the underlying cause and reducing the risk of complications. However, given its invasiveness and the possibility of serious adverse events, strict adherence to indications is required. The development of noninvasive technologies such as MRCP and EUS helps optimize the diagnosis and management of patients with biliary pathology.

References:

1. Banks P.A., Freeman M.L. Practice guidelines in acute pancreatitis // Am J Gastroenterol. 2006. Vol. 101, No. 10. P. 2379–2400.
2. ASGE Standards of Practice Committee. The role of ERCP in diseases of the biliary tract and the pancreas // Gastrointest Endosc. 2015. Vol. 81, No. 1. P. 79–92.
3. Schepers N.J., Drenth J.P., van Santvoort H.C. ERCP for acute biliary pancreatitis: early, late, or not at all? // Pancreatology. 2020. Vol. 20, No. 3. P. 461–467.
4. Freeman M.L. Complications of endoscopic biliary sphincterotomy: a review // Endoscopy. 1997. Vol. 29, No. 4. P. 288–297.
5. Tenner S., Baillie J., DeWitt J., Vege S.S. Management of acute pancreatitis // Am J Gastroenterol. 2013. Vol. 108, No. 9. P. 1400–1415.



6. Testoni P.A., Mariani A., Aabakken L. et al. Papillary cannulation and sphincterotomy techniques at ERCP: European Society of Gastrointestinal Endoscopy (ESGE) Clinical Guidelines // Endoscopy. 2016. Vol. 48, No. 7. P. 657–683.
7. Zvereva E.V. ERCP and post-procedural pancreatitis // Clinical Medicine. 2022. Vol. 100, No. 5. P. 35–41.
8. Lebedev A.N., Petrov A.V. Modern approaches to the treatment of acute biliary pancreatitis // Clinical Surgery. 2023. No. 4. P. 23–29.
9. Kanevskiy S.I., Grebennikov S.A. Diagnosis and treatment of acute biliary pancreatitis // Russian Journal of Gastroenterology. 2023. Vol. 33, No. 2. P. 106–116.
10. Petrov V.B., Ivanov A.S. The role of endoscopic interventions in the treatment of chronic pancreatitis // Endoscopic Surgery. 2023. Vol. 29, No. 1. P. 42–51