

## **EFFECTIVENESS AND ADVANTAGES OF ENDOSCOPIC TREATMENT METHODS FOR COMMON BILE DUCT OBSTRUCTIONS**

**Yusupova Shaxnozaxon Abdikarim qizi**

**Assistant Professor, Department of Human Anatomy and Physiology,  
Tashkent State Medical University**

### **Abstract**

Advantages and clinical results of endoscopic treatment of obstructive diseases of the common bile duct. The study studied the results of the treatment process in patients who underwent endoscopic retrograde cholangiopancreatography (ERCP), sphincterotomy, stone extraction and stenting. The data obtained showed that endoscopic approaches are characterized by low traumatism, short rehabilitation period and low complication rate. Endoscopic procedures provided high clinical effectiveness in restoring bile duct patency, reducing pain syndrome and normalizing liver function in patients. According to the results of the study, endoscopic methods can be recognized as a preferable, safe and cost-effective approach in modern surgical practice compared to traditional open operations.

**Keywords:** endoscopic treatment, common bile duct, obstruction, ERCP, sphincterotomy, stenting, choledocholithiasis, minimally invasive surgery, mechanical jaundice, clinical efficacy.

### **Introduction**

In recent years, obstructive diseases of the common bile duct (CBD) due to choledocholithiasis, strictures, tumors or inflammation have become one of the most urgent problems in the field of gastroenterology and surgery. Compared with traditional open surgical procedures, endoscopic methods (ERCP - endoscopic retrograde cholangiopancreatography, endoscopic sphincterotomy, stenting and stone extraction) are characterized by low trauma, short rehabilitation period and high efficiency. The improvement of endoscopic treatment technologies, the development of optical and instrumental diagnostics, as well as the widespread introduction of a minimally invasive approach have opened a new stage in the treatment of these diseases. Therefore, the study of the effectiveness of endoscopic methods and the analysis of their advantages



are of great importance in clinical practice. The study was aimed at evaluating endoscopic methods widely used in medical practice, with the main focus on determining their effectiveness, safety and degree of impact on the patient's body. The study involved clinical observation of patients presenting with obstructive diseases of the common bile duct. All participants were selected based on the selection criteria: patients had impaired biliary tract patency due to mechanical jaundice, choledocholithiasis, or strictures. At the same time, age, general health, comorbidities, and previous surgical interventions were taken into account.

The methodological basis of the study was clinical and instrumental diagnostic methods. Each patient underwent endoscopic retrograde cholangiopancreatography (ERCP), which determined the anatomical position of the bile duct, the degree of obstruction, and the cause. After that, patients were referred to an individual type of endoscopic treatment - sphincterotomy, balloon dilatation, stone extraction, or biliary stenting. At the practical stage, endoscopic procedures were performed using modern videoendoscope systems, strictly adhering to the rules of asepsis and antiseptics. During the procedures, the patients' cardiovascular activity, respiratory parameters, and arterial pressure were constantly monitored. When complications that could arise during the procedure were detected - bleeding, pancreatitis, infection, or bile leakage, urgent conservative or endoscopic measures were taken. When evaluating the results, important clinical indicators were analyzed: the degree of restoration of biliary tract patency, operation time, length of hospital stay, duration of pain syndrome, frequency of complications, and the patient's overall rehabilitation period. The long-term condition of the patients was also monitored, that is, the incidence of re-obstruction or stone formation after treatment. Based on the obtained clinical data, the results of endoscopic treatment were compared with traditional surgical approaches. In this case, the speed of postoperative recovery, the degree of invasiveness, and the criteria of cost-effectiveness were taken as the main evaluation factors. In addition, individual results for each patient's case were reanalyzed, and generalized statistical conclusions were drawn based on their overall clinical dynamics. The methodology was developed in accordance with the requirements of medical ethics, and all patients provided written informed consent before being included in the study. The study data were recorded in a confidential manner and analyzed for scientific purposes. This methodological approach allowed us to determine the effectiveness of endoscopic technologies using



reliable clinical criteria, compare them with traditional surgical procedures, and develop practical recommendations based on the results obtained.

The results of the study showed that the number of patients who recovered from endoscopic surgery was significantly higher than those treated with traditional open surgery. In addition, the length of stay in the hospital was shortened after endoscopic treatment, which accelerated the recovery process and increased cost-effectiveness. Among the complications after the procedure, mild cases of bile leakage, biliary spasm, and transient pancreatitis were noted, but all of them were successfully eliminated with conservative treatment. The results of the study also showed that due to the minimal traumatic effect of endoscopic methods, the rehabilitation period of patients is shorter, and the pain syndrome is less pronounced. This has a positive effect on the general condition of the patient and allows for a quick return to normal activities. In long-term follow-up, biliary tract patency was maintained in patients who underwent endoscopic surgery, and cases of re-obstruction were very rare. This proves the effectiveness of endoscopic approaches not only in the short term, but also in the long term. Compared with traditional surgery, endoscopic methods have a much lower rate of complications such as bleeding, infection, and delayed wound healing. During the discussion, it was found that for the successful use of endoscopic methods, proper patient selection, accurate pre-procedure diagnosis, and specialist experience are important. In complex cases, especially in the presence of large stones or malignant obstructions, endoscopic stenting or combined (endoscopic and laparoscopic) approaches are highly effective. These methods also improve the patient's quality of life, avoid major surgical interventions, and reduce the need for reoperations.

### **Conclusion**

Endoscopic technologies are less invasive than traditional surgery, and postoperative complications — bleeding, infection, biliary tract infection, or delayed wound healing — are very rare. Long-term follow-up results have shown that endoscopic treatment methods provide stable results and a low probability of re-obstruction. In general, endoscopic treatment methods have a clear advantage in clinical practice due to their effectiveness and reliability. Their widespread introduction into modern surgical practice, as well as ensuring the perfect mastery of endoscopic techniques by specialists, will create the opportunity for safe, rapid and effective treatment for patients. Thus, the treatment of common bile duct obstructions using



endoscopic methods can be recognized as an advanced, promising and practically the most acceptable approach in medicine.

**References:**

1. Tojiev, A. A., & Yuldashev, U. M. (2023). Endoskopik usullar yordamida xoledoxolitiazni davolash tajribasi. O‘zbekiston Tibbiyot Jurnal, 3(2), 45–50.
2. Zhao, Y., Li, J., & Xu, M. (2021). Comparative outcomes of endoscopic versus surgical treatment for common bile duct obstruction. World Journal of Gastroenterology, 27(11), 1021–1030.
3. Sharipov, D. B., & Karimov, I. A. (2024). Umumiy o‘t yo‘llarining obstruktiv kasalliklarida endoskopik davolash usullarining klinik samaradorligi. Tibbiyot va Jarrohlik Amaliyoti Jurnal, 6(1), 33–39.