UDC: 616.366-089.87-06-001.33

CLINICAL COURSE OF CHANGES IN THE GASTROINTESTINAL TRACT IN POST-CHOLECYSTECTOMY SYNDROME

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Abstract

The paper analyzes the results of a comprehensive clinical and functional examination of 198 patients who had previously undergone gallbladder removal and who were diagnosed with "postcholecystectomy syndrome" at various times after surgery. Based on the data obtained, 65 patients were re-operated on due to bile outflow disorders. Endoscopic papillosphincterotomy was performed in 26 cases, and reconstructive surgeries on the bile ducts had to be performed in 25 patients. In 14 patients, repeated surgeries were not due to organic pathology of the extrahepatic bile ducts.

Keywords: major duodenal papilla, postcholecystectomy syndrome, papillosphincterotomy, dyskinesia.

POST-XOLETSISTEKTOMIK SINDROMIDA OSHQOZON-ICHAK TRAKTIDAGI O'ZGARISHLARNING KLINIK KECHISHI

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Respublika ixtisoslashtirilgan terapiya va tibbiy reabilitatsiya ilmiy-amaliy tibbiyot markazi[3]

Annotatsiya

Maqolada ilgari o't pufagini olib tashlagan va operatsiyadan keyingi turli vaqtlarda "postxoletsistektomiya sindromi" tashxisi qo'yilgan 198 bemorni kompleks klinik va funktsional tekshirish natijalari tahlil qilinadi. Olingan ma'lumotlarga asoslanib, safro chiqishi buzilishi tufayli 65 bemor qayta operatsiya qilindi. Endoskopik papillosfinkterotomiya 26 holatda amalga oshirildi va 25 bemorda o't yo'llarida rekonstruktiv operatsiyalar o'tkazilishi kerak edi. 14 bemorda takroriy operatsiyalar jigardan tashqari o't yo'llarining organik patologiyasi tufayli bo'lmagan.

Kalit so'zlar: o'n ikki barmoqli ichak papillasi, postxoletsistektomiya sindromi, papillosfinkterotomiya, diskineziya.

КЛИНИЧЕСКОЕ ТЕЧЕНИЕ ИЗМЕНЕНИЙ В ЖЕЛУДОЧНО-КИШЕЧНОМ ТРАКТЕ ПРИ ПОСТХОЛЕЦИСТЭКТОМИЧЕСКОМ СИНДРОМЕ

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Аннотация

В статье анализируются результаты комплексного клинико-функционального обследования 198 пациентов, ранее перенесших удаление желчного пузыря и которым в разное время после операции был поставлен диагноз "постхолецистэктомический синдром". На основании полученных данных, 65 пациентов были повторно прооперированы в связи с нарушениями оттока желчи. Эндоскопическая папиллосфинктеротомия была выполнена в 26 случаях, а реконструктивные операции на желчных протоках - у 25 пациентов. У 14 пациентов повторные операции не были вызваны органической патологией внепеченочных желчных протоков.

Ключевые слова: большой дуоденальный сосочек, постхолецистэктомический синдром, папиллосфинктеротомия, дискинезия.

Introduction. In modern surgical practice, the treatment approach for acute and chronic cholecystitis has become increasingly standardized, with surgical intervention remaining the primary and most effective method for managing this pathology. Cholecystectomy is widely recognized as the definitive solution for symptomatic cholelithiasis, providing relief from gallbladder-related complications. However, despite its therapeutic benefits, this procedure is not without its challenges and long-term consequences [2, 3].

Over the past few decades, there has been a noticeable increase in the incidence of cholelithiasis, particularly among younger populations [5]. This rise has coincided with an increase in the detection of complex biliary disorders, including the presence of stones in the extrahepatic bile ducts in approximately 20% of patients undergoing cholecystectomy. Additionally, about 10% of these patients exhibit cicatricial-inflammatory changes in the major duodenal papilla (MDP) and the terminal section of the common bile duct (TSC), which can contribute to post-surgical complications and long-term dysfunction of the gastrointestinal tract [1, 7].

In Uzbekistan, medical statistics indicate that up to 150,000 cholecystectomies are performed annually, making this procedure one of the most commonly conducted abdominal surgeries, second only to appendectomies and herniotomies. With the advent of minimally invasive techniques such as laparoscopic and mini-access cholecystectomy, the perception of the procedure as a simple and routine intervention has become widespread [4, 7]. However, despite its technical feasibility, surgical interventions on the extrahepatic bile ducts remain highly delicate procedures where even minor technical errors can result in serious postoperative complications.

The increasing utilization of advanced diagnostic modalities has provided deeper insights into the progressive rise in biliary system disorders. This growth is not only attributed to a higher detection rate of cholelithiasis and associated inflammatory processes but also to a surge in biliary dyskinesias, which frequently emerge postoperatively [1]. Given these trends, it is crucial to further investigate the clinical course of gastrointestinal changes in post-cholecystectomy syndrome, aiming to improve patient outcomes through refined surgical techniques, enhanced postoperative care, and a comprehensive understanding of long-term gastrointestinal adaptations following gallbladder removal [5, 9, 11].

Materials and methods. Along with the increase in the incidence of gallstone disease, despite the undoubted successes of its surgical treatment, the number of patients with the so-called "postcholecystectomy syndrome" (PCS) increases, as does the number of repeated and reconstructive surgeries performed for this reason. In clinical practice, the term PCS is a collective concept that unites a wide variety of pathological syndromes that directly or indirectly arise after cholecystectomy and sometimes have no causal connection with the absence of a gallbladder in the patient . It is well known that the gallbladder has its own, fairly well-studied functions, and if they are even to one degree or another replaceable, then only at the cost of serious adaptive-compensatory devices that cannot in any way be considered indifferent to the patient's body. It is logical to assume that after removal of the gallbladder, its reservoir function is redistributed to the entire system of extra- and intrahepatic bile ducts, thereby making a demand for a capacity that is not characteristic of them with inevitable periods of bile stagnation and overstretching of the liver duct system. Clinical experience shows that the postoperative compensatory abilities of the biliary system are such that it, as a rule, copes with its functions in new conditions. As a rule, 6-12 months after removal of the gallbladder, the necessary adaptation occurs and in most cases the patient does not experience any discomfort from either the biliary system or the digestive system as a whole. However, in 15-35% of cases, the remote functional results of cholecystectomy are not so favorable. A thorough clinical examination using modern instrumental diagnostic methods allows us to identify the causes of most unsatisfactory results of surgical interventions. However, this problem still has many unclear and controversial issues, the solution of which is possible only on the basis of further accumulation of collective experience and exchange of opinions. Analyzing the causes of postcholecystectomy syndrome, it is necessary to distinguish the category of patients in whom pain manifestations, preserved or re-emerging after surgery, depend on various intraoperative errors. This concerns both diagnostic errors and incorrect choice of the scope of surgery, and the further development of the concomitant pathological process, not eliminated during the primary surgical intervention. A special place in this series is occupied by technical errors made during cholecystectomy, such as: trauma to the liver and extrahepatic bile ducts, leaving an excessive portion of the cystic duct, narrowing of the common bile duct in the area of ligation of the cystic duct.

Results and discussion. The main tasks upon re-admission of the patient to the hospital were the most accurate determination of the localization and nature of the morphological changes underlying the disease, assessment of the degree of functional changes in the digestive system, and resolution of issues of the need for interventional correction of disorders detected in the biliary tract. The basis for a comprehensive assessment of the digestive system as a whole was a comprehensive clinical and functional examination of patients complaining of persistent and post-cholecystectomy pain attacks localized in the epigastric region or right hypochondrium, as well as their combination.

The examination complex included mandatory performance of the following examination methods by patients: X-ray and endoscopic examination of the esophagus, stomach and duodenum with a functional assessment of the esophagogastric and gastroduodenal junctions; ultrasound examination of the liver, extrahepatic bile ducts and pancreatic duct system; radioisotope examination of the motor-evacuation function of the stomach and the excretory function of the liver; level-by-level pH-metry and manometry from the level of the Treitz ligament to the middle third of the esophagus. In recent years, we have widely included computed tomography in the examination program for this group of patients. However, it should be noted that computed tomography, like ultrasound, diagnosing existing hypertension of the intra- and extrahepatic ducts and the presence of tumors and stones in them, do not allow us to reliably judge the presence of benign stenosis of the BDS, and even more so to conduct differential diagnostics between organic stenosis and dysfunctional disorders of the sphincter of Oddi. In order to improve the efficiency of diagnosing the functional capabilities of the liver and bile transit, we used hepatobiliary scintigraphy, which allows us to accurately assess not only the absorption and excretion function of polygonal liver cells, but also the concentration and evacuation function of the gallbladder, as well as to track the passage of a radiopharmaceutical through the bile ducts into the intestine. Low radiation exposure and rapid elimination of isotopes from the body allow us to consider this method accessible and safe. As a result of the examination, 32 patients were diagnosed with various dysfunctions of the physiological cardia (cardia insufficiency, reflux esophagitis, hernia of the esophageal opening of the diaphragm), causing the presence of pain syndrome. Residual or "forgotten" (16 patients) and recurrent or "newly formed" (9 patients) stones in the extrahepatic bile ducts were detected in 25 patients. The term "newly formed" was applied only to those patients in whom revision of the biliary duct system was performed and radiographically documented during cholecystectomy, excluding the presence of stones in it during the first surgical intervention.

In addition to the above, the following causes of pain attacks were identified in the group of examined patients: chronic pancreatitis in 35 people, various forms of biliary dyskinesia - in 20, cholangitis - in 12, stenosis of the extrahepatic bile ducts - in 19, excessive stump of the cystic duct - in 3, pericholedochal lymphadenitis - in 2, gastric ulcer or duodenal ulcer - in 10, duodenostasis - in 5, tumors of the gastrointestinal tract - in 3, adhesive disease - in 10, cirrhosis of the liver - in 1, spastic colitis - in 7, gastroduodenitis - in 14. The polymorphism of causes that simulate PCES is noteworthy, meanwhile, the pain syndrome had a direct relationship with the previously performed cholecystectomy. ratio only in 91 patients, of whom we re-operated on 65. The indication for re-operation in them was persistent pain syndrome that did not respond to conservative treatment, accompanied by varying degrees of impairment of adequate bile outflow. In 51 observations, there were signs of mechanical jaundice caused by both the presence of stones in the common bile duct and stenotic inflammatory and cicatricial processes in its terminal section and the BDS zone. There is no doubt that endoscopic transpapillary interventions used to correct pathological changes in the extrahepatic bile ducts that arose after cholecystectomy are the most optimal in terms of obtaining a positive result. This is confirmed by the results of a study by foreign and domestic authors based on a large number of clinical observations [10].

The presence of stones in the common bile duct larger than 15 mm in size in most cases was a reason to refuse endoscopic correction of this pathology. However, due to the introduction of various types of intraductal lithotripsy into clinical practice, it became possible to successfully remove stones 25–30 mm in size. The most widespread method of mechanical lithotripsy is using a special lithotripter, which is also successfully used in our clinic. Particular difficulties in performing endoscopic interventions arose in combination with choledocholithiasis, stenosis of the bile duct or TCH with purulent cholangitis. For effective treatment of this pathology, long-term decompression of the bile ducts and their active sanitation are necessary. This is achieved using the nasobiliary drainage technique. The installation of nasobiliary drainage was also used during staged lithoextraction to prevent the wedging of stones left in the common bile duct.

Currently, the technique of endoprosthetics of the common bile duct in case of its benign stenosis is used much less frequently than in case of blastomatous obstruction. As a rule, we resorted to it in the presence of cicatricial postoperative strictures of the extrahepatic bile ducts in the choledochotomy zone, the stump of the cystic duct or in the place of iatrogenic damage to the common bile duct. This technique was performed after preliminary bougienage or balloon dilation of the stenosis zone and, as a rule, endoprosthetics was temporary and was used at the stage of preparing the patient for reconstructive surgery. In 26 cases, the performed ERCP served as the basis for endoscopic papillosphincterotomy (EPST), during which stones were removed from the common bile duct in 9 patients. Repeated reconstructive operations on the bile ducts were performed in 25 patients. Transduodenal papillosphincterotomy was performed in 7 cases, and papillosphincteroplasty in 13 cases. In the presence of an extended stricture in the distal section of the common bile duct over 2.5 cm, choledochoduodenoanastomosis was performed in 5 patients. In addition, in 2 patients, the excess cystic duct stump left during primary cholecystectomy was resected, in 1 patient, lymphadenectomy was performed in the common bile duct and hepatic hilum area, in 2 patients, adhesive deformation of the common bile duct was eliminated, longitudinal pancreatojejunostomy was performed in 4 cases, choledochojejunostomy was performed in 3 patients, and in 2 patients, repeated surgery consisted of external drainage of the common bile duct due to severe cholangitis. Remote results of repeated surgeries were monitored for periods of 3 to 5 years in 22 patients. In 19 of them, they were assessed as “good” and “excellent”. These results were mainly observed only in those patients who did not have any disturbances in the bile outflow system in the long term.

Special attention in the development of pain syndrome after cholecystectomy deserves dyskinesia of the biliary tract, which is often one of the clinical manifestations of general neurosis. With a more or less long-term existence of dyskinesia, as a result of the stagnation and especially infection of bile in the biliary tract caused by it, inflammatory phenomena can develop. Morphological changes in the biliary tract that join in such cases can further enhance dyskinetic phenomena.

Conclusion. In conclusion, summarizing our experience, it should be noted that the main reason for the resumption of pain after cholecystectomy are stenotic lesions of the CBD or strictures of the TOC that were not eliminated during the first operation, as well as unaccounted for and unresolved concomitant diseases of the gastrointestinal tract that require surgical correction. The first is associated with an incorrect assessment of intraoperative cholangiogram data and, as a consequence, the absence of the necessary intervention on the CBD or TOC. The second is due to an unjustified refusal to expand the scope of the necessary intervention and failure to perform a combined corrective operation.

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