

**КЛИНИЧЕСКИЙ СЛУЧАЙ ЭНДОВИДЕОСКОПИЧЕСКОГО ЛЕЧЕНИЯ
ХОЛЕДОХОЛИТИАЗА, ОСЛОЖНЕННОГО СИНДРОМОМ МИРИЗЗИ**

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Синдром МириZZи – редкое и тяжелое следствие холецистохоледохолитиаза, лечение и диагностика которого вызывает большие трудности. Вопрос выбора способа хирургического лечения холедохолитиаза, осложненного синдромом МириZZи, сегодня остается окончательно нерешенным. В статье приводится описание клинического случая холедохолитиаза, осложненного синдромом МириZZи, и оригинальная методика его оперативного лечения. Описанный клинический случай интересен демонстрацией разработанной нами техники эндовидеоскопического лечения данного заболевания.

Ключевые слова: синдром МириZZи, холедохолитиаз, литэкстракция, антеградно-ассистированная папиллосфинктеротомия, холедохолитотомия.

**CLINICAL CASE OF ENDOVIDEOSCOPIC TREATMENT
OF CHOLEDOCHOLITHIASIS COMPLICATED WITH MIRIZZI'S SYNDROME**

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Mirizzi's syndrome is a rare and severe consequence of cholecystocholedocholithiasis, the treatment and diagnosis of which presents significant difficulties. The question of selection of the method of surgical treatment of choledocholithiasis, complicated with Mirizzi's syndrome, still remains open today. The article describes a clinical case of choledocholithiasis, complicated with Mirizzi's syndrome, and the original technique of its surgical treatment. The described clinical case is interesting from the point of view of demonstration of the original technique of endovideoscopic treatment of this disease.

Keywords: Mirizzi's syndrome, choledocholithiasis, lithoextraction, antegrade-assisted papillosphincterotomy, choledocholithotomy.

Mirizzi's syndrome was first described by P.L. Mirizzi in 1948. This is a rather rare but severe consequence of the long-standing cholecystocholedocholithiasis, which even today, despite the technical progress in medicine, presents considerable difficulties in diagnosis and treatment.

The initial pathomorphological sign of Mirizzi's syndrome is compression of the

common bile duct with a large concrement located in the neck of the gallbladder or of the bladder duct, that ends in formation of the stricture of hepaticocholedochus followed by formation of the bladder-biliary fistula [1].

In 1982, C.K. McSherry et al. identified two varieties of Mirizzi's syndrome: type I – compression of hepaticocholedochus with a stone located in the neck of the gallbladder or



in the bladder duct, and type II – a bladder-biliary fistula.

Today, the most popular classification is that of McSherry, with supplements of A. Csendes, et al [1]. According to this classification, Mirizzi's syndrome is divided into four types:

Type I – compression of the hepaticocholedochus with a concrement located in the neck of the gallbladder or of the bladder duct;

Type II – a cholecysto-cholechoeal fistula occupying less than 1/3 of the circumference of the common bile duct;

Type III – a cholecysto-cholechoeal fistula occupying 2/3 of the circumference of the common bile duct;

IV type – a cholecysto-cholechoeal fistula occupying the entire circumference of the common bile duct, with a complete destruction of the hepaticocholedochus wall.

According to different authors, the occurrence of Mirizzi's syndrome ranges from 0.2 to 6% [2].

Mirizzi's syndrome most commonly affects patients above 60 years old with a long-standing cholelithiasis and is the leading kind of biliodigestive fistulas with incidence up to 70% [2].

Diagnosis of Mirizzi's syndrome in the preoperative stage is difficult due to absence of specific clinical symptoms in this disease. The diagnostic significance of ultrasound examination appears to be very low with sensitivity of the method from 8 to 22% [3]. Sensitivity of endoscopic retrograde cholangiopancreatography is also low, from 20 to 75% [4]. Therefore, very often this syndrome is diagnosed only intraoperatively [4], which creates significant difficulties for the surgeon during laparoscopic intervention. In case of detection of Mirizzi's syndrome, laparoscopic cholecystectomy is fraught with damage to hepaticocholedochus, since its narrow distal part located below the calculus, is often mistaken for the cystic duct, and the enlarged part above the calculus – for Hartmann pocket [2].

The experience of surgical treatment of patients with Mirizzi's syndrome indicates the lack of reliable methods of intraoperative di-

agnosing this pathology. Symptoms indirectly indicative of Mirizzi's syndrome may include:

- adhesions between hepaticocholedochus and the neck of the gallbladder,
- infiltration in the neck of the gallbladder,
- wide hepaticocholedochus,
- sclerotically altered gallbladder.

The choice of the method of surgical treatment of choledocholithiasis, complicated by Mirizzi's syndrome, is not yet determined. The opinions of the authors on this point are ambiguous. Some specialists insist on the open surgery both for diagnosis of Mirizzi's syndrome in laparoscopic surgery, and for diagnosis or suggestion of Mirizzi's syndrome in preoperative examination [1]. Other authors see the possibility for use of laparoscopic surgery for types I and II Mirizzi's syndrome (according to the A. Csendes' classification), and consider types III and IV Mirizzi's syndrome as absolute indications to the open surgery [1].

In order to reduce postoperative complications, some authors propose preoperative endoprosthesis of bile ducts or nasobiliary drainage as preoperative preparation of the patient, which will make differentiation of duct structures during surgical intervention easier [5].

Thus, the question of choice of a method of treatment of choledocholithiasis in combination with Mirizzi's syndrome is not completely decided. Taking into consideration all said above, we present a clinical case of endovideoscopic treatment of choledocholithiasis, complicated with Mirizzi's syndrome.

Patient K., 62 years old, entered the Emergency Care Hospital of Ryazan on June 15, 2017 with a clinical diagnosis: Gallstone disease: choledocholithiasis, stricture of the terminal portion of choledoch (TPC).

Upon admission, the patient complained of permanent dull pain in the right hypochondrium, dark urine, icteric sclera. By that moment, the complaints have been present for six months, the outpatient treatment gave no effect, the last worsening of the

condition happened a week before admission to hospital. Stone carriage within 15 years. The patient was hospitalized.

Upon examination, the condition was satisfactory. Skin subicteric, sclera of icteric color. The lungs and heart without pathological changes. Blood pressure 120/80 mm Hg, pulse 80 beat/min. The tongue moist. The abdomen was soft, not bloated, painful in the right upper quadrant, no peritoneal symptoms. Urine dark, feces of normal color.

In common clinical tests, mild leukocytosis of $10.2 \times 10^9/L$ was found. Biochemical blood test showed increase in the level of total bilirubin to $44.1 \mu\text{mol/L}$, of conjugated bilirubin – up to $38.2 \mu\text{mol/L}$. Ultrasound examination of the abdominal cavity revealed expansion of the common hepatic duct to 18 mm, with a group of concrements in the TPC from 6 to 12 mm in size; the gallbladder 45×21 mm, containing small concrements. In magneto-resonance cholangiopancreatography (MRCPG) cholelithiasis was identified, complicated with choledocholithiasis and Mirizzi's syndrome. In endoscopic examination: duodenal ampilla located in the diverticulum, inaccessible for manipulation, excretion of bile in small portions.

Taking into account the obtained data, it was decided to make a surgery with laparoscopic access after preoperative preparation. The operation was performed on June 19, 2017. In the zone of the hepatic-duodenum ligament a pronounced adhesion process and the sclerotically altered gallbladder were revealed. Adhesiolysis. With technical difficulties, the gallbladder was isolated. During the isolation of the latter, the choledoch was opened, and stagnant bile and several concrements discharged. Choledoch was sanitized through the formed choledochotomical hole. Most of the stones were removed by instrumental palpation of the choledoch. Two concrements of 8 and 10 mm were removed using lithextraction instruments kit, developed at the Department of Hospital Surgery of Ryazan State Medical University.

The device for lithextraction was a set of elastic aspirator tubes of different diameters with the internal facet on the working end in the form of a cone. The size of the aspirator was selected in each case individually depending on the expected size of extracted stones. Due to permanent aspiration created by electrical sucking device connected to the distal end of the lithextractor, concrements, due to a special form of the aspirator tip, were sucked up to it and extracted.

After extraction of all concrements, choledochoscopy was performed during which no concrements were revealed. The terminal portion of choledoch was considerably narrowed which made introduction of a choledochoscope into the duodenum impossible. It was decided to perform ante grade-assisted papillosphincterotomy.

This technique was also developed at the Department of Hospital Surgery of Ryazan State Medical University and, in our opinion, is a reasonable alternative to ante grade papillosphincterotomy. The essence of the technique is that instead of papillotome, a guiding metalized string is introduced into the duodenum. The duodenal ampulla was dissected retrograde by a papillotome installed on the string and drawn through the operational channel of the duodenoscope. We believe that antegradeassisted papillosphincterotomy has certain advantages over antegrade papillosphincterotomy: firstly, a thin rigid guiding string more easily passes through the stenotic duodenal ampilla than the papillotome; secondly, orientation of the cutting part of the papillotome is realized through the working channel of the duodenoscope, which is technically easier.

After elimination of choledocholithiasis and of stenosing duodenal papillitis, choledochography was performed with a continuous locking a traumatic endostitch with Vicryl 4/0, with external drainage of choledoch through the stump of the bladder duct according to Halstead-Pikovsky.

The postoperative period was uneventful. The patient was discharged on the 6th day

after the operation in a satisfactory condition. By the moment of discharge, laboratory parameters normalized to the age-related level, the patient's condition was satisfactory, with no complications in the postoperative period.

Conclusion

This clinical case demonstrated the pos-

sibility of successful treatment of choledocholithiasis in combination with Mirizzi's syndrome with laparoscopic access using endovideoscopic technologies. Such an intervention can be recommended as an operation of choice in treatment of patients with Mirizzi's syndrome.

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