



## DIAGNOSTICS AND TREATMENT OF CHOLEDOCHOLITIASIS IN ELDERLY AND SENILE AGE PATIENTS

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<p><b>Received:</b> 7<sup>th</sup> February 2021 <b>Accepted:</b> 17<sup>th</sup> February 2021 <b>Published:</b> 11<sup>th</sup> March 2021</p>	<p>The most common complication of gallstone disease is choledocholithiasis. Among those suffering from choledocholithiasis, the main contingent of patients is made up of elderly and senile people. Endoscopic papillosphincterotomy (EPST) and stone extraction are the surgery of choice in patients with choledocholithiasis. When performing EPST, the greatest difficulties were observed in patients with a point-shaped papilla, with a parapapillary and especially with an intra-diverticular arrangement of the OBD. The analysis of the results showed that in case of choledocholithiasis of elderly and senile age, a full-fledged study and the use of minimally invasive low-traumatic interventions are required as much as possible.</p>

**Keywords:** Acute cholecystitis, obstructive jaundice, hepatopancreatoduodenal zone, endoscopic retrograde cholangiopancreatography, laparoscopic cholecystectomy

### 1. INTRODUCTION.

Gallstone disease ŽDD, despite the passage of several thousand years, has not lost its relevance. On the contrary it acquires more and more importance year by year. The tendency of ubiquitous increase of morbidity, unsatisfactory results of treatment especially in its complicated forms cause special social importance of this problem. The problem of diagnostics and treatment of cholelithiasis and its complications is actual nowadays.

During last decades along with wide prevalence of cholelithiasis the rate of its complicated forms, including choledocholithiasis, has increased up to 15-25%. Choledocholithiasis is often accompanied by persistent obstruction of bile ducts with subsequent development of mechanical jaundice, purulent cholangitis and acute pancreatitis. Mechanical jaundice in anamnesis or on admission as a manifestation of choledocholithiasis is diagnosed in 80-85% of patients, remaining at the time of the operation in 40% of patients. Cholangitis occurs in 20% of patients. And pancreatitis occurs in 25% of patients. Choledocholithiasis sufferers are mostly elderly and senile people, which is mostly caused by long history of the disease. A specific peculiarity of choledocholithiasis course in patients of these age groups is that it is often combined with primary destructive forms of gallbladder inflammation. Cholecystectomy combined with extrahepatic bile ducts intervention leads to negative results. In fact, even the opening of the lumen of the hepaticocholedochus in the elderly leads to an increase in mortality of 3-4 times.

The main factor contributing to the high surgical and anaesthetic risk in elderly patients is the presence of severe metabolic comorbidities. Cardiovascular and pulmonary system disorders may be risk factors. Therefore, postoperative mortality in elderly patients with acute calculous cholecystitis averages 4-6%, and in complicated form it reaches 15-63%.

### 2. OBJECTIVE OF THE STUDY.

To improve results of diagnostics and treatment of elderly and senile patients suffering from cholelithiasis complicated by using rational methods of diagnostics, modern methods and techniques of operative interventions.

### 3. MATERIALS AND RESEARCH METHODS.

During the period from 2015 to 2020, 6,378 patients were examined and treated at the Andijan branch of the Republican Scientific Center of Emergency Medical Care for biliary calculi disease and its complications. At admission to the hospital 1594 (25%) patients had suspicion of extrahepatic bile duct pathology. The patients ranged in age from 24 to 86 years. The main contingent of patients (1018-63,8%) were elderly and senile. It is noteworthy that the elderly patients come to the clinic at a later time of the disease onset, so during the 1st day of hospitalization averaged 19.7-38.1% of patients, and after 3 days - 35.7-41%. The anamnesis collection revealed that this was due to the age-related nature of the course of the disease. All elderly and senile patients on admission underwent general clinical, biochemical blood and urine tests, coagulogram, electrocardiography, lung radiography, ultrasound examination of hepatopancreatobiliary zone, Fibrogastroduodenoscopy (FGDS), endoscopic retrograde pancreatocholangiography (ERCG), endoscopic papillosphincterotomy (EPST), intraoperative cholangiography (IOCH), echocardiography (EchoCG) and computed tomography (CT) if necessary. A biochemical examination of 526 (51.6%) patients showed elevated bilirubin levels in the blood, ranging from 26.7 to 368.4 $\mu$ mol.

Ultrasound of the liver, gallbladder and bile ducts is of great importance for the diagnosis of extrahepatic biliary pathology. Common bile duct stones were revealed in 42% of patients, in 58% of patients an increase of choledochal diameter up to 8 mm and more was revealed, as well as other indirect signs of bile duct obstruction, thickening, uneven contour of choledochal walls, heterogeneous hyperechogenic inclusions. Esophagogastroduodenoscopy provides an opportunity to inspect the upper gastrointestinal tract organs and to assess the condition of the large duodenal papilla (LAD). On FGDS 12 (1.1%) patients had peptic ulcer and 21 (2.0%) patients had duodenal ulcer as comorbidities. Papillary diverticula were detected in 109 (10.9%) patients. The introduction of endoscopic retrograde pancreatocholangiography (ERCG) has led to significant progress in the diagnosis of choledocholithiasis. ERCG is now part of routine surgical practice and has become the leading diagnostic technique for choledocholithiasis.

The indications for ERCG were mechanical jaundice on admission or in the anamnesis, dilatation of the common bile duct more than 8 mm in diameter according to ultrasound, and the clinical picture of acute biliary pancreatitis.

Endoscopic papillosphincterotomy (EPST) and concrements extraction is an operation of choice in patients of any age with choledocholithiasis. Often an effective preoperative preparation, it is an alternative to abdominal cavity surgery and offers optimal results in elderly patients.

### 4. RESULTS.

Endoscopic retrograde pancreatocholangiography was performed in 906 of 1018 elderly and elderly patients. ERPCG was failed in 112 (10.0%) patients because of impossibility to catheterize and large duodenal papilla of peripapillary diverticulum, scar stenosis of large duodenal papilla, allergy to radiopaque agents and inadequate behaviour. During ERCG oledocholithiasis was revealed in 768 (84.7%) patients, stenosis of the terminal portion of choledochus in 41 (4.5%), combination of choledocholithiasis with stenosis of the terminal portion of choledochus in 97 (10.7%) patients. ERCG was performed once in 76,9% of patients, and twice in 33,9% of patients. EPST was performed in all patients with choledocholithiasis. Nonconsecutive EPST was performed in 12 patients, from the ostium of BDS in 7 patients, suprapapillary choledochotomy - in 2 patients. In patients with stones larger than 1.5 cm in diameter (32.7%), their removal from the choledochus after EPST is always problematic. After the introduction of mechanical lithotripsy into the clinic, the percentage of endoscopic lithoextraction in patients with large choledochal stones doubled. EPST in this category of patients was performed in 1 stage - in 551 (61%) patients, in 355 (39%) - in 2 stages. The average incision length for EPST was 15.5  $\pm$  1.3 mm. A comparative analysis showed that the probability of presence of concrements in the bile ducts increased significantly with the age of patients. Out of 1594 patients with complicated forms of cholelithiasis in 576 patients under 60 years old choledocholithiasis was revealed in 35 patients (2,1%), in 865 patients over 60 years old (54,2%). There is a direct correlation between the size of concrements and the age of patients. Thus concrements more than 1.5 cm in size were identified in 285 patients older than 60 years old (17.8%), and in patients younger than 60 years old - in 17 patients (1.1%). Similarly the frequency of development of mechanical jaundice increased with increasing age of patients: in patients younger than 60 years old - in 45.6%, older than 60 years old - in 72.1% of cases. In elderly and elderly patients with large size of concrements in the biliary tract, as well as with severe comorbidities, the use of EPST with mechanical lithoextraction requires the use of less traumatic options of EPST. In 31 patients (3.5%) with choledocholithiasis endoscopic signs of purulent cholangitis were identified. In these patients ERCG was completed by EPST with lithoextraction and nasobiliary drainage for 5-6 days for bile duct decompression and sanitation. In elderly and elderly patients with large size of concrements in the biliary tract, as well as with severe comorbidities, the use of EPST with mechanical lithoextraction requires the use of less traumatic options of EPST. In 31 patients (3.5%) with choledocholithiasis endoscopic signs of purulent cholangitis were identified. In these patients ERCG was completed by EPST with lithoextraction and nasobiliary drainage for 5-6 days for bile duct decompression and sanitation. During EPST in patients with choledocholithiasis of elderly and senile age bleeding from the papillotomy wound was observed in 109 (12,6%) cases out of 865 patients. In 36 (4.2%) patients bleeding was stopped by endoscopic approach, in 73 (8.4%) patients bleeding stopped automatically, in 2 patients with severe bleeding due to ineffectiveness of

endoscopic hemostasis the bleeding was stopped by conversion - suturing the bleeding vessels. Lethality in 1 patient with recurrent bleeding.

Major difficulties in the performance of EPST were observed in patients with papillary papillae, stricture and deformity, as well as with parapapillary and intradiverticular location of the LAD. In 2 patients with intradiverticular location of the LAD, there was damage of the choledochal wall (1) and retroperitoneal perforation of the duodenum during papillotomy. Laparotomy - suturing of the choledochal wall and retroperitoneal perforation of the duodenum with an external Kerr drainage of the choledochus was performed. Lethality in 1 patient with duodenal suture failure, peritonitis, multiple organ failure.

### 5.CONCLUSIONS.

1. elderly and elderly patients with biliary stones complicated by choledocholithiasis should be admitted to specialised centres for full examination and surgical treatment.
2. In this category of patients, especially those with large stones in the hepaticochodochus and, in a large proportion of cases, with severe comorbidities, the use of EPST with mechanical lithoextraction for choledochal sanitation allows a less traumatic version of EPST in a single step.
3. Choledocholithiasis in the elderly and elderly requires minimally invasive, minimally traumatic interventions whenever possible.
4. Possible complications of endoscopic biliary tract surgery can be prevented by strict adherence to the correct surgical technique in elderly and senile patients.

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